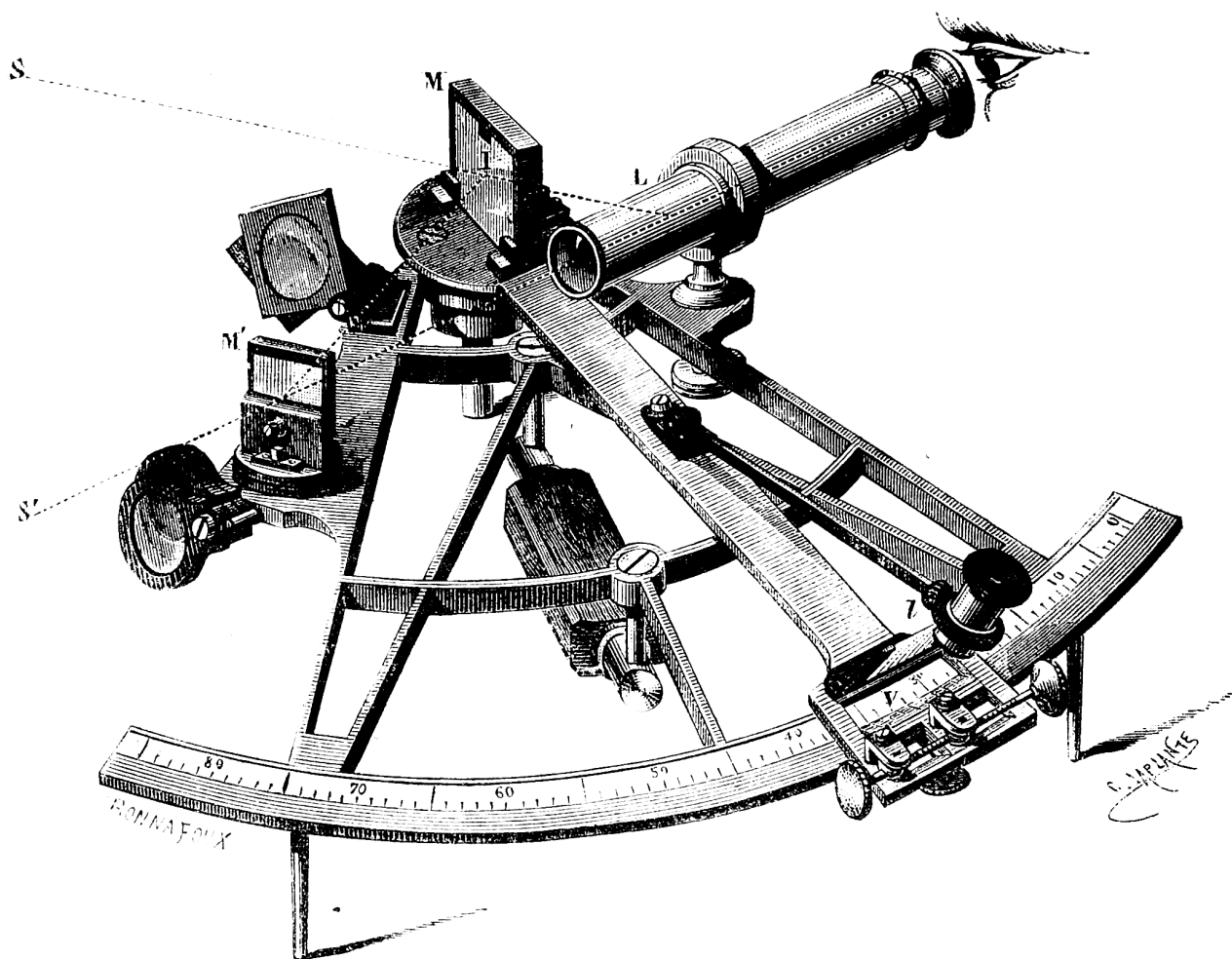




ALMANAQUE NÁUTICO PERSEIS 2011

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

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Introducción

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

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

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

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

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

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

UT	SOL				● LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna				
	SD: 16'3 PMG: 12 ^h 03 ^m 4				Edad: 26 ^d 3 PHE { 4 ^h : 57'7 12 ^h : 57'6 20 ^h : 57'4 PMG: 9 ^h 25 ^m R°: 57 ^m														
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m	
0	179	12.3	-23	02.7	223	57.6	-22	50.4	60 N	7 09	8 06	9 02	6 34	69	12 13	48			
1	194	12.0		02.5	238	23.8	72	55.2	48	58	7 02	7 54	8 46	6 14	67		33	50	
2	209	11.7		02.3	252	49.9	71	-22	59.9	47	56	6 56	44	31	5 58	65	12	49	52
3	224	11.4		02.1	267	16.0	71	-23	04.5	46	54	50	36	19	43	65	13	04	52
4	239	11.1		01.9	281	42.0	70		08.9	44	52	44	28	8 08	31	64		16	53
5	254	10.8	-23	01.7	296	08.1	71	-23	13.2	43	50	6 39	7 20	7 59	5 20	64	13	27	53
6	269	10.5	-23	01.5	310	34.1	70	-23	17.3	41	45	6 28	7 05	7 38	4 58	62	13	50	54
7	284	10.2		01.3	325	00.1	70		21.3	40	40	17	6 51	22	40	61	14	09	54
8	299	09.9		01.1	339	26.1	70		25.2	39	35	08	40	7 08	25	60		24	55
9	314	09.6		00.9	353	52.1	70		28.9	37	30	6 00	30	6 56	4 12	59	14	38	55
10	329	09.3		00.7	8	18.1	70		32.4	35	20	5 44	6 11	35	3 49	59	15	01	55
11	344	09.0	-23	00.5	22	44.0	69	-23	35.8	34	10 N	5 28	5 54	6 17	3 30	57	15	20	57
12	359	08.7	-23	00.3	37	10.0	70	-23	39.1	33	0	5 11	5 37	6 00	3 12	57	15	39	57
13	14	08.4	-23	00.1	51	35.9	69		42.3	32	10 S	4 52	5 19	5 42	2 54	56	15	58	56
14	29	08.1	-22	59.9	66	01.8	69		45.2	29	20	30	4 59	24	35	54	16	18	57
15	44	07.8		59.7	80	27.8	70		48.1	29	30	4 02	35	5 02	13	53		40	58
16	59	07.5		59.5	94	53.7	69		50.8	27	35	3 43	20	4 49	2 00	53	16	54	58
17	74	07.2	-22	59.3	109	19.6	69	-23	53.3	25	40	3 21	4 02	4 35	1 46	51	17	10	57
18	89	06.9	-22	59.1	123	45.5	69	-23	55.7	24	45	2 51	3 40	4 17	1 28	50	17	28	58
19	104	06.6		58.9	138	11.4	69	-23	58.0	23	50	2 07	3 11	3 55	1 07	48	17	51	58
20	119	06.4		58.7	152	37.4	70	-24	00.1	21	52	1 40	2 56	44	0 56	47	18	02	59
21	134	06.1		58.5	167	03.3	69		02.1	20	54	1 00	39	32	45	46		15	58
22	149	05.8		58.2	181	29.2	69		03.9	18	56	** ** *	2 17	18	32	44		29	59
23	164	05.5		58.0	195	55.1	69		05.6	17	58	** ** *	1 49	3 02	0 17	42	18	47	58
24	179	05.2	-22	57.8	210	21.1	70	-24	07.1	15	60 S	** ** *	1 05	2 42	** ** *	**	19	07	59
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO				
	PMG: 17 ^h 16 ^m 0		Mag: -4.6 PMG: 8 ^h 47 ^m				Mag: +1.2 PMG: 12 ^h 39 ^m				Mag: -2.4 PMG: 17 ^h 06 ^m				Mag: +0.8 PMG: 6 ^h 23 ^m				
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	100	18.2	228	13.2	-15	16.5	170	15.5	-23	09.6	102	57.9	-2	32.0	264	01.4	-4	19.4	
1	115	20.7	243	13.3		17.1	185	15.9		09.3	118	00.0		31.8	279	03.8		19.4	
2	130	23.1	258	13.3		17.6	200	16.3		09.0	133	02.2		31.7	294	06.1		19.4	
3	145	25.6	273	13.4		18.2	215	16.6		08.8	148	04.4		31.6	309	08.5		19.5	
4	160	28.1	288	13.4		18.7	230	17.0		08.5	163	06.5		31.4	324	10.9		19.5	
5	175	30.5	303	13.5	-15	19.3	245	17.4	-23	08.3	178	08.7	-2	31.3	339	13.2	-4	19.5	
6	190	33.0	318	13.5	-15	19.9	260	17.8	-23	08.0	193	10.8	-2	31.1	354	15.6	-4	19.6	
7	205	35.5	333	13.6		20.4	275	18.2		07.8	208	13.0		31.0	9	17.9		19.6	
8	220	37.9	348	13.6		21.0	290	18.5		07.5	223	15.1		30.8	24	20.3		19.6	
9	235	40.4	3	13.6		21.6	305	18.9		07.3	238	17.3		30.7	39	22.7		19.7	
10	250	42.8	18	13.7		22.1	320	19.3		07.0	253	19.5		30.6	54	25.0		19.7	
11	265	45.3	33	13.7	-15	22.7	335	19.7	-23	06.7	268	21.6	-2	30.4	69	27.4	-4	19.7	
12	280	47.8	48	13.7	-15	23.3	350	20.1	-23	06.5	283	23.8	-2	30.3	84	29.7	-4	19.8	
13	295	50.2	63	13.8		23.8	5	20.4		06.2	298	25.9		30.1	99	32.1		19.8	
14	310	52.7	78	13.8		24.4	20	20.8		06.0	313	28.1		30.0	114	34.4		19.8	
15	325	55.2	93	13.8		24.9	35	21.2		05.7	328	30.2		29.8	129	36.8		19.9	
16	340	57.6	108	13.9		25.5	50	21.6		05.4	343	32.4		29.7	144	39.2		19.9	
17	356	00.1	123	13.9	-15	26.1	65	21.9	-23	05.2	358	34.6	-2	29.6	159	41.5	-4	19.9	
18	11	02.6	138	13.9	-15	26.6	80	22.3	-23	04.9	13	36.7	-2	29.4	174	43.9	-4	19.9	
19	26	05.0	153	14.0		27.2	95	22.7		04.7	28	38.9		29.3	189	46.2		20.0	
20	41	07.5	168	14.0		27.8	110	23.1		04.4	43	41.0		29.1	204	48.6		20.0	
21	56	10.0	183	14.0		28.3	125	23.5		04.1	58	43.2		29.0	219	51.0		20.0	
22	71	12.4	198	14.1		28.9	140	23.8		03.9	73	45.3		28.8	234	53.3		20.1	
23	86	14.9	213	14.1		29.4	155	24.2		03.6	88	47.5		28.7	249	55.7		20.1	
24	101	17.3	228	14.1	-15	30.0	170	24.6	-23	03.3	103	49.6	-2	28.6	264	58.1	-4	20.1	
Dif	—		0		-6		+4		+3		+22		+1		+24		0		

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna	Puesta de Luna			
	SD: 16 ^h 3			Edad: 27 ^d 3 PHE { 4 ^h : 57 ^m 3 12 ^h : 57 ^m 1 20 ^h : 56 ^m 9											
	PMG: 12 ^h 03 ^m 9			SD: 15 ^h 6 PMG: 10 ^h 22 ^m Rº: 56 ^m					Civil	Náutico	Hora	Rº	Hora	Rº	
	hG ☉	Dec		hG ☾	Dif	Dec	Dif								
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m
0	179	05.2	-22 57.8	210	21.1	-24 07.1	14	60 N	15 06	16 03	16 59	7 43 48	13 01 68		
1	194	04.9	57.6	224	47.0	08.5	13	58	23	14	17 06	21 49	23 66		
2	209	04.6	57.4	239	13.0	09.8	11	56	37	24	13	7 03 51	41 64		
3	224	04.3	57.2	253	38.9	10.9	9	54	15 49	33	18	6 48 51	13 56 64		
4	239	04.0	57.0	268	04.9	11.8	8	52	16 00	40	24	35 52	14 09 63		
5	254	03.7	-22 56.7	282	30.9	12.6	7	50	16 10	16 48	17 29	6 24 52	14 20 63		
6	269	03.4	-22 56.5	296	56.9	13.3	5	45	16 30	17 03	17 40	6 00 53	14 44 61		
7	284	03.1	56.3	311	22.9	13.8	4	40	16 46	16	50	5 41 54	15 03 60		
8	299	02.8	56.1	325	49.0	14.2	2	35	17 00	28	17 59	25 54	19 59		
9	314	02.5	55.9	340	15.1	14.4	1	30	12	38	18 08	5 11 55	33 58		
10	329	02.2	55.6	354	41.1	14.5	1	20	33	17 56	24	4 48 55	15 56 58		
11	344	01.9	-22 55.4	9	07.3	14.4	2	10 N	17 51	18 13	18 40	4 27 56	16 17 56		
12	359	01.7	-22 55.2	23	33.4	14.2	1	0	18 08	18 30	18 56	4 09 56	16 36 55		
13	14	01.4	55.0	37	59.6	13.9	3	10 S	25	18 48	19 15	3 50 56	16 54 55		
14	29	01.1	54.7	52	25.7	13.4	5	20	18 43	19 08	19 37	29 57	17 15 53		
15	44	00.8	54.5	66	52.0	12.7	7	30	19 05	32	20 05	3 06 57	38 52		
16	59	00.5	54.3	81	18.2	12.0	7	35	17	19 47	23	2 53 57	17 52 50		
17	74	00.2	-22 54.1	95	44.5	11.0	10	40	19 32	20 05	20 46	2 37 57	18 07 50		
18	88	59.9	-22 53.8	110	10.8	10.0	10	45	19 50	20 27	21 15	2 18 58	18 26 48		
19	103	59.6	53.6	124	37.2	08.8	12	50	20 11	20 55	21 59	1 55 58	18 49 47		
20	118	59.3	53.4	139	03.6	07.5	13	52	22	21 10	22 24	43 58	19 01 45		
21	133	59.0	53.1	153	30.0	06.0	15	54	34	27	23 03	31 58	13 45		
22	148	58.7	52.9	167	56.4	04.4	16	56	20 47	21 48	** **	1 16 58	28 43		
23	163	58.4	52.7	182	23.0	02.6	18	58	21 03	22 15	** **	0 59 58	19 45 41		
24	178	58.2	-22 52.4	196	49.5	00.7	19	60 S	21 23	22 57	** **	0 38 59	20 06 38		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG 17 ^h 12 ^m 0		Mag: -4.6 PMG: 8 ^h 47 ^m			Mag: +1.2 PMG: 12 ^h 38 ^m			Mag: -2.4 PMG: 17 ^h 02 ^m			Mag: +0.8 PMG: 6 ^h 19 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	101	17.3	228 14.1	-15 30.0	170 24.6	-23 03.3	103 49.6	-2 28.6	264 58.1	-4 20.1					
1	116	19.8	243 14.1	30.6	185 25.0	03.1	118 51.8	28.4	280 00.4	20.2					
2	131	22.3	258 14.1	31.1	200 25.4	02.8	133 54.0	28.3	295 02.8	20.2					
3	146	24.7	273 14.2	31.7	215 25.7	02.6	148 56.1	28.1	310 05.1	20.2					
4	161	27.2	288 14.2	32.3	230 26.1	02.3	163 58.3	28.0	325 07.5	20.2					
5	176	29.7	303 14.2	-15 32.8	245 26.5	-23 02.0	179 00.4	-2 27.8	340 09.9	-4 20.3					
6	191	32.1	318 14.2	-15 33.4	260 26.9	-23 01.8	194 02.6	-2 27.7	355 12.2	-4 20.3					
7	206	34.6	333 14.2	33.9	275 27.3	01.5	209 04.7	27.5	10 14.6	20.3					
8	221	37.1	348 14.3	34.5	290 27.6	01.2	224 06.9	27.4	25 16.9	20.4					
9	236	39.5	3 14.3	35.1	305 28.0	01.0	239 09.0	27.2	40 19.3	20.4					
10	251	42.0	18 14.3	35.6	320 28.4	00.7	254 11.2	27.1	55 21.7	20.4					
11	266	44.4	33 14.3	-15 36.2	335 28.8	-23 00.4	269 13.3	-2 27.0	70 24.0	-4 20.5					
12	281	46.9	48 14.3	-15 36.8	350 29.2	-23 00.1	284 15.5	-2 26.8	85 26.4	-4 20.5					
13	296	49.4	63 14.3	37.3	5 29.5	-22 59.9	299 17.6	26.7	100 28.8	20.5					
14	311	51.8	78 14.3	37.9	20 29.9	59.6	314 19.8	26.5	115 31.1	20.5					
15	326	54.3	93 14.3	38.4	35 30.3	59.3	329 21.9	26.4	130 33.5	20.6					
16	341	56.8	108 14.3	39.0	50 30.7	59.1	344 24.1	26.2	145 35.8	20.6					
17	356	59.2	123 14.3	-15 39.6	65 31.1	-22 58.8	359 26.2	-2 26.1	160 38.2	-4 20.6					
18	12	01.7	138 14.4	-15 40.1	80 31.5	-22 58.5	14 28.4	-2 25.9	175 40.6	-4 20.7					
19	27	04.2	153 14.4	40.7	95 31.8	58.3	29 30.5	25.8	190 42.9	20.7					
20	42	06.6	168 14.4	41.3	110 32.2	58.0	44 32.7	25.6	205 45.3	20.7					
21	57	09.1	183 14.4	41.8	125 32.6	57.7	59 34.8	25.5	220 47.7	20.7					
22	72	11.6	198 14.4	42.4	140 33.0	57.4	74 37.0	25.4	235 50.0	20.8					
23	87	14.0	213 14.4	42.9	155 33.4	57.2	89 39.1	25.2	250 52.4	20.8					
24	102	16.5	228 14.4	-15 43.5	170 33.7	-22 56.9	104 41.3	-2 25.1	265 54.8	-4 20.8					
Dif	—		0	-6	+4	+3	+22	+1	+24	0					

UT	SOL				● LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna				
	SD: 16 ^h 3 PMG: 12 ^h 04 ^m 4				Edad: 28 ^d 3 PHE { 4 ^h : 56 ^m 8 12 ^h : 56 ^m 6 20 ^h : 56 ^m 4 PMG: 11 ^h 18 ^m R°: 53 ^m																
	hG ☉		Dec		hG ☾		Dif		Dec			Dif			Náutico	Civil	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	m
0	178	58.2	-22	52.4	196	49.5	-24	00.7	20	58	60 N	7 09	8 05	9 01	8 31	29	14 09	80			
1	193	57.9		52.2	211	16.1	76	-23	58.7	22	58	7 02	7 54	8 45	8 10	34	29 76				
2	208	57.6		52.0	225	42.7	76		56.5	22	56	6 55	44	31	7 54	36	14 45	74			
3	223	57.3		51.7	240	09.4	77		54.2	23	54	49	35	19	39 39		15 00	71			
4	238	57.0		51.5	254	36.1	77		51.7	25	52	44	27	8 08	27 40		12 69				
5	253	56.7	-22	51.3	269	02.9	78	-23	49.2	25	50	6 39	7 20	7 58	7 16	41	15 23	67			
6	268	56.4	-22	51.0	283	29.7	78	-23	46.4	28	45	6 28	7 05	7 38	6 53	44	15 45	65			
7	283	56.1		50.8	297	56.6	79		43.6	28	40	18	6 52	22	35 45		16 03	63			
8	298	55.8		50.6	312	23.5	79		40.6	30	35	09	40	7 08	19 47		18 61				
9	313	55.5		50.3	326	50.5	80		37.5	31	30	6 00	30	6 56	6 06	48	31 60				
10	328	55.3		50.1	341	17.5	80		34.2	33	20	5 44	6 12	36	5 43	50	16 54	56			
11	343	55.0	-22	49.8	355	44.6	81	-23	30.9	33	10 N	5 29	5 55	6 18	5 23	52	17 13	54			
12	358	54.7	-22	49.6	10	11.8	82	-23	27.4	35	0	5 12	5 38	6 01	5 05	53	17 31	52			
13	13	54.4		49.3	24	39.0	82		23.7	37	10 S	4 54	21	5 44	4 46	55	17 49	50			
14	28	54.1		49.1	39	06.2	82		19.9	38	20	32	5 01	25	26 57		18 08	48			
15	43	53.8		48.9	53	33.6	84		16.1	38	30	4 03	4 36	5 04	4 03	59	30 45				
16	58	53.5		48.6	68	00.9	83		12.0	41	35	3 45	21	4 51	3 50	60	42 44				
17	73	53.2	-22	48.4	82	28.4	85	-23	07.9	41	40	3 23	4 04	4 36	3 34	62	18 57	42			
18	88	52.9	-22	48.1	96	55.9	85	-23	03.6	43	45	2 53	3 42	4 19	3 16	63	19 14	40			
19	103	52.7		47.9	111	23.5	86	-22	59.2	44	50	2 10	3 13	3 57	2 53	65	36 36				
20	118	52.4		47.6	125	51.1	86		54.7	45	52	1 44	2 59	47	41 67		46 35				
21	133	52.1		47.4	140	18.8	87		50.0	47	54	1 05	42	35	29 68		19 58	33			
22	148	51.8		47.1	154	46.6	88		45.3	47	56	** **	2 21	21	2 14	70	20 11	31			
23	163	51.5		46.9	169	14.4	88		40.4	49	58	** **	1 53	3 05	1 57	72	26 28				
24	178	51.2	-22	46.6	183	42.3	89	-22	35.4	50	60 S	** **	1 11	2 46	1 37	74	20 44	24			

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO							
	PMG: 17 ^h 08 ^m 1		Mag: -4.6 PMG: 8 ^h 47 ^m			Mag: +1.2 PMG: 12 ^h 37 ^m			Mag: -2.4 PMG: 16 ^h 59 ^m			Mag: +0.8 PMG: 6 ^h 15 ^m							
	hG ♈		hG ♀		Dec	hG ♂		Dec	hG ♃		Dec	hG ♄		Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'					
0	102	16.5	228	14.4	-15	43.5	170	33.7	-22	56.9	104	41.3	-2	25.1	265	54.8	-4	20.8	
1	117	18.9	243	14.4		44.1	185	34.1		56.6	119	43.4		24.9	280	57.1		20.9	
2	132	21.4	258	14.4		44.6	200	34.5		56.3	134	45.6		24.8	295	59.5		20.9	
3	147	23.9	273	14.4		45.2	215	34.9		56.1	149	47.7		24.6	311	01.9		20.9	
4	162	26.3	288	14.3		45.7	230	35.3		55.8	164	49.9		24.5	326	04.2		20.9	
5	177	28.8	303	14.3	-15	46.3	245	35.6	-22	55.5	179	52.0	-2	24.3	341	06.6	-4	21.0	
6	192	31.3	318	14.3	-15	46.9	260	36.0	-22	55.2	194	54.2	-2	24.2	356	09.0	-4	21.0	
7	207	33.7	333	14.3		47.4	275	36.4		54.9	209	56.3		24.0	11	11.3		21.0	
8	222	36.2	348	14.3		48.0	290	36.8		54.7	224	58.5		23.9	26	13.7		21.1	
9	237	38.7	3	14.3		48.6	305	37.2		54.4	240	00.6		23.7	41	16.1		21.1	
10	252	41.1	18	14.3		49.1	320	37.6		54.1	255	02.8		23.6	56	18.4		21.1	
11	267	43.6	33	14.3	-15	49.7	335	37.9	-22	53.8	270	04.9	-2	23.4	71	20.8	-4	21.1	
12	282	46.1	48	14.3	-15	50.2	350	38.3	-22	53.6	285	07.1	-2	23.3	86	23.2	-4	21.2	
13	297	48.5	63	14.3		50.8	5	38.7		53.3	300	09.2		23.1	101	25.5		21.2	
14	312	51.0	78	14.2		51.4	20	39.1		53.0	315	11.3		23.0	116	27.9		21.2	
15	327	53.4	93	14.2		51.9	35	39.5		52.7	330	13.5		22.9	131	30.3		21.3	
16	342	55.9	108	14.2		52.5	50	39.9		52.4	345	15.6		22.7	146	32.6		21.3	
17	357	58.4	123	14.2	-15	53.0	65	40.2	-22	52.1	0	17.8	-2	22.6	161	35.0	-4	21.3	
18	13	00.8	138	14.2	-15	53.6	80	40.6	-22	51.9	15	19.9	-2	22.4	176	37.4	-4	21.3	
19	28	03.3	153	14.1		54.2	95	41.0		51.6	30	22.1		22.3	191	39.7		21.4	
20	43	05.8	168	14.1		54.7	110	41.4		51.3	45	24.2		22.1	206	42.1		21.4	
21	58	08.2	183	14.1		55.3	125	41.8		51.0	60	26.4		22.0	221	44.5		21.4	
22	73	10.7	198	14.1		55.8	140	42.2		50.7	75	28.5		21.8	236	46.8		21.4	
23	88	13.2	213	14.1		56.4	155	42.5		50.4	90	30.6		21.7	251	49.2		21.5	
24	103	15.6	228	14.0	-15	57.0	170	42.9	-22	50.2	105	32.8	-2	21.5	266	51.6	-4	21.5	
Dif	—		0			-6	+4		+3		+21		+1		+24			0	

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16 ^h 3			Edad: 29 ^d 3	PHE { 4 ^h : 56 ^h 3 12 ^h : 56 ^h 1 20 ^h : 55 ^h 9 Rº: 50 ^m										
	PMG: 12 ^h 04 ^m 8					SD: 15 ^h 3			PMG: 12 ^h 11 ^m						
	hG ☉		Dec	hG ☾ Dif		Dec Dif			Civil	Náutico	Hora	Rº	Hora	Rº	
h	°	'	°	°	'	°	°	h m	h m	h m	h m m		h m m		
0	178	51.2	-22 46.6	183	42.3	-22 35.4	60 N	15 09	16 05	17 01	9 00 19		15 29 84		
1	193	50.9	46.4	198	10.3	90 30.3	58	26	16	08	8 44 22		45 80		
2	208	50.6	46.1	212	38.3	90 25.0	56	40	26	15	30 25		15 59 77		
3	223	50.4	45.9	227	06.4	91 19.6	54	15 52	35	21	18 28		16 11 74		
4	238	50.1	45.6	241	34.6	92 14.2	52	16 02	43	26	8 07 30		21 72		
5	253	49.8	-22 45.3	256	02.8	92 -22 08.6	50	16 12	16 50	17 31	7 57 32		16 30 71		
6	268	49.5	-22 45.1	270	31.2	94 -22 02.9	45	16 32	17 05	17 42	7 37 35		16 50 66		
7	283	49.2	44.8	284	59.5	93 -21 57.0	40	16 48	18	17 52	20 39		17 06 63		
8	298	48.9	44.6	299	28.0	95 51.1	35	17 01	29	18 01	7 06 41		19 61		
9	313	48.6	44.3	313	56.5	95 45.1	30	13	40	09	6 54 43		31 58		
10	328	48.4	44.1	328	25.2	97 38.9	20	34	17 58	25	33 46		17 50 55		
11	343	48.1	-22 43.8	342	53.9	97 -21 32.6	10 N	17 52	18 14	18 41	6 15 49		18 07 52		
12	358	47.8	-22 43.5	357	22.6	97 -21 26.3	0	18 09	18 31	18 57	5 58 51		18 23 49		
13	13	47.5	43.3	11	51.5	99 19.8	10 S	26	18 48	19 15	41 54		39 46		
14	28	47.2	43.0	26	20.4	99 13.2	20	18 44	19 08	19 37	23 56		18 56 43		
15	43	46.9	42.7	40	49.4	100 -21 06.5	30	19 05	32	20 05	5 02 59		19 15 40		
16	58	46.6	42.5	55	18.4	100 -20 59.7	35	18	19 47	23	4 50 61		26 38		
17	73	46.4	-22 42.2	69	47.6	102 -20 52.8	40	19 32	20 05	20 46	4 36 63		19 39 35		
18	88	46.1	-22 41.9	84	16.8	102 -20 45.8	45	19 49	20 26	21 15	4 19 66		19 54 32		
19	103	45.8	41.7	98	46.1	103 38.7	50	20 11	20 55	21 57	3 58 69		20 12 29		
20	118	45.5	41.4	113	15.5	104 31.5	52	21	21 09	22 22	48 71		21 27		
21	133	45.2	41.1	127	44.9	104 24.2	54	33	26	22 59	37 73		31 24		
22	148	44.9	40.9	142	14.5	106 16.8	56	20 47	21 46	** **	24 75		42 22		
23	163	44.7	40.6	156	44.1	106 09.4	58	21 02	22 13	** **	3 09 78		20 54 19		
24	178	44.4	-22 40.3	171	13.8	107 -20 01.8	60 S	21 21	22 52	** **	2 51 83		21 08 16		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 17 ^h 04 ^m 2		Mag: -4.6 PMG: 8 ^h 47 ^m			Mag: +1.2 PMG: 12 ^h 37 ^m			Mag: -2.4 PMG: 16 ^h 55 ^m			Mag: +0.8 PMG: 6 ^h 12 ^m			
	hG ♈		hG ♀ Dec			hG ♂ Dec			hG ♃ Dec			hG ♄ Dec			
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	
0	103	15.6	228 14.0	-15 57.0	170 42.9	-22 50.2	105 32.8	-2 21.5	266 51.6	-4 21.5					
1	118	18.1	243 14.0	57.5	185 43.3	49.9	120 34.9	21.4	281 53.9	21.5					
2	133	20.6	258 14.0	58.1	200 43.7	49.6	135 37.1	21.2	296 56.3	21.5					
3	148	23.0	273 13.9	58.6	215 44.1	49.3	150 39.2	21.1	311 58.7	21.6					
4	163	25.5	288 13.9	59.2	230 44.5	49.0	165 41.4	20.9	327 01.0	21.6					
5	178	27.9	303 13.9	-15 59.7	245 44.8	-22 48.7	180 43.5	-2 20.8	342 03.4	-4 21.6					
6	193	30.4	318 13.9	-16 00.3	260 45.2	-22 48.4	195 45.6	-2 20.6	357 05.8	-4 21.7					
7	208	32.9	333 13.8	00.9	275 45.6	48.1	210 47.8	20.5	12 08.2	21.7					
8	223	35.3	348 13.8	01.4	290 46.0	47.9	225 49.9	20.3	27 10.5	21.7					
9	238	37.8	3 13.8	02.0	305 46.4	47.6	240 52.1	20.2	42 12.9	21.7					
10	253	40.3	18 13.7	02.5	320 46.8	47.3	255 54.2	20.0	57 15.3	21.8					
11	268	42.7	33 13.7	-16 03.1	335 47.1	-22 47.0	270 56.3	-2 19.9	72 17.6	-4 21.8					
12	283	45.2	48 13.6	-16 03.7	350 47.5	-22 46.7	285 58.5	-2 19.7	87 20.0	-4 21.8					
13	298	47.7	63 13.6	04.2	5 47.9	46.4	301 00.6	19.6	102 22.4	21.8					
14	313	50.1	78 13.6	04.8	20 48.3	46.1	316 02.8	19.4	117 24.7	21.9					
15	328	52.6	93 13.5	05.3	35 48.7	45.8	331 04.9	19.3	132 27.1	21.9					
16	343	55.1	108 13.5	05.9	50 49.1	45.5	346 07.0	19.1	147 29.5	21.9					
17	358	57.5	123 13.4	-16 06.4	65 49.4	-22 45.2	1 09.2	-2 19.0	162 31.9	-4 21.9					
18	14	00.0	138 13.4	-16 07.0	80 49.8	-22 44.9	16 11.3	-2 18.8	177 34.2	-4 22.0					
19	29	02.4	153 13.4	07.6	95 50.2	44.6	31 13.5	18.7	192 36.6	22.0					
20	44	04.9	168 13.3	08.1	110 50.6	44.4	46 15.6	18.5	207 39.0	22.0					
21	59	07.4	183 13.3	08.7	125 51.0	44.1	61 17.7	18.4	222 41.4	22.0					
22	74	09.8	198 13.2	09.2	140 51.4	43.8	76 19.9	18.2	237 43.7	22.1					
23	89	12.3	213 13.2	09.8	155 51.8	43.5	91 22.0	18.1	252 46.1	22.1					
24	104	14.8	228 13.1	-16 10.3	170 52.1	-22 43.2	106 24.2	-2 17.9	267 48.5	-4 22.1					
Dif	—		0	-6	+4	+3	+21	+2	+24	0					

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna				
	SD: 16 ^h 3 PMG: 12 ^h 05 ^m 3			Edad: 0 ^d 6 PHE { 4 ^h : 55 ^m 7 12 ^h : 55 ^m 6 20 ^h : 55 ^m 4 PMG: 13 ^h 01 ^m R ^o : 47 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°		
h	°	'	°	°	'	°	'	h	m	h	m	h	m	h	m	m	
0	178	44.4	-22	40.3	171	13.8	-20	01.8	77	60 N	7 08	8 04	9 00	9 19	12	16 53 84	
1	193	44.1		40.1	185	43.5 ¹⁰⁷	-19	54.1	77	58	7 01	7 53	8 44	9 06	16	17 05 80	
2	208	43.8		39.8	200	13.4 ¹⁰⁹		46.3	78	56	6 55	43	30	8 55	19	16 77	
3	223	43.5		39.5	214	43.3 ¹⁰⁹		38.4	79	54	49	35	18	46	21	25 79	
4	238	43.3		39.2	229	13.3 ¹¹⁰		30.5	79	52	44	27	8 07	37	23	33 72	
5	253	43.0	-22	39.0	243	43.4 ¹¹¹	-19	22.4	81	50	6 39	7 20	7 58	8 29	25	17 41 69	
6	268	42.7	-22	38.7	258	13.6 ¹¹²	-19	14.3	81	45	6 28	7 05	7 38	8 12	30	17 56 66	
7	283	42.4		38.4	272	43.8 ¹¹²	-19	06.1	82	40	18	6 52	22	7 59	32	18 09 62	
8	298	42.1		38.1	287	14.1 ¹¹³	-18	57.8	83	35	09	41	7 08	47	35	20 59	
9	313	41.8		37.9	301	44.5 ¹¹⁴		49.4	84	30	6 01	30	6 57	37	37	29 57	
10	328	41.6		37.6	316	15.0 ¹¹⁵		40.9	85	20	5 45	6 12	36	19	41	45 53	
11	343	41.3	-22	37.3	330	45.6 ¹¹⁶	-18	32.3	86	10 N	5 29	5 56	6 18	7 04	44	18 59 50	
12	358	41.0	-22	37.0	345	16.2 ¹¹⁶	-18	23.7	86	0	5 13	5 39	6 02	6 49	48	19 12 46	
13	13	40.7		36.7	359	46.9 ¹¹⁷		15.0	87	10 S	4 55	22	5 45	35	50	25 43	
14	28	40.4		36.5	14	17.7 ¹¹⁸	-18	06.2	88	20	33	5 02	26	19	54	39 39	
15	43	40.2		36.2	28	48.6 ¹¹⁹	-17	57.3	89	30	4 05	4 38	5 05	6 01	58	19 55 35	
16	58	39.9		35.9	43	19.6 ¹²⁰		48.3	90	35	3 47	23	4 53	5 51	60	20 04 33	
17	73	39.6	-22	35.6	57	50.6 ¹²⁰	-17	39.3	90	40	3 25	4 06	4 38	5 39	62	20 14 31	
18	88	39.3	-22	35.3	72	21.7 ¹²¹	-17	30.2	91	45	2 55	3 44	4 21	5 25	65	20 26 27	
19	103	39.0		35.0	86	52.9 ¹²²		21.0	92	50	2 13	16	3 59	5 07	70	41 23	
20	118	38.8		34.8	101	24.1 ¹²²		11.7	93	52	1 48	3 01	49	4 59	72	48 21	
21	133	38.5		34.5	115	55.5 ¹²⁴	-17	02.4	93	54	1 12	2 45	37	50	74	20 55 19	
22	148	38.2		34.2	130	26.9 ¹²⁴	-16	53.0	94	56	** ** *	2 24	24	39	77	21 04 16	
23	163	37.9		33.9	144	58.4 ¹²⁵		43.5	95	58	** ** *	1 58	3 08	27	80	13 14	
24	178	37.6	-22	33.6	159	29.9 ¹²⁵	-16	34.0	95	60 S	** ** *	1 18	2 49	4 14	83	21 24 10	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO					
	PMG: 17 ^h 00 ^m 2		Mag: -4.6 PMG: 8 ^h 47 ^m			Mag: +1.2 PMG: 12 ^h 36 ^m			Mag: -2.4 PMG: 16 ^h 52 ^m			Mag: +0.8 PMG: 6 ^h 08 ^m					
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec				
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°	'	
0	104	14.8	228	13.1	-16	10.3	170	52.1	-22	43.2	106	24.2	-2	17.9	267	48.5	
1	119	17.2	243	13.1		10.9	185	52.5		42.9	121	26.3		17.8	282	50.8	
2	134	19.7	258	13.0		11.5	200	52.9		42.6	136	28.4		17.6	297	53.2	
3	149	22.2	273	13.0		12.0	215	53.3		42.3	151	30.6		17.5	312	55.6	
4	164	24.6	288	12.9		12.6	230	53.7		42.0	166	32.7		17.3	327	58.0	
5	179	27.1	303	12.9	-16	13.1	245	54.1	-22	41.7	181	34.8	-2	17.2	343	00.3	
6	194	29.6	318	12.8	-16	13.7	260	54.5	-22	41.4	196	37.0	-2	17.0	358	02.7	
7	209	32.0	333	12.7		14.2	275	54.8		41.1	211	39.1		16.9	13	05.1	
8	224	34.5	348	12.7		14.8	290	55.2		40.8	226	41.2		16.7	28	07.5	
9	239	36.9	3	12.6		15.3	305	55.6		40.5	241	43.4		16.5	43	09.8	
10	254	39.4	18	12.6		15.9	320	56.0		40.2	256	45.5		16.4	58	12.2	
11	269	41.9	33	12.5	-16	16.5	335	56.4	-22	39.9	271	47.7	-2	16.2	73	14.6	
12	284	44.3	48	12.4	-16	17.0	350	56.8	-22	39.6	286	49.8	-2	16.1	88	17.0	
13	299	46.8	63	12.4		17.6	5	57.2		39.3	301	51.9		15.9	103	19.3	
14	314	49.3	78	12.3		18.1	20	57.5		39.0	316	54.1		15.8	118	21.7	
15	329	51.7	93	12.3		18.7	35	57.9		38.7	331	56.2		15.6	133	24.1	
16	344	54.2	108	12.2		19.2	50	58.3		38.4	346	58.3		15.5	148	26.5	
17	359	56.7	123	12.1	-16	19.8	65	58.7	-22	38.1	2	00.5	-2	15.3	163	28.8	
18	14	59.1	138	12.1	-16	20.3	80	59.1	-22	37.8	17	02.6	-2	15.2	178	31.2	
19	30	01.6	153	12.0		20.9	95	59.5		37.5	32	04.7		15.0	193	33.6	
20	45	04.0	168	11.9		21.4	110	59.9		37.1	47	06.9		14.9	208	36.0	
21	60	06.5	183	11.9		22.0	126	00.2		36.8	62	09.0		14.7	223	38.3	
22	75	09.0	198	11.8		22.5	141	00.6		36.5	77	11.1		14.6	238	40.7	
23	90	11.4	213	11.7		23.1	156	01.0		36.2	92	13.3		14.4	253	43.1	
24	105	13.9	228	11.6	-16	23.7	171	01.4	-22	35.9	107	15.4	-2	14.3	268	45.5	
Dif	—		-1			-6	+4		+3		+21		+2		+24		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 7			Edad: 1 ^d 6 PHE { 4 ^h : 55/3 12 ^h : 55/1 20 ^h : 55/0 PMG: 13 ^h 48 ^m R°: 44 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m m	h m m	h m m				
0	178	37.6	-22	33.6	159	29.9	-16	34.0	60 N	15 13	16 08	17 04	9 31 9	18 17 81				
1	193	37.4		33.3	174	01.6 ¹²⁷		24.3 ⁹⁷	58	29	19	11	22 12	25 78				
2	208	37.1		33.0	188	33.3 ¹²⁷		14.7 ⁹⁶	56	42	29	17	14 15	33 74				
3	223	36.8		32.7	203	05.1 ¹²⁸	-16	04.9 ⁹⁸	54	15 54	37	23	07 17	39 72				
4	238	36.5		32.4	217	37.0 ¹²⁹	-15	55.1 ⁹⁸	52	16 05	45	28	9 00 19	45 70				
5	253	36.3	-22	32.1	232	08.9 ¹²⁹	-15	45.2 ⁹⁹	50	16 14	16 52	17 33	8 54 21	18 50 68				
6	268	36.0	-22	31.8	246	40.9 ¹³⁰	-15	35.3 ⁹⁹	45	16 34	17 07	17 44	8 42 25	19 02 64				
7	283	35.7		31.6	261	13.0 ¹³¹		25.3 ¹⁰⁰	40	16 50	20	17 54	31 28	11 60				
8	298	35.4		31.3	275	45.1 ¹³¹		15.2 ¹⁰¹	35	17 03	31	18 02	22 31	19 58				
9	313	35.2		31.0	290	17.4 ¹³³	-15	05.1 ¹⁰¹	30	15	41	11	14 33	26 55				
10	328	34.9		30.7	304	49.7 ¹³³	-14	54.9 ¹⁰²	20	35	17 59	26	8 00 38	38 51				
11	343	34.6	-22	30.4	319	22.0 ¹³³	-14	44.7 ¹⁰²	10 N	17 53	18 15	18 42	7 48 41	19 49 47				
12	358	34.3	-22	30.1	333	54.5 ¹³⁵	-14	34.4 ¹⁰³	0	18 09	18 32	18 58	7 37 44	19 58 44				
13	13	34.1		29.8	348	27.0 ¹³⁵		24.0 ¹⁰⁴	10 S	26	18 49	19 16	25 48	20 08 40				
14	28	33.8		29.5	2	59.5 ¹³⁵		13.6 ¹⁰⁴	20	18 44	19 09	19 38	7 13 52	18 37				
15	43	33.5		29.2	17	32.2 ¹³⁷	-14	03.2 ¹⁰⁴	30	19 05	33	20 05	6 59 56	30 32				
16	58	33.2		28.9	32	04.9 ¹³⁷	-13	52.7 ¹⁰⁵	35	18	19 47	23	51 58	37 29				
17	73	32.9	-22	28.6	46	37.7 ¹³⁸	-13	42.1 ¹⁰⁶	40	19 32	20 04	20 45	6 41 62	20 45 26				
18	88	32.7	-22	28.3	61	10.5 ¹³⁸	-13	31.5 ¹⁰⁶	45	19 49	20 26	21 14	6 30 65	20 53 24				
19	103	32.4		28.0	75	43.4 ¹³⁹		20.8 ¹⁰⁷	50	20 10	20 54	21 55	17 69	21 04 19				
20	118	32.1		27.7	90	16.4 ¹⁴⁰	-13	10.1 ¹⁰⁷	52	21	21 08	22 20	11 71	09 17				
21	133	31.9		27.3	104	49.4 ¹⁴⁰	-12	59.3 ¹⁰⁸	54	32	24	22 54	6 04 73	14 16				
22	148	31.6		27.0	119	22.5 ¹⁴¹		48.5 ¹⁰⁸	56	20 45	21 44	** **	5 56 76	20 13				
23	163	31.3		26.7	133	55.7 ¹⁴²		37.7 ¹⁰⁸	58	21 01	22 10	** **	47 79	27 10				
24	178	31.0	-22	26.4	148	28.9 ¹⁴²	-12	26.8 ¹⁰⁹	60 S	21 19	22 47	** **	5 37 82	21 34 8				
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 16 ^h 56 ^m 3		Mag: -4.6 PMG: 8 ^h 47 ^m			Mag: +1.2 PMG: 12 ^h 36 ^m			Mag: -2.4 PMG: 16 ^h 49 ^m			Mag: +0.8 PMG: 6 ^h 04 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	°	'	°	°	'	°	°	'	°				
0	105	13.9	228	11.6	-16	171	01.4	-22	107	15.4	-2	268	45.5	-4				
1	120	16.4	243	11.6		186	01.8		122	17.5		283	47.8					
2	135	18.8	258	11.5		201	02.2		137	19.7		298	50.2					
3	150	21.3	273	11.4		216	02.6		152	21.8		313	52.6					
4	165	23.8	288	11.3		231	03.0		167	23.9		328	55.0					
5	180	26.2	303	11.3	-16	246	03.3	-22	182	26.0	-2	343	57.3	-4				
6	195	28.7	318	11.2	-16	261	03.7	-22	197	28.2	-2	358	59.7	-4				
7	210	31.2	333	11.1		276	04.1		212	30.3		14	02.1					
8	225	33.6	348	11.0		291	04.5		227	32.4		29	04.5					
9	240	36.1	3	10.9		306	04.9		242	34.6		44	06.9					
10	255	38.5	18	10.9		321	05.3		257	36.7		59	09.2					
11	270	41.0	33	10.8	-16	336	05.7	-22	272	38.8	-2	74	11.6	-4				
12	285	43.5	48	10.7	-16	351	06.1	-22	287	41.0	-2	89	14.0	-4				
13	300	45.9	63	10.6		6	06.4		302	43.1		104	16.4					
14	315	48.4	78	10.5		21	06.8		317	45.2		119	18.8					
15	330	50.9	93	10.4		36	07.2		332	47.3		134	21.1					
16	345	53.3	108	10.3		51	07.6		347	49.5		149	23.5					
17	0	55.8	123	10.2	-16	66	08.0	-22	2	51.6	-2	164	25.9	-4				
18	15	58.3	138	10.2	-16	81	08.4	-22	17	53.7	-2	179	28.3	-4				
19	31	00.7	153	10.1		96	08.8		32	55.9		194	30.7					
20	46	03.2	168	10.0		111	09.2		47	58.0		209	33.0					
21	61	05.7	183	09.9		126	09.6		63	00.1		224	35.4					
22	76	08.1	198	09.8		141	10.0		78	02.2		239	37.8					
23	91	10.6	213	09.7		156	10.3		93	04.4		254	40.2					
24	106	13.0	228	09.6	-16	171	10.7	-22	108	06.5	-2	269	42.6	-4				
Dif	—		-1			+4			+21			+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 06 ^m 2				Edad: 2 ^d 6 PHE { SD: 14:9 PMG: 14 ^h 32 ^m R°: 41 ^m 4 ^h : 54:8 12 ^h : 54:7 20 ^h : 54:6												
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	178	31.0	-22	26.4	148	28.9	-12	26.8	60 N	7 07	8 03	8 58	9 40	7	19 38	78	
1	193	30.8		26.1	163	02.2 ¹⁴³		15.8 ¹¹⁰	58	7 01	7 52	42	34	9	43	75	
2	208	30.5		25.8	177	35.6 ¹⁴⁴	-12	04.8 ¹¹⁰	56	6 54	43	29	29	12	47	73	
3	223	30.2		25.5	192	09.0 ¹⁴⁴	-11	53.8 ¹¹⁰	54	49	34	17	24	14	51	71	
4	238	29.9		25.2	206	42.4 ¹⁴⁴		42.7 ¹¹¹	52	43	27	8 07	19	17	55	68	
5	253	29.7	-22	24.9	221	16.0 ¹⁴⁶	-11	31.6 ¹¹¹	50	6 39	7 20	7 57	9 15	18	19 58	67	
6	268	29.4	-22	24.6	235	49.5 ¹⁴⁵	-11	20.5 ¹¹¹	45	6 28	7 05	7 38	9 07	22	20 06	62	
7	283	29.1		24.2	250	23.2 ¹⁴⁷	-11	09.3 ¹¹²	40	18	6 52	22	8 59	26	11	59	
8	298	28.9		23.9	264	56.9 ¹⁴⁷	-10	58.0 ¹¹³	35	09	41	7 09	53	28	17	56	
9	313	28.6		23.6	279	30.6 ¹⁴⁷		46.8 ¹¹²	30	6 01	31	6 57	47	31	21	53	
10	328	28.3		23.3	294	04.5 ¹⁴⁹		35.5 ¹¹³	20	5 46	6 13	37	38	35	29	49	
11	343	28.0	-22	23.0	308	38.3 ¹⁴⁸	-10	24.1 ¹¹⁴	10 N	5 30	5 56	6 19	8 29	39	20 36	45	
12	358	27.8	-22	22.7	323	12.2 ¹⁴⁹	-10	12.7 ¹¹⁴	0	5 14	5 40	6 02	8 21	42	20 42	41	
13	13	27.5		22.4	337	46.2 ¹⁵⁰	-10	01.3 ¹¹⁴	10 S	4 56	23	5 46	13	46	48	38	
14	28	27.2		22.0	352	20.2 ¹⁵⁰	-9	49.9 ¹¹⁴	20	34	5 03	28	8 05	49	20 55	34	
15	43	27.0		21.7	6	54.3 ¹⁵¹		38.4 ¹¹⁵	30	4 07	4 39	5 07	7 55	54	21 02	30	
16	58	26.7		21.4	21	28.4 ¹⁵¹		26.9 ¹¹⁵	35	3 49	25	4 54	49	57	06	28	
17	73	26.4	-22	21.1	36	02.6 ¹⁵²	-9	15.4 ¹¹⁵	40	3 27	4 08	4 40	7 43	59	21 11	25	
18	88	26.1	-22	20.8	50	36.8 ¹⁵²	-9	03.8 ¹¹⁶	45	2 58	3 46	4 23	7 35	63	21 17	21	
19	103	25.9		20.4	65	11.1 ¹⁵³	-8	52.2 ¹¹⁶	50	2 17	18	4 02	26	67	23	18	
20	118	25.6		20.1	79	45.4 ¹⁵³		40.6 ¹¹⁶	52	1 53	3 04	3 52	22	69	26	16	
21	133	25.3		19.8	94	19.7 ¹⁵³		28.9 ¹¹⁷	54	1 18	2 48	40	17	71	30	13	
22	148	25.1		19.5	108	54.2 ¹⁵⁵		17.3 ¹¹⁶	56	** ** *	28	27	12	73	33	12	
23	163	24.8		19.1	123	28.6 ¹⁵⁴	-8	05.6 ¹¹⁷	58	** ** *	2 02	3 11	7 06	76	37	9	
24	178	24.5	-22	18.8	138	03.1 ¹⁵⁵	-7	53.8 ¹¹⁸	60 S	** ** *	1 25	2 53	6 59	80	21 42	6	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 16 ^h 52 ^m 4		Mag: -4.6 PMG: 8 ^h 47 ^m		Mag: +1.2 PMG: 12 ^h 35 ^m		Mag: -2.3 PMG: 16 ^h 45 ^m		Mag: +0.8 PMG: 6 ^h 00 ^m	
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄	
h	°	'	°	'	°	'	°	'	°	'
0	106	13.0	228	09.6	171	10.7	108	06.5	269	42.6
1	121	15.5	243	09.5	186	11.1	123	08.6	284	44.9
2	136	18.0	258	09.4	201	11.5	138	10.7	299	47.3
3	151	20.4	273	09.3	216	11.9	153	12.9	314	49.7
4	166	22.9	288	09.2	231	12.3	168	15.0	329	52.1
5	181	25.4	303	09.1	246	12.7	183	17.1	344	54.5
6	196	27.8	318	09.0	261	13.1	198	19.2	359	56.8
7	211	30.3	333	08.9	276	13.5	213	21.4	14	59.2
8	226	32.8	348	08.8	291	13.8	228	23.5	30	01.6
9	241	35.2	3	08.7	306	14.2	243	25.6	45	04.0
10	256	37.7	18	08.6	321	14.6	258	27.7	60	06.4
11	271	40.2	33	08.5	336	15.0	273	29.9	75	08.8
12	286	42.6	48	08.4	351	15.4	288	32.0	90	11.1
13	301	45.1	63	08.3	6	15.8	303	34.1	105	13.5
14	316	47.5	78	08.2	21	16.2	318	36.2	120	15.9
15	331	50.0	93	08.0	36	16.6	333	38.4	135	18.3
16	346	52.5	108	07.9	51	17.0	348	40.5	150	20.7
17	1	54.9	123	07.8	66	17.4	3	42.6	165	23.0
18	16	57.4	138	07.7	81	17.8	18	44.7	180	25.4
19	31	59.9	153	07.6	96	18.1	33	46.9	195	27.8
20	47	02.3	168	07.5	111	18.5	48	49.0	210	30.2
21	62	04.8	183	07.4	126	18.9	63	51.1	225	32.6
22	77	07.3	198	07.2	141	19.3	78	53.2	240	35.0
23	92	09.7	213	07.1	156	19.7	93	55.3	255	37.4
24	107	12.2	228	07.0	171	20.1	108	57.5	270	39.7
Dif	—		-1		+4		+21		+24	

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna					
	SD: 16:3 PMG: 12 ^h 06 ^m 6			Edad: 3 ^d 6 PHE { 4 ^h : 54:5 12 ^h : 54:4 20 ^h : 54:3 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	178	24.5	-22	18.8	138	03.1	-7	53.8	60 N	15 16	16 11	17 07	9 47 6	20 56 77				
1	193	24.3		18.5	152	37.6 ¹⁵⁵		42.1 ¹¹⁷	58	32	22	14	43 9	20 58 74				
2	208	24.0		18.2	167	12.2 ¹⁵⁶		30.3 ¹¹⁸	56	45	31	20	41 10	21 00 72				
3	223	23.7		17.8	181	46.8 ¹⁵⁶		18.5 ¹¹⁸	54	15 57	40	25	38 13	02 69				
4	238	23.5		17.5	196	21.5 ¹⁵⁷		-7 06.7 ¹¹⁸	52	16 07	47	30	36 14	03 68				
5	253	23.2	-22	17.2	210	56.2 ¹⁵⁷		-6 54.8 ¹¹⁹	50	16 16	16 54	17 35	9 33 17	21 05 65				
6	268	22.9	-22	16.8	225	30.9 ¹⁵⁷		-6 43.0 ¹¹⁸	45	16 36	17 09	17 46	9 29 20	21 08 61				
7	283	22.7		16.5	240	05.7 ¹⁵⁸		31.1 ¹¹⁹	40	16 51	22	17 55	25 23	10 58				
8	298	22.4		16.2	254	40.5 ¹⁵⁸		19.2 ¹¹⁹	35	17 05	33	18 04	21 27	13 55				
9	313	22.1		15.8	269	15.3 ¹⁵⁸		-6 07.3 ¹¹⁹	30	16	17 42	12	18 29	14 53				
10	328	21.9		15.5	283	50.2 ¹⁵⁹		-5 55.4 ¹¹⁹	20	36	18 00	27	13 33	18 48				
11	343	21.6	-22	15.2	298	25.1 ¹⁵⁹		-5 43.4 ¹²⁰	10 N	17 54	18 16	18 43	9 08 37	21 21 44				
12	358	21.3	-22	14.8	313	00.1 ¹⁶⁰		-5 31.4 ¹²⁰	0	18 10	18 33	18 59	9 03 41	21 23 41				
13	13	21.1		14.5	327	35.0 ¹⁵⁹		19.5 ¹¹⁹	10 S	27	18 50	19 17	8 59 44	26 37				
14	28	20.8		14.2	342	10.0 ¹⁶⁰		-5 07.5 ¹²⁰	20	18 45	19 09	19 38	54 49	29 33				
15	43	20.5		13.8	356	45.1 ¹⁶¹		-4 55.4 ¹²¹	30	19 06	33	20 05	49 53	32 28				
16	58	20.3		13.5	11	20.1 ¹⁶⁰		43.4 ¹²⁰	35	18	19 47	23	46 55	34 26				
17	73	20.0	-22	13.1	25	55.2 ¹⁶¹		-4 31.4 ¹²⁰	40	19 32	20 04	20 45	8 42 58	21 36 23				
18	88	19.7	-22	12.8	40	30.4 ¹⁶²		-4 19.3 ¹²¹	45	19 49	20 25	21 13	8 38 62	21 38 20				
19	103	19.5		12.5	55	05.5 ¹⁶¹		-4 07.3 ¹²⁰	50	20 10	20 53	21 53	33 66	41 16				
20	118	19.2		12.1	69	40.7 ¹⁶²		-3 55.2 ¹²¹	52	20	21 06	22 17	31 67	42 14				
21	133	19.0		11.8	84	15.9 ¹⁶²		43.1 ¹²¹	54	31	22	22 49	28 70	43 13				
22	148	18.7		11.4	98	51.1 ¹⁶²		31.0 ¹²¹	56	44	21 42	** **	25 72	45 10				
23	163	18.4		11.1	113	26.3 ¹⁶²		19.0 ¹²⁰	58	20 59	22 07	** **	22 75	46 9				
24	178	18.2	-22	10.7	128	01.6 ¹⁶³		-3 06.8 ¹²²	60 S	21 17	22 42	** **	8 19 77	21 48 6				
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 16 ^h 48 ^m 4		Mag: -4.6 PMG: 8 ^h 48 ^m				Mag: +1.2 PMG: 12 ^h 34 ^m				Mag: -2.3 PMG: 16 ^h 42 ^m				Mag: +0.8 PMG: 5 ^h 56 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	107	12.2	228	07.0	-16	49.9	171	20.1	-22	20.7	108	57.5	-2	06.8	270	39.7	-4	23.8
1	122	14.6	243	06.9		50.5	186	20.5		20.3	123	59.6		06.6	285	42.1		23.8
2	137	17.1	258	06.8		51.0	201	20.9		20.0	139	01.7		06.5	300	44.5		23.8
3	152	19.6	273	06.7		51.6	216	21.3		19.7	154	03.8		06.3	315	46.9		23.8
4	167	22.0	288	06.5		52.1	231	21.7		19.3	169	06.0		06.1	330	49.3		23.8
5	182	24.5	303	06.4	-16	52.7	246	22.1	-22	19.0	184	08.1	-2	06.0	345	51.7	-4	23.9
6	197	27.0	318	06.3	-16	53.2	261	22.5	-22	18.7	199	10.2	-2	05.8	0	54.0	-4	23.9
7	212	29.4	333	06.2		53.7	276	22.9		18.4	214	12.3		05.7	15	56.4		23.9
8	227	31.9	348	06.0		54.3	291	23.2		18.0	229	14.4		05.5	30	58.8		23.9
9	242	34.4	3	05.9		54.8	306	23.6		17.7	244	16.6		05.4	46	01.2		23.9
10	257	36.8	18	05.8		55.4	321	24.0		17.4	259	18.7		05.2	61	03.6		23.9
11	272	39.3	33	05.7	-16	55.9	336	24.4	-22	17.0	274	20.8	-2	05.0	76	06.0	-4	24.0
12	287	41.8	48	05.5	-16	56.4	351	24.8	-22	16.7	289	22.9	-2	04.9	91	08.4	-4	24.0
13	302	44.2	63	05.4		57.0	6	25.2		16.4	304	25.0		04.7	106	10.8		24.0
14	317	46.7	78	05.3		57.5	21	25.6		16.0	319	27.1		04.6	121	13.1		24.0
15	332	49.1	93	05.1		58.1	36	26.0		15.7	334	29.3		04.4	136	15.5		24.0
16	347	51.6	108	05.0		58.6	51	26.4		15.4	349	31.4		04.2	151	17.9		24.1
17	2	54.1	123	04.9	-16	59.1	66	26.8	-22	15.0	4	33.5	-2	04.1	166	20.3	-4	24.1
18	17	56.5	138	04.7	-16	59.7	81	27.2	-22	14.7	19	35.6	-2	03.9	181	22.7	-4	24.1
19	32	59.0	153	04.6	-17	00.2	96	27.6		14.3	34	37.7		03.8	196	25.1		24.1
20	48	01.5	168	04.5		00.7	111	28.0		14.0	49	39.9		03.6	211	27.5		24.1
21	63	03.9	183	04.3		01.3	126	28.4		13.7	64	42.0		03.4	226	29.9		24.2
22	78	06.4	198	04.2		01.8	141	28.8		13.3	79	44.1		03.3	241	32.2		24.2
23	93	08.9	213	04.0		02.4	156	29.1		13.0	94	46.2		03.1	256	34.6		24.2
24	108	11.3	228	03.9	-17	02.9	171	29.5	-22	12.7	109	48.3	-2	03.0	271	37.0	-4	24.2
Dif	—		-1		-5		+4		+3		+21		+2		+24			

UT	SOL				LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'3 PMG: 12 ^h 07 ^m 0				Edad: 4 ^d 6 PHE { SD: 14'8 PMG: 15 ^h 54 ^m												
	hG ☉		Dec		hG ☾		Dif						Hora		R°		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	178	18.2	-22	10.7	128	01.6	-3	06.8	60 N	7	06	8	01	8	56	9	53
1	193	17.9		10.4	142	36.9 ¹⁶³	-2	54.7 ¹²¹	58	7	00	7	51	41	52	8	12
2	208	17.6		10.1	157	12.2 ¹⁶³		42.6 ¹²¹	56	6	53	42	27	51	11	12	71
3	223	17.4		09.7	171	47.5 ¹⁶³		30.5 ¹²¹	54		48	33	16	51	13	11	66
4	238	17.1		09.4	186	22.9 ¹⁶⁴		18.4 ¹²¹	52		43	26	8	06	50	15	11
5	253	16.9	-22	09.0	200	58.2 ¹⁶³	-2	06.2 ¹²²	50	6	38	7	19	7	57	9	50
6	268	16.6	-22	08.7	215	33.6 ¹⁶⁴	-1	54.1 ¹²¹	45	6	27	7	04	7	37	9	49
7	283	16.3		08.3	230	09.0 ¹⁶⁴		42.0 ¹²¹	40		18	6	52	22	48	24	08
8	298	16.1		08.0	244	44.4 ¹⁶⁴		29.8 ¹²²	35		09	41	7	09	48	26	08
9	313	15.8		07.6	259	19.8 ¹⁶⁴		17.7 ¹²¹	30	6	01	31	6	57	47	29	07
10	328	15.6		07.3	273	55.2 ¹⁶⁴	-1	05.5 ¹²²	20	5	46	6	13	37	46	33	06
11	343	15.3	-22	06.9	288	30.7 ¹⁶⁵	-0	53.4 ¹²¹	10 N	5	31	5	57	6	20	9	45
12	358	15.0	-22	06.6	303	06.1 ¹⁶⁴	-0	41.3 ¹²¹	0	5	15	5	41	6	03	9	44
13	13	14.8		06.2	317	41.6 ¹⁶⁵		29.1 ¹²²	10 S	4	57	24	5	47	43	44	03
14	28	14.5		05.8	332	17.1 ¹⁶⁵		17.0 ¹²¹	20		36	5	05	29	43	47	02
15	43	14.3		05.5	346	52.5 ¹⁶⁴	-0	04.8 ¹²²	30	4	08	4	41	5	08	42	52
16	58	14.0		05.1	1	28.0 ¹⁶⁵	+0	07.3 ¹²¹	35	3	51	27	4	56	41	55	22
17	73	13.7	-22	04.8	16	03.5 ¹⁶⁵	+0	19.4 ¹²¹	40	3	29	4	10	4	42	9	40
18	88	13.5	-22	04.4	30	39.0 ¹⁶⁵	+0	31.6 ¹²²	45	3	01	3	49	4	25	9	40
19	103	13.2		04.1	45	14.5 ¹⁶⁵		43.7 ¹²¹	50	2	20	21	4	04	39	65	57
20	118	13.0		03.7	59	50.0 ¹⁶⁵	+0	55.8 ¹²¹	52	1	57	3	08	3	54	38	67
21	133	12.7		03.3	74	25.5 ¹⁶⁵	+1	07.9 ¹²¹	54	1	25	2	52	43	38	69	56
22	148	12.4		03.0	89	01.0 ¹⁶⁵		20.1 ¹²²	56	** ** *		32	30		37	72	55
23	163	12.2		02.6	103	36.5 ¹⁶⁵		32.2 ¹²¹	58	** ** *	2	07	3	15	37	74	55
24	178	11.9	-22	02.3	118	12.0 ¹⁶⁵	+1	44.2 ¹²⁰	60 S	** ** *	1	32	2	57	9	36	77

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 16 ^h 44 ^m 5		Mag: -4.6 PMG: 8 ^h 48 ^m		Mag: +1.2 PMG: 12 ^h 34 ^m		Mag: -2.3 PMG: 16 ^h 38 ^m		Mag: +0.8 PMG: 5 ^h 53 ^m	
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄	
h	°	'	°	'	°	'	°	'	°	'
0	108	11.3	228	03.9	171	29.5	109	48.3	271	37.0
1	123	13.8	243	03.8	186	29.9	124	50.4	286	39.4
2	138	16.3	258	03.6	201	30.3	139	52.5	301	41.8
3	153	18.7	273	03.5	216	30.7	154	54.7	316	44.2
4	168	21.2	288	03.3	231	31.1	169	56.8	331	46.6
5	183	23.6	303	03.2	246	31.5	184	58.9	346	49.0
6	198	26.1	318	03.0	261	31.9	200	01.0	1	51.4
7	213	28.6	333	02.9	276	32.3	215	03.1	16	53.7
8	228	31.0	348	02.7	291	32.7	230	05.2	31	56.1
9	243	33.5	3	02.6	306	33.1	245	07.4	46	58.5
10	258	36.0	18	02.4	321	33.5	260	09.5	62	00.9
11	273	38.4	33	02.3	336	33.9	275	11.6	77	03.3
12	288	40.9	48	02.1	351	34.3	290	13.7	92	05.7
13	303	43.4	63	02.0	6	34.7	305	15.8	107	08.1
14	318	45.8	78	01.8	21	35.1	320	17.9	122	10.5
15	333	48.3	93	01.7	36	35.5	335	20.0	137	12.9
16	348	50.7	108	01.5	51	35.9	350	22.1	152	15.3
17	3	53.2	123	01.4	66	36.3	5	24.3	167	17.7
18	18	55.7	138	01.2	81	36.7	20	26.4	182	20.0
19	33	58.1	153	01.1	96	37.1	35	28.5	197	22.4
20	49	00.6	168	00.9	111	37.5	50	30.6	212	24.8
21	64	03.1	183	00.7	126	37.9	65	32.7	227	27.2
22	79	05.5	198	00.6	141	38.2	80	34.8	242	29.6
23	94	08.0	213	00.4	156	38.6	95	36.9	257	32.0
24	109	10.5	228	00.3	171	39.0	110	39.0	272	34.4
Dif	—		-2		+4		+21		+24	
			-5		+3		+2		0	

UT	SOL			 LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 16/3			Edad: 5 ^d 6	PHE { 4 ^h : 54/1 12 ^h : 54/2 20 ^h : 54/2	Puesta de Sol			Final del crepúsculo		Salida de Luna		Puesta de Luna		
	PMG: 12 ^h 07 ^m 4					R ^o : 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	178	11.9	-22 02.3	118	12.0	+1 44.2		60 N	15 20	16 15	17 10	9 58 6	23 30 78		
1	193	11.7	01.9	132	47.5 ¹⁶⁵	+1 56.3 ¹²¹		58	36	25	16	10 00 9	26 75		
2	208	11.4	01.5	147	23.0 ¹⁶⁵	+2 08.4 ¹²¹		56	15 49	34	22	02 11	23 72		
3	223	11.2	01.2	161	58.5 ¹⁶⁵	20.5 ¹²¹		54	16 00	42	28	04 13	20 70		
4	238	10.9	00.8	176	34.0 ¹⁶⁵	32.5 ¹²⁰		52	10	50	33	05 15	18 67		
5	253	10.7	-22 00.4	191	09.4 ¹⁶⁴	+2 44.6 ¹²¹		50	16 19	16 57	17 37	10 06 17	23 15 66		
6	268	10.4	-22 00.1	205	44.9 ¹⁶⁵	+2 56.6 ¹²⁰		45	16 38	17 11	17 48	10 09 21	23 10 62		
7	283	10.1	-21 59.7	220	20.4 ¹⁶⁵	+3 08.7 ¹²¹		40	16 53	24	17 57	12 24	06 58		
8	298	09.9	59.3	234	55.8 ¹⁶⁴	20.7 ¹²⁰		35	17 07	34	18 06	14 27	23 02 56		
9	313	09.6	59.0	249	31.3 ¹⁶⁵	32.7 ¹²⁰		30	18	17 44	14	16 29	22 59 53		
10	328	09.4	58.6	264	06.7 ¹⁶⁴	44.7 ¹²⁰		20	38	18 01	29	19 33	54 48		
11	343	09.1	-21 58.2	278	42.1 ¹⁶⁴	+3 56.6 ¹¹⁹		10 N	17 55	18 17	18 44	10 22 37	22 49 45		
12	358	08.9	-21 57.8	293	17.6 ¹⁶⁵	+4 08.6 ¹²⁰		0	18 11	18 33	18 59	10 25 40	22 44 42		
13	13	08.6	57.5	307	53.0 ¹⁶⁴	20.5 ¹¹⁹		10 S	27	18 50	19 17	27 45	40 38		
14	28	08.4	57.1	322	28.3 ¹⁶³	32.5 ¹²⁰		20	18 45	19 09	19 38	30 49	35 34		
15	43	08.1	56.7	337	03.7 ¹⁶⁴	44.4 ¹¹⁹		30	19 06	33	20 05	34 52	29 30		
16	58	07.9	56.4	351	39.1 ¹⁶⁴	+4 56.3 ¹¹⁹		35	18	19 47	22	36 55	26 28		
17	73	07.6	-21 56.0	6	14.4 ¹⁶³	+5 08.1 ¹¹⁸		40	19 31	20 03	20 44	10 38 58	22 23 24		
18	88	07.4	-21 55.6	20	49.7 ¹⁶³	+5 20.0 ¹¹⁹		45	19 48	20 24	21 11	10 41 61	22 18 22		
19	103	07.1	55.2	35	25.0 ¹⁶³	31.8 ¹¹⁸		50	20 09	20 51	21 51	44 65	14 17		
20	118	06.8	54.9	50	00.3 ¹⁶³	43.6 ¹¹⁸		52	18	21 05	22 13	45 68	11 16		
21	133	06.6	54.5	64	35.5 ¹⁶²	+5 55.4 ¹¹⁸		54	29	20	22 44	47 69	09 14		
22	148	06.3	54.1	79	10.7 ¹⁶²	+6 07.2 ¹¹⁸		56	42	21 39	** **	49 72	06 12		
23	163	06.1	53.7	93	46.0 ¹⁶³	19.0 ¹¹⁸		58	20 57	22 03	** **	51 74	03 9		
24	178	05.8	-21 53.3	108	21.1 ¹⁶¹	+6 30.7 ¹¹⁷		60 S	21 14	22 36	** **	10 53 77	22 00 6		
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 16 ^h 40 ^m 6			Mag: -4.5 PMG: 8 ^h 48 ^m			Mag: +1.2 PMG: 12 ^h 33 ^m			Mag: -2.3 PMG: 16 ^h 35 ^m			Mag: +0.7 PMG: 5 ^h 49 ^m		
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	°	'	°	'	°	'	°	'	°	°	'	°
0	109	10.5	228 00.3	-17 15.7		171 39.0	-22 04.4		110 39.0	-1 59.1		272 34.4	-4 24.6		
1	124	12.9	243 00.1	16.2		186 39.4	04.0		125 41.2	58.9		287 36.8	24.7		
2	139	15.4	257 59.9	16.7		201 39.8	03.7		140 43.3	58.8		302 39.2	24.7		
3	154	17.9	272 59.8	17.3		216 40.2	03.3		155 45.4	58.6		317 41.6	24.7		
4	169	20.3	287 59.6	17.8		231 40.6	03.0		170 47.5	58.4		332 44.0	24.7		
5	184	22.8	302 59.4	-17 18.3		246 41.0	-22 02.6		185 49.6	-1 58.3		347 46.4	-4 24.7		
6	199	25.2	317 59.3	-17 18.8		261 41.4	-22 02.3		200 51.7	-1 58.1		2 48.8	-4 24.7		
7	214	27.7	332 59.1	19.4		276 41.8	01.9		215 53.8	57.9		17 51.1	24.8		
8	229	30.2	347 58.9	19.9		291 42.2	01.6		230 55.9	57.8		32 53.5	24.8		
9	244	32.6	2 58.8	20.4		306 42.6	01.2		245 58.0	57.6		47 55.9	24.8		
10	259	35.1	17 58.6	21.0		321 43.0	00.9		261 00.1	57.5		62 58.3	24.8		
11	274	37.6	32 58.4	-17 21.5		336 43.4	-22 00.5		276 02.2	-1 57.3		78 00.7	-4 24.8		
12	289	40.0	47 58.2	-17 22.0		351 43.8	-22 00.2		291 04.4	-1 57.1		93 03.1	-4 24.8		
13	304	42.5	62 58.1	22.5		6 44.2	-21 59.8		306 06.5	57.0		108 05.5	24.8		
14	319	45.0	77 57.9	23.1		21 44.6	59.5		321 08.6	56.8		123 07.9	24.9		
15	334	47.4	92 57.7	23.6		36 45.0	59.1		336 10.7	56.6		138 10.3	24.9		
16	349	49.9	107 57.5	24.1		51 45.4	58.7		351 12.8	56.5		153 12.7	24.9		
17	4	52.3	122 57.4	-17 24.6		66 45.8	-21 58.4		6 14.9	-1 56.3		168 15.1	-4 24.9		
18	19	54.8	137 57.2	-17 25.2		81 46.2	-21 58.0		21 17.0	-1 56.2		183 17.5	-4 24.9		
19	34	57.3	152 57.0	25.7		96 46.6	57.7		36 19.1	56.0		198 19.9	24.9		
20	49	59.7	167 56.8	26.2		111 47.0	57.3		51 21.2	55.8		213 22.3	25.0		
21	65	02.2	182 56.6	26.7		126 47.4	57.0		66 23.3	55.7		228 24.7	25.0		
22	80	04.7	197 56.5	27.2		141 47.8	56.6		81 25.4	55.5		243 27.1	25.0		
23	95	07.1	212 56.3	27.8		156 48.2	56.2		96 27.5	55.3		258 29.5	25.0		
24	110	09.6	227 56.1	-17 28.3		171 48.6	-21 55.9		111 29.6	-1 55.2		273 31.9	-4 25.0		
Dif	—			-2	-5	+4	+4		+21	+2		+24			

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna			Puesta de Luna		
	SD: 16'3 PMG: 12 ^h 07 ^m 8			Edad: 6 ^d 6 SD: 14'8 PMG: 17 ^h 15 ^m	PHE { 4 ^h : 54'2 12 ^h : 54'3 20 ^h : 54'4 R°: 43 ^m											
	hG ☉	Dec				hG ☾		Dif	Dec		Dif	Náutico	Civil	Hora	R°	Hora
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m
0	178	05.8	-21	53.3	108	21.1	+6	30.7	60 N	7 05	8 00	8 54	10 04	8	***	***
1	193	05.6		53.0	122	56.3 ¹⁶²		42.4 ¹¹⁷	58	6 58	7 49	39	09	10	***	***
2	208	05.3		52.6	137	31.4 ¹⁶¹	+6	54.1 ¹¹⁷	56	52	40	26	13	13	***	***
3	223	05.1		52.2	152	06.5 ¹⁶¹	+7	05.8 ¹¹⁷	54	47	32	14	17	15	***	***
4	238	04.8		51.8	166	41.6 ¹⁶¹		17.4 ¹¹⁶	52	42	25	8 04	20	17	***	***
5	253	04.6	-21	51.4	181	16.6 ¹⁶⁰	+7	29.0 ¹¹⁶	50	6 37	7 18	7 56	10 23	19	***	***
6	268	04.3	-21	51.0	195	51.7 ¹⁶¹	+7	40.6 ¹¹⁶	45	6 27	7 04	7 37	10 30	23	***	***
7	283	04.1		50.7	210	26.6 ¹⁵⁹	+7	52.2 ¹¹⁶	40	18	6 51	21	36	26	***	***
8	298	03.8		50.3	225	01.6 ¹⁶⁰	+8	03.7 ¹¹⁵	35	09	41	7 08	41	28	23	58
9	313	03.6		49.9	239	36.5 ¹⁵⁹		15.2 ¹¹⁵	30	6 01	31	6 57	45	31	52	55
10	328	03.4		49.5	254	11.4 ¹⁵⁹		26.7 ¹¹⁵	20	5 46	6 14	37	52	36	42	51
11	343	03.1	-21	49.1	268	46.3 ¹⁵⁹	+8	38.1 ¹¹⁴	10 N	5 32	5 58	6 20	10 59	39	23	34
12	358	02.9	-21	48.7	283	21.1 ¹⁵⁸	+8	49.6 ¹¹⁵	0	5 16	5 42	6 04	11 05	43	23	26
13	13	02.6		48.3	297	55.8 ¹⁵⁷	+9	00.9 ¹¹³	10 S	4 58	25	5 48	12	46	18	40
14	28	02.4		47.9	312	30.6 ¹⁵⁸		12.3 ¹¹⁴	20	37	5 06	30	19	49	23	09
15	43	02.1		47.5	327	05.3 ¹⁵⁷		23.6 ¹¹³	30	4 10	4 43	5 10	26	54	22	59
16	58	01.9		47.2	341	40.0 ¹⁵⁷		34.9 ¹¹³	35	3 53	29	4 58	31	56	54	30
17	73	01.6	-21	46.8	356	14.6 ¹⁵⁶	+9	46.2 ¹¹³	40	3 32	4 12	4 44	11 36	59	22	47
18	88	01.4	-21	46.4	10	49.2 ¹⁵⁶	+9	57.4 ¹¹²	45	3 04	3 51	4 27	11 42	63	22	40
19	103	01.1		46.0	25	23.7 ¹⁵⁵	+10	08.6 ¹¹²	50	2 24	24	4 07	49	67	31	21
20	118	00.9		45.6	39	58.2 ¹⁵⁵		19.8 ¹¹²	52	2 02	3 11	3 57	53	68	27	19
21	133	00.6		45.2	54	32.6 ¹⁵⁴		30.9 ¹¹¹	54	1 31	2 55	46	11 56	71	23	16
22	148	00.4		44.8	69	07.0 ¹⁵⁴		42.0 ¹¹¹	56	0 27	36	34	12 01	73	18	14
23	163	00.1		44.4	83	41.4 ¹⁵⁴	+10	53.0 ¹¹⁰	58	***	2 13	19	05	76	12	12
24	177	59.9	-21	44.0	98	15.7 ¹⁵³	+11	04.0 ¹¹⁰	60 S	***	1 39	3 01	12 10	79	22	06

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG 16 ^h 36 ^m 6		Mag: -4.5 PMG: 8 ^h 48 ^m		Mag: +1.2 PMG: 12 ^h 32 ^m		Mag: -2.3 PMG: 16 ^h 32 ^m		Mag: +0.7 PMG: 5 ^h 45 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	110	09.6	227	56.1	-17	28.3	171	48.6	-21	55.9	111	29.6	-1	55.2	273	31.9	-4	25.0
1	125	12.1	242	55.9		28.8	186	49.0		55.5	126	31.7		55.0	288	34.3		25.0
2	140	14.5	257	55.7		29.3	201	49.4		55.2	141	33.9		54.8	303	36.7		25.0
3	155	17.0	272	55.5		29.9	216	49.8		54.8	156	36.0		54.7	318	39.1		25.1
4	170	19.5	287	55.4		30.4	231	50.2		54.4	171	38.1		54.5	333	41.5		25.1
5	185	21.9	302	55.2	-17	30.9	246	50.6	-21	54.1	186	40.2	-1	54.3	348	43.9	-4	25.1
6	200	24.4	317	55.0	-17	31.4	261	51.0	-21	53.7	201	42.3	-1	54.2	3	46.3	-4	25.1
7	215	26.8	332	54.8		31.9	276	51.4		53.4	216	44.4		54.0	18	48.7		25.1
8	230	29.3	347	54.6		32.4	291	51.8		53.0	231	46.5		53.8	33	51.0		25.1
9	245	31.8	2	54.4		33.0	306	52.2		52.6	246	48.6		53.7	48	53.4		25.1
10	260	34.2	17	54.2		33.5	321	52.6		52.3	261	50.7		53.5	63	55.8		25.2
11	275	36.7	32	54.0	-17	34.0	336	53.0	-21	51.9	276	52.8	-1	53.4	78	58.2	-4	25.2
12	290	39.2	47	53.8	-17	34.5	351	53.4	-21	51.5	291	54.9	-1	53.2	94	00.6	-4	25.2
13	305	41.6	62	53.6		35.0	6	53.8		51.2	306	57.0		53.0	109	03.0		25.2
14	320	44.1	77	53.4		35.6	21	54.2		50.8	321	59.1		52.9	124	05.4		25.2
15	335	46.6	92	53.2		36.1	36	54.6		50.4	337	01.2		52.7	139	07.8		25.2
16	350	49.0	107	53.0		36.6	51	55.0		50.1	352	03.3		52.5	154	10.2		25.2
17	5	51.5	122	52.8	-17	37.1	66	55.4	-21	49.7	7	05.4	-1	52.4	169	12.6	-4	25.3
18	20	54.0	137	52.6	-17	37.6	81	55.8	-21	49.3	22	07.5	-1	52.2	184	15.0	-4	25.3
19	35	56.4	152	52.4		38.1	96	56.2		49.0	37	09.6		52.0	199	17.4		25.3
20	50	58.9	167	52.2		38.6	111	56.6		48.6	52	11.7		51.9	214	19.8		25.3
21	66	01.3	182	52.0		39.2	126	57.0		48.2	67	13.8		51.7	229	22.2		25.3
22	81	03.8	197	51.8		39.7	141	57.4		47.9	82	15.9		51.5	244	24.6		25.3
23	96	06.3	212	51.6		40.2	156	57.8		47.5	97	18.0		51.4	259	27.0		25.3
24	111	08.7	227	51.4	-17	40.7	171	58.2	-21	47.1	112	20.1	-1	51.2	274	29.4	-4	25.4
Dif	—		-2	-5			+4	+4			+21	+2			+24			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 2			Edad: 7 ^d 6 SD: 14/8 PMG: 17 ^h 58 ^m	PHE { 4 ^h : 54/5 12 ^h : 54/6 20 ^h : 54/7 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	
0	177	59.9	-21	44.0	98	15.7	+11	04.0	60 N	15 24	16 18	17 13	10 12	10	0 48	80		
1	192	59.7		43.6	112	50.0 ¹⁵³		15.0 ¹¹⁰	58	39	28	19	19	14	41	77		
2	207	59.4		43.2	127	24.2 ¹⁵²		25.9 ¹⁰⁹	56	15 52	37	25	26	16	35	74		
3	222	59.2		42.8	141	58.4 ¹⁵²		36.8 ¹⁰⁹	54	16 03	45	30	32	18	30	71		
4	237	58.9		42.4	156	32.5 ¹⁵¹		47.7 ¹⁰⁹	52	13	53	35	37	21	25	69		
5	252	58.7	-21	42.0	171	06.5 ¹⁵⁰	+11	58.5 ¹⁰⁸	50	16 22	16 59	17 40	10 42	23	0 21	67		
6	267	58.4	-21	41.6	185	40.6 ¹⁵¹	+12	09.2 ¹⁰⁷	45	16 40	17 13	17 50	10 53	26	0 12	63		
7	282	58.2		41.2	200	14.5 ¹⁴⁹		20.0 ¹⁰⁸	40	16 56	25	17 59	11 02	29	0 04	60		
8	297	58.0		40.8	214	48.4 ¹⁴⁹		30.7 ¹⁰⁷	35	17 08	36	18 07	09	32	**	**	**	
9	312	57.7		40.4	229	22.3 ¹⁴⁹		41.3 ¹⁰⁶	30	20	17 46	15	16	34	**	**	**	
10	327	57.5		40.0	243	56.1 ¹⁴⁸	+12	51.9 ¹⁰⁶	20	39	18 03	30	28	38	**	**	**	
11	342	57.2	-21	39.6	258	29.8 ¹⁴⁷	+13	02.4 ¹⁰⁵	10 N	17 56	18 18	18 44	11 38	42	**	**	**	
12	357	57.0	-21	39.2	273	03.5 ¹⁴⁷	+13	12.9 ¹⁰⁵	0	18 12	18 34	19 00	11 48	45	**	**	**	
13	12	56.7		38.7	287	37.1 ¹⁴⁶		23.4 ¹⁰⁵	10 S	28	18 51	17	11 58	48	23	58	43	
14	27	56.5		38.3	302	10.6 ¹⁴⁵		33.8 ¹⁰⁴	20	18 45	19 09	19 38	12 08	52	46	40		
15	42	56.3		37.9	316	44.1 ¹⁴⁵		44.1 ¹⁰³	30	19 05	32	20 05	20	56	32	36		
16	57	56.0		37.5	331	17.6 ¹⁴⁵	+13	54.4 ¹⁰³	35	17	19 46	22	27	58	24	34		
17	72	55.8	-21	37.1	345	51.0 ¹⁴⁴	+14	04.7 ¹⁰³	40	19 31	20 03	20 43	12 35	61	23	15	31	
18	87	55.5	-21	36.7	0	24.3 ¹⁴³	+14	14.9 ¹⁰²	45	19 47	20 23	21 10	12 45	63	23	04	29	
19	102	55.3		36.3	14	57.5 ¹⁴²		25.0 ¹⁰¹	50	20 07	20 49	21 48	12 56	68	22	52	24	
20	117	55.1		35.9	29	30.7 ¹⁴²		35.1 ¹⁰¹	52	17	21 03	22 10	13 01	70	46	22		
21	132	54.8		35.5	44	03.8 ¹⁴¹		45.2 ¹⁰¹	54	28	18	22 39	07	72	39	21		
22	147	54.6		35.0	58	36.9 ¹⁴¹	+14	55.2 ¹⁰⁰	56	40	36	23 30	14	74	32	18		
23	162	54.4		34.6	73	09.9 ¹⁴⁰	+15	05.1 ⁹⁹	58	20 54	21 59	** **	21	78	24	15		
24	177	54.1	-21	34.2	87	42.8 ¹³⁹	+15	15.0 ⁹⁹	60 S	21 11	22 30	** **	13 29	82	22	15	12	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG 16 ^h 32 ^m 7		Mag: -4.5 PMG: 8 ^h 49 ^m			Mag: +1.2 PMG: 12 ^h 32 ^m			Mag: -2.3 PMG: 16 ^h 28 ^m			Mag: +0.7 PMG: 5 ^h 41 ^m						
	hG ♈	Dec	hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	111	08.7	227	51.4	-17	40.7	171	58.2	-21	47.1	112	20.1	-1	51.2	274	29.4	-4	25.4
1	126	11.2	242	51.2		41.2	186	58.6		46.8	127	22.2		51.0	289	31.8		25.4
2	141	13.7	257	51.0		41.7	201	59.0		46.4	142	24.3		50.9	304	34.2		25.4
3	156	16.1	272	50.8		42.2	216	59.4		46.0	157	26.4		50.7	319	36.6		25.4
4	171	18.6	287	50.6		42.8	231	59.9		45.6	172	28.5		50.5	334	39.0		25.4
5	186	21.1	302	50.4	-17	43.3	247	00.3	-21	45.3	187	30.6	-1	50.4	349	41.4	-4	25.4
6	201	23.5	317	50.2	-17	43.8	262	00.7	-21	44.9	202	32.7	-1	50.2	4	43.8	-4	25.4
7	216	26.0	332	50.0		44.3	277	01.1		44.5	217	34.8		50.0	19	46.3		25.4
8	231	28.4	347	49.8		44.8	292	01.5		44.1	232	36.9		49.9	34	48.7		25.5
9	246	30.9	2	49.6		45.3	307	01.9		43.8	247	39.0		49.7	49	51.1		25.5
10	261	33.4	17	49.3		45.8	322	02.3		43.4	262	41.1		49.5	64	53.5		25.5
11	276	35.8	32	49.1	-17	46.3	337	02.7	-21	43.0	277	43.2	-1	49.4	79	55.9	-4	25.5
12	291	38.3	47	48.9	-17	46.8	352	03.1	-21	42.7	292	45.3	-1	49.2	94	58.3	-4	25.5
13	306	40.8	62	48.7		47.3	7	03.5		42.3	307	47.4		49.0	110	00.7		25.5
14	321	43.2	77	48.5		47.8	22	03.9		41.9	322	49.5		48.9	125	03.1		25.5
15	336	45.7	92	48.3		48.4	37	04.3		41.5	337	51.6		48.7	140	05.5		25.5
16	351	48.2	107	48.0		48.9	52	04.7		41.1	352	53.7		48.5	155	07.9		25.6
17	6	50.6	122	47.8	-17	49.4	67	05.1	-21	40.8	7	55.8	-1	48.4	170	10.3	-4	25.6
18	21	53.1	137	47.6	-17	49.9	82	05.5	-21	40.4	22	57.9	-1	48.2	185	12.7	-4	25.6
19	36	55.6	152	47.4		50.4	97	05.9		40.0	38	00.0		48.0	200	15.1		25.6
20	51	58.0	167	47.2		50.9	112	06.3		39.6	53	02.1		47.8	215	17.5		25.6
21	67	00.5	182	46.9		51.4	127	06.7		39.3	68	04.2		47.7	230	19.9		25.6
22	82	02.9	197	46.7		51.9	142	07.1		38.9	83	06.3		47.5	245	22.3		25.6
23	97	05.4	212	46.5		52.4	157	07.5		38.5	98	08.4		47.3	260	24.7		25.6
24	112	07.9	227	46.3	-17	52.9	172	07.9	-21	38.1	113	10.5	-1	47.2	275	27.1	-4	25.7
Dif	—		-2 -5			+4 +4			+21 +2			+24 0						

ALMANAQUE NÁUTICO PERSEIS

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna					
	SD: 16/3 PMG: 12 ^h 09 ^m 0			Edad: 9 ^d 6 PHE { 4 ^h : 55/5 12 ^h : 55/7 20 ^h : 55/9 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	h m	h m		
0	177	48.5	-21	24.0	76	30.9	+18	52.8	60 N	15 29	16 22	17 16	10 37	23	3 29	82		
1	192	48.3		23.6	91	01.9 ¹²⁰	+19	01.0	58	43	32	22	10 51	27	16	77		
2	207	48.0		23.2	105	32.8 ¹¹⁹		09.1	56	15 56	40	28	11 03	30	3 04	74		
3	222	47.8		22.7	120	03.7 ¹¹⁹		17.1	54	16 06	48	33	14 32		2 54	72		
4	237	47.6		22.3	134	34.5 ¹¹⁸		25.0	52	16	16 55	38	24 34		45	69		
5	252	47.3	-21	21.9	149	05.1 ¹¹⁶	+19	32.8	50	16 25	17 02	17 42	11 32	36	2 36	69		
6	267	47.1	-21	21.4	163	35.7 ¹¹⁶	+19	40.6	45	16 43	17 16	17 52	11 51	38	2 19	65		
7	282	46.9		21.0	178	06.2 ¹¹⁵		48.3	40	16 58	27	18 01	12 05	42	2 05	62		
8	297	46.6		20.5	192	36.7 ¹¹⁵	+19	55.9	35	17 10	38	09	18 43		1 53	60		
9	312	46.4		20.1	207	07.0 ¹¹³	+20	03.4	30	21	17 47	17	29 45		43	58		
10	327	46.2		19.7	221	37.3 ¹¹³		10.8	20	40	18 04	31	12 48	48	25	55		
11	342	46.0	-21	19.2	236	07.4 ¹¹¹	+20	18.1	10 N	17 57	18 19	18 45	13 05	50	1 10	52		
12	357	45.7	-21	18.8	250	37.5 ¹¹¹	+20	25.3	0	18 13	18 35	19 01	13 21	51	0 55	50		
13	12	45.5		18.3	265	07.5 ¹¹⁰		32.5	10 S	28	18 51	18	36 54		41	47		
14	27	45.3		17.9	279	37.4 ¹⁰⁹		39.5	20	18 45	19 10	19 38	13 53	56	26	44		
15	42	45.1		17.5	294	07.2 ¹⁰⁸		46.5	30	19 05	32	20 04	14 13	58	0 08	42		
16	57	44.8		17.0	308	37.0 ¹⁰⁸	+20	53.3	35	17	19 46	21	24 60		** ** *			
17	72	44.6	-21	16.6	323	06.6 ¹⁰⁶	+21	00.1	40	19 30	20 02	20 42	14 37	63	** ** *			
18	87	44.4	-21	16.1	337	36.2 ¹⁰⁶	+21	06.8	45	19 46	20 22	21 08	14 53	64	** ** *			
19	102	44.1		15.7	352	05.7 ¹⁰⁵		13.3	50	20 06	20 48	21 46	15 12	68	23 47	40		
20	117	43.9		15.2	6	35.0 ¹⁰³		19.8	52	15	21 00	22 06	22 68		38	39		
21	132	43.7		14.8	21	04.3 ¹⁰³		26.2	54	26	15	22 34	32 71		27	37		
22	147	43.5		14.3	35	33.5 ¹⁰²		32.4	56	38	33	23 18	44 73		15	35		
23	162	43.2		13.9	50	02.7 ¹⁰²		38.6	58	20 52	21 55	** ** *	15 57	76	23 01	33		
24	177	43.0	-21	13.4	64	31.7 ¹⁰⁰	+21	44.7	60 S	21 08	22 24	** ** *	16 13	79	22 45	29		
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO					
	PMG: 16 ^h 24 ^m 8			Mag: -4.5 PMG: 8 ^h 49 ^m			Mag: +1.2 PMG: 12 ^h 30 ^m			Mag: -2.3 PMG: 16 ^h 22 ^m			Mag: +0.7 PMG: 5 ^h 33 ^m					
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec							
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	113	07.0	227	40.6	-18	04.9	172	17.7	-21	28.9	114	00.7	-1	43.1	276	24.9	-4	25.9
1	128	09.5	242	40.4		05.4	187	18.1		28.5	129	02.8		42.9	291	27.3		25.9
2	143	11.9	257	40.1		05.9	202	18.5		28.1	144	04.9		42.8	306	29.7		25.9
3	158	14.4	272	39.9		06.4	217	19.0		27.7	159	07.0		42.6	321	32.1		25.9
4	173	16.9	287	39.6		06.9	232	19.4		27.3	174	09.1		42.4	336	34.5		26.0
5	188	19.3	302	39.4	-18	07.3	247	19.8	-21	26.9	189	11.2	-1	42.3	351	36.9	-4	26.0
6	203	21.8	317	39.1	-18	07.8	262	20.2	-21	26.5	204	13.3	-1	42.1	6	39.3	-4	26.0
7	218	24.3	332	38.9		08.3	277	20.6		26.1	219	15.4		41.9	21	41.7		26.0
8	233	26.7	347	38.6		08.8	292	21.0		25.7	234	17.5		41.7	36	44.2		26.0
9	248	29.2	2	38.4		09.3	307	21.4		25.3	249	19.5		41.6	51	46.6		26.0
10	263	31.7	17	38.1		09.8	322	21.8		24.9	264	21.6		41.4	66	49.0		26.0
11	278	34.1	32	37.9	-18	10.3	337	22.2	-21	24.6	279	23.7	-1	41.2	81	51.4	-4	26.0
12	293	36.6	47	37.6	-18	10.8	352	22.6	-21	24.2	294	25.8	-1	41.1	96	53.8	-4	26.0
13	308	39.0	62	37.4		11.3	7	23.1		23.8	309	27.9		40.9	111	56.2		26.0
14	323	41.5	77	37.1		11.8	22	23.5		23.4	324	30.0		40.7	126	58.6		26.0
15	338	44.0	92	36.9		12.2	37	23.9		23.0	339	32.1		40.5	142	01.0		26.1
16	353	46.4	107	36.6		12.7	52	24.3		22.6	354	34.2		40.4	157	03.4		26.1
17	8	48.9	122	36.3	-18	13.2	67	24.7	-21	22.2	9	36.3	-1	40.2	172	05.9	-4	26.1
18	23	51.4	137	36.1	-18	13.7	82	25.1	-21	21.8	24	38.3	-1	40.0	187	08.3	-4	26.1
19	38	53.8	152	35.8		14.2	97	25.5		21.4	39	40.4		39.8	202	10.7		26.1
20	53	56.3	167	35.6		14.7	112	25.9		21.0	54	42.5		39.7	217	13.1		26.1
21	68	58.8	182	35.3		15.2	127	26.3		20.6	69	44.6		39.5	232	15.5		26.1
22	84	01.2	197	35.0		15.6	142	26.8		20.2	84	46.7		39.3	247	17.9		26.1
23	99	03.7	212	34.8		16.1	157	27.2		19.8	99	48.8		39.2	262	20.3		26.1
24	114	06.2	227	34.5	-18	16.6	172	27.6	-21	19.4	114	50.9	-1	39.0	277	22.7	-4	26.1
Dif	—			-3 -5			+4 +4			+21 +2			+24 0					

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16 ^h 3			Edad: 10 ^d 6 PHE { 4 ^h : 56 ^m /2 12 ^h : 56 ^m /5 20 ^h : 56 ^m /7 R°: 56 ^m												
	PMG: 12 ^h 09 ^m 3			SD: 15 ^h 3 PMG: 20 ^h 25 ^m												
	hG ☉		Dec	hG ☾		Dif	Dec	Dif		Náutico	Civil		Hora R°		Hora R°	
h	°	'	°	°	'	°	°	'	°	h m	h m	h m	h m	m	h m	m
0	177	43.0	-21	13.4	64	31.7	+21	44.7	59	60 N	7 01	7 55	8 48	11 00	38	4 51 74
1	192	42.8		13.0	79	00.7		50.6	59	58	6 55	46	34	18	41	33 72
2	207	42.6		12.5	93	29.5	+21	56.5	59	56	50	37	22	33	43	18 70
3	222	42.4		12.1	107	58.3	+22	02.2	57	54	45	29	11	46	44	4 06 67
4	237	42.1		11.6	122	27.0		07.8	56	52	40	22	8 01	11 58	45	3 54 67
5	252	41.9	-21	11.2	136	55.6	+22	13.4	56	50	6 36	7 16	7 53	12 08	46	3 45 65
6	267	41.7	-21	10.7	151	24.1	+22	18.8	54	45	6 26	7 02	7 35	12 29	48	3 24 63
7	282	41.5		10.3	165	52.5		24.1	53	40	17	6 50	20	12 47	49	3 07 61
8	297	41.2		09.8	180	20.9		29.3	52	35	09	40	7 08	13 01	51	2 53 60
9	312	41.0		09.4	194	49.1		34.3	50	30	6 01	31	6 57	14	51	41 59
10	327	40.8		08.9	209	17.3		39.3	50	20	5 47	6 14	38	36	53	20 57
11	342	40.6	-21	08.4	223	45.4	+22	44.1	48	10 N	5 33	5 59	6 21	13 55	54	2 02 55
12	357	40.4	-21	08.0	238	13.4	+22	48.9	48	0	5 18	5 43	6 06	14 12	56	1 45 53
13	12	40.1		07.5	252	41.3		53.5	46	10 S	5 01	27	5 50	30	56	28 52
14	27	39.9		07.1	267	09.2	+22	58.0	45	20	4 40	5 09	33	14 49	58	1 10 50
15	42	39.7		06.6	281	36.9	+23	02.4	44	30	4 14	4 46	13	15 11	59	0 50 47
16	57	39.5		06.1	296	04.6		06.6	42	35	3 57	33	5 02	24	60	37 47
17	72	39.3	-21	05.7	310	32.2	+23	10.7	41	40	3 37	4 17	4 48	15 40	60	0 24 45
18	87	39.0	-21	05.2	324	59.7	+23	14.7	40	45	3 10	3 57	4 32	15 57	62	0 07 43
19	102	38.8		04.8	339	27.1		18.6	39	50	2 33	31	13	16 20	63	** ** *
20	117	38.6		04.3	353	54.5		22.4	38	52	2 12	18	4 03	30	64	** ** *
21	132	38.4		03.8	8	21.7		26.0	36	54	1 45	3 03	3 53	43	64	** ** *
22	147	38.2		03.4	22	48.9		29.5	35	56	1 01	2 46	41	16 57	65	23 50 50
23	162	37.9		02.9	37	16.1		32.9	34	58	** ** *	2 24	27	17 13	67	34 48
24	177	37.7	-21	02.4	51	43.1	+23	36.2	33	60 S	** ** *	1 54	3 10	17 32	69	23 14 47

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 16 ^h 20 ^m 9		Mag: -4.5 PMG: 8 ^h 50 ^m		Mag: +1.1 PMG: 12 ^h 30 ^m		Mag: -2.3 PMG: 16 ^h 18 ^m		Mag: +0.7 PMG: 5 ^h 30 ^m	
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄	
h	°	'	°	'	°	'	°	'	°	'
0	114	06.2	227	34.5	-18	16.6	172	27.6	-21	19.4
1	129	08.6	242	34.2		17.1	187	28.0		19.0
2	144	11.1	257	34.0		17.6	202	28.4		18.6
3	159	13.5	272	33.7		18.1	217	28.8		18.2
4	174	16.0	287	33.4		18.5	232	29.2		17.8
5	189	18.5	302	33.2	-18	19.0	247	29.6	-21	17.4
6	204	20.9	317	32.9	-18	19.5	262	30.1	-21	17.0
7	219	23.4	332	32.6		20.0	277	30.5		16.6
8	234	25.9	347	32.4		20.5	292	30.9		16.2
9	249	28.3	2	32.1		20.9	307	31.3		15.8
10	264	30.8	17	31.8		21.4	322	31.7		15.4
11	279	33.3	32	31.5	-18	21.9	337	32.1	-21	15.0
12	294	35.7	47	31.3	-18	22.4	352	32.5	-21	14.5
13	309	38.2	62	31.0		22.9	7	33.0		14.1
14	324	40.7	77	30.7		23.3	22	33.4		13.7
15	339	43.1	92	30.4		23.8	37	33.8		13.3
16	354	45.6	107	30.2		24.3	52	34.2		12.9
17	9	48.0	122	29.9	-18	24.8	67	34.6	-21	12.5
18	24	50.5	137	29.6	-18	25.2	82	35.0	-21	12.1
19	39	53.0	152	29.3		25.7	97	35.4		11.7
20	54	55.4	167	29.0		26.2	112	35.9		11.3
21	69	57.9	182	28.8		26.7	127	36.3		10.9
22	85	00.4	197	28.5		27.1	142	36.7		10.5
23	100	02.8	212	28.2		27.6	157	37.1		10.1
24	115	05.3	227	27.9	-18	28.1	172	37.5	-21	09.7
Dif	—		-3 -5		+4		+4		+21 +2	

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16:3 PMG: 12 ^h 09 ^m 7			Edad: 11 ^d 6 PHE { 4 ^h : 57'0 12 ^h : 57'3 20 ^h : 57'6 R°: 58 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	
0	177	37.7	-21 02.4	51	43.1	+23 36.2	31	60 N	15 33	16 26	17 20	11 38 59	6 05 60		
1	192	37.5	02.0	66	10.1	80 39.3	30	58	47	35	26	11 59 58	5 45 59		
2	207	37.3	01.5	80	37.0	79 42.3	28	56	15 59	44	31	12 16 59	28 59		
3	222	37.1	01.0	95	03.8	78 45.1	28	54	16 10	51	36	30 59	13 60		
4	237	36.9	00.6	109	30.5	77 47.8	27	52	19	16 58	40	43 59	5 01 59		
5	252	36.6	-21 00.1	123	57.2	77 +23 50.4	26	50	16 28	17 04	17 45	12 54 59	4 50 59		
6	267	36.4	-20 59.6	138	23.8	76 +23 52.9	25	45	16 45	17 18	17 54	13 17 59	4 27 58		
7	282	36.2	59.2	152	50.3	75 55.2	23	40	17 00	30	18 03	36 59	4 08 59		
8	297	36.0	58.7	167	16.8	75 57.4	22	35	12	40	11	13 52 58	3 53 58		
9	312	35.8	58.2	181	43.2	74 +23 59.5	21	30	23	17 49	18	14 05 59	40 57		
10	327	35.6	57.7	196	09.5	73 +24 01.4	19	20	42	18 05	32	29 58	3 17 57		
11	342	35.4	-20 57.3	210	35.8	73 +24 03.1	17	10 N	17 58	18 20	18 46	14 49 58	2 57 57		
12	357	35.1	-20 56.8	225	02.0	72 +24 04.8	17	0	18 13	18 35	19 01	15 08 57	2 38 57		
13	12	34.9	56.3	239	28.1	71 06.3	15	10 S	29	18 51	18	26 58	20 56		
14	27	34.7	55.8	253	54.2	71 07.6	13	20	18 46	19 10	19 38	15 47 57	2 00 56		
15	42	34.5	55.4	268	20.2	70 08.8	12	30	19 05	32	20 04	16 10 57	1 37 55		
16	57	34.3	54.9	282	46.1	69 09.9	11	35	16	19 45	20	24 56	24 54		
17	72	34.1	-20 54.4	297	12.0	69 +24 10.8	9	40	19 29	20 01	20 40	16 40 56	1 09 53		
18	87	33.9	-20 53.9	311	37.8	68 +24 11.6	8	45	19 45	20 20	21 06	16 59 55	0 50 53		
19	102	33.7	53.4	326	03.6	68 12.2	6	50	20 04	46	21 43	17 23 54	27 53		
20	117	33.4	53.0	340	29.3	67 12.7	5	52	13	20 58	22 02	34 54	17 51		
21	132	33.2	52.5	354	55.0	67 13.0	3	54	24	21 12	22 28	17 47 54	0 04 51		
22	147	33.0	52.0	9	20.6	66 13.2	2	56	35	30	23 07	18 02 53	** ** *		
23	162	32.8	51.5	23	46.2	66 13.3	1	58	20 49	21 51	** ** *	20 52	** ** *		
24	177	32.6	-20 51.0	38	11.7	65 +24 13.2	1	60 S	21 05	22 18	** ** *	18 41 51	** ** *		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 16 ^h 17 ^m 0		Mag: -4.5 PMG: 8 ^h 50 ^m		Mag: +1.1 PMG: 12 ^h 29 ^m		Mag: -2.3 PMG: 16 ^h 15 ^m		Mag: +0.7 PMG: 5 ^h 26 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	115	05.3	227 27.9	-18 28.1	172 37.5	-21 09.7	115 40.9	-1 34.8	278 20.7	-4 26.3
1	130	07.8	242 27.6	28.5	187 37.9	09.2	130 43.0	34.6	293 23.1	26.3
2	145	10.2	257 27.3	29.0	202 38.3	08.8	145 45.0	34.5	308 25.5	26.3
3	160	12.7	272 27.1	29.5	217 38.8	08.4	160 47.1	34.3	323 28.0	26.3
4	175	15.2	287 26.8	30.0	232 39.2	08.0	175 49.2	34.1	338 30.4	26.3
5	190	17.6	302 26.5	-18 30.4	247 39.6	-21 07.6	190 51.3	-1 33.9	353 32.8	-4 26.3
6	205	20.1	317 26.2	-18 30.9	262 40.0	-21 07.2	205 53.4	-1 33.8	8 35.2	-4 26.3
7	220	22.5	332 25.9	31.4	277 40.4	06.8	220 55.4	33.6	23 37.6	26.4
8	235	25.0	347 25.6	31.8	292 40.8	06.4	235 57.5	33.4	38 40.0	26.4
9	250	27.5	2 25.3	32.3	307 41.3	05.9	250 59.6	33.2	53 42.5	26.4
10	265	29.9	17 25.0	32.8	322 41.7	05.5	266 01.7	33.1	68 44.9	26.4
11	280	32.4	32 24.7	-18 33.2	337 42.1	-21 05.1	281 03.8	-1 32.9	83 47.3	-4 26.4
12	295	34.9	47 24.4	-18 33.7	352 42.5	-21 04.7	296 05.8	-1 32.7	98 49.7	-4 26.4
13	310	37.3	62 24.1	34.2	7 42.9	04.3	311 07.9	32.5	113 52.1	26.4
14	325	39.8	77 23.9	34.6	22 43.3	03.9	326 10.0	32.4	128 54.6	26.4
15	340	42.3	92 23.6	35.1	37 43.8	03.5	341 12.1	32.2	143 57.0	26.4
16	355	44.7	107 23.3	35.6	52 44.2	03.0	356 14.2	32.0	158 59.4	26.4
17	10	47.2	122 23.0	-18 36.0	67 44.6	-21 02.6	11 16.2	-1 31.8	174 01.8	-4 26.4
18	25	49.6	137 22.7	-18 36.5	82 45.0	-21 02.2	26 18.3	-1 31.7	189 04.2	-4 26.4
19	40	52.1	152 22.4	37.0	97 45.4	01.8	41 20.4	31.5	204 06.7	26.4
20	55	54.6	167 22.1	37.4	112 45.9	01.4	56 22.5	31.3	219 09.1	26.4
21	70	57.0	182 21.8	37.9	127 46.3	00.9	71 24.6	31.1	234 11.5	26.4
22	85	59.5	197 21.5	38.3	142 46.7	00.5	86 26.6	31.0	249 13.9	26.4
23	101	02.0	212 21.2	38.8	157 47.1	-21 00.1	101 28.7	30.8	264 16.3	26.4
24	116	04.4	227 20.9	-18 39.3	172 47.5	-20 59.7	116 30.8	-1 30.6	279 18.8	-4 26.4
Dif	—		-3	-5	+4	+4	+21	+2	+24	

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16:3			Edad: 12 ^d 6 PHE { 4 ^h : 57/9 12 ^h : 58/2 20 ^h : 58/4 Rº: 59 ^m						Principio del crepúsculo			Salida de Luna		Puesta de Luna	
	PMG: 12 ^h 10 ^m 0			SD: 15:7 PMG: 22 ^h 19 ^m						Principio del crepúsculo			Salida de Luna		Puesta de Luna	
	hG ☉		Dec	hG ☾		Dif	Dec	Dif		Náutico	Civil		Hora	Rº	Hora	Rº
h	°	'	°	°	'		°	'	°	h	m	h	m		h	m
0	177	32.6	-20 51.0	38	11.7	+24 13.2	60 N	6 59	7 53	8 45	12 37	80	7 05	42		
1	192	32.4	50.5	52	37.2	12.9	58	53	43	31	12 57	78	6 44	45		
2	207	32.2	50.1	67	02.6	12.5	56	48	35	19	13 15	75	27	47		
3	222	32.0	49.6	81	28.0	11.9	54	43	28	09	29 73		13	4		
4	237	31.8	49.1	95	53.3	11.2	52	39	21	8 00	42 72		6 00	49		
5	252	31.6	-20 48.6	110	18.6	+24 10.4	50	6 34	7 15	7 51	13 53	70	5 49	50		
6	267	31.4	-20 48.1	124	43.9	+24 09.4	45	6 25	7 01	7 34	14 16	68	5 25	52		
7	282	31.1	47.6	139	09.1	08.2	40	16	6 50	19	35 66		5 07	53		
8	297	30.9	47.1	153	34.3	06.9	35	09	40	7 07	14 50	65	4 51	54		
9	312	30.7	46.7	167	59.4	05.5	30	6 01	31	6 56	15 04	64	37	55		
10	327	30.5	46.2	182	24.5	03.8	20	5 47	6 14	38	27 62		4 14	56		
11	342	30.3	-20 45.7	196	49.6	+24 02.1	10 N	5 33	5 59	6 22	15 47	60	3 54	57		
12	357	30.1	-20 45.2	211	14.6	+24 00.2	0	5 18	5 44	6 06	16 05	59	3 35	58		
13	12	29.9	44.7	225	39.7	+23 58.1	10 S	5 02	28	5 51	24 57		3 16	59		
14	27	29.7	44.2	240	04.6	55.9	20	4 42	5 10	34	16 44	55	2 56	60		
15	42	29.5	43.7	254	29.6	53.5	30	16	4 48	15	17 07	53	32	61		
16	57	29.3	43.2	268	54.5	50.9	35	4 00	35	5 04	20 52		18	62		
17	72	29.1	-20 42.7	283	19.5	+23 48.2	40	3 40	4 19	4 51	17 36	50	2 02	63		
18	87	28.9	-20 42.2	297	44.4	+23 45.4	45	3 14	4 00	4 35	17 54	48	1 43	64		
19	102	28.7	41.7	312	09.2	42.4	50	2 38	3 35	16	18 17	45	20	64		
20	117	28.5	41.2	326	34.1	39.2	52	2 18	22	4 07	28 44		1 08	66		
21	132	28.3	40.7	340	58.9	35.9	54	1 52	3 08	3 56	41 42		0 55	66		
22	147	28.1	40.2	355	23.8	32.5	56	1 13	2 51	45	18 55	40	40	67		
23	162	27.9	39.7	9	48.6	28.8	58	** **	30	31	19 12	37	22	69		
24	177	27.7	-20 39.2	24	13.4	+23 25.1	60 S	** **	2 02	3 15	19 32	33	0 01	70		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO							
	PMG 16 ^h 13 ^m 0		Mag: -4.5 PMG: 8 ^h 51 ^m		Mag: +1.1 PMG: 12 ^h 28 ^m		Mag: -2.3 PMG: 16 ^h 12 ^m		Mag: +0.7 PMG: 5 ^h 22 ^m							
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄							
h	°	'	°	'	°	'	°	'	°	'						
0	116	04.4	227	20.9	-18 39.3	172	47.5	-20 59.7	116	30.8	-1 30.6	279	18.8	-4 26.4		
1	131	06.9	242	20.6	39.7	187	47.9	59.3	131	32.9	30.4	294	21.2	26.5		
2	146	09.4	257	20.2	40.2	202	48.4	58.8	146	34.9	30.3	309	23.6	26.5		
3	161	11.8	272	19.9	40.6	217	48.8	58.4	161	37.0	30.1	324	26.0	26.5		
4	176	14.3	287	19.6	41.1	232	49.2	58.0	176	39.1	29.9	339	28.4	26.5		
5	191	16.8	302	19.3	-18 41.6	247	49.6	-20 57.6	191	41.2	-1 29.7	354	30.9	-4 26.5		
6	206	19.2	317	19.0	-18 42.0	262	50.0	-20 57.2	206	43.2	-1 29.6	9	33.3	-4 26.5		
7	221	21.7	332	18.7	42.5	277	50.5	56.7	221	45.3	29.4	24	35.7	26.5		
8	236	24.1	347	18.4	42.9	292	50.9	56.3	236	47.4	29.2	39	38.1	26.5		
9	251	26.6	2 18.1	43.4	307	51.3	55.9	251	49.5	29.0	54	40.6	26.5			
10	266	29.1	17 17.8	43.8	322	51.7	55.5	266	51.5	28.8	69	43.0	26.5			
11	281	31.5	32 17.5	-18 44.3	337	52.1	-20 55.0	281	53.6	-1 28.7	84	45.4	-4 26.5			
12	296	34.0	47 17.2	-18 44.7	352	52.6	-20 54.6	296	55.7	-1 28.5	99	47.8	-4 26.5			
13	311	36.5	62 16.8	45.2	7 53.0	54.2	311	57.8	28.3	114	50.3	26.5				
14	326	38.9	77 16.5	45.7	22 53.4	53.8	326	59.8	28.1	129	52.7	26.5				
15	341	41.4	92 16.2	46.1	37 53.8	53.3	342	01.9	28.0	144	55.1	26.5				
16	356	43.9	107 15.9	46.6	52 54.3	52.9	357	04.0	27.8	159	57.5	26.5				
17	11	46.3	122 15.6	-18 47.0	67 54.7	-20 52.5	12	06.1	-1 27.6	174	59.9	-4 26.5				
18	26	48.8	137 15.3	-18 47.5	82 55.1	-20 52.1	27	08.1	-1 27.4	190	02.4	-4 26.5				
19	41	51.3	152 15.0	47.9	97 55.5	51.6	42	10.2	27.2	205	04.8	26.5				
20	56	53.7	167 14.6	48.4	112 55.9	51.2	57	12.3	27.1	220	07.2	26.5				
21	71	56.2	182 14.3	48.8	127 56.4	50.8	72	14.4	26.9	235	09.6	26.5				
22	86	58.6	197 14.0	49.3	142 56.8	50.3	87	16.4	26.7	250	12.1	26.5				
23	102	01.1	212 13.7	49.7	157 57.2	49.9	102	18.5	26.5	265	14.5	26.5				
24	117	03.6	227 13.4	-18 50.2	172 57.6	-20 49.5	117	20.6	-1 26.4	280	16.9	-4 26.5				
Dif	—		-3		-5		+4		+4		+21		+2		+24	

UT	SOL		☉ LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna				
	SD: 16:3 PMG: 12 ^h 10 ^m 3		Edad: 13 ^d 6 PHE { 4 ^h : 58/7 12 ^h : 59/0 20 ^h : 59/2 R°: 57 ^m SD: 16/0 PMG: 23 ^h 18 ^m														
	hG ☉	Dec	hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m			
0	177	27.7	-20	39.2	24	13.4	+23	25.1	60 N	15 38	16 30	17 23	13 57 94	7 47 26			
1	192	27.5		38.7	38	38.2	58	21.1	58	15 51	39	29	14 15 90	29 31			
2	207	27.3		38.2	53	03.0	58	17.0	56	16 03	47	34	30 86	14 33			
3	222	27.1		37.7	67	27.8	58	12.8	54	13	16 55	39	42 84	7 00 33			
4	237	26.9		37.2	81	52.5	57	08.4	52	22	17 01	43	14 54 81	6 49 39			
5	252	26.7	-20	36.7	96	17.3	58	+23	03.8	50	16 31	17 07	17 47	15 03 80	6 39 40		
6	267	26.5	-20	36.2	110	42.1	58	+22	59.1	45	16 48	17 20	17 57	15 24 76	6 17 44		
7	282	26.3		35.7	125	06.9	58	54.3	48	40	17 02	32	18 05	41 72	6 00 46		
8	297	26.1		35.2	139	31.6	57	49.3	50	35	14	42	12	15 55 70	5 45 49		
9	312	25.9		34.7	153	56.4	58	44.1	52	30	25	17 50	20	16 08 67	32 51		
10	327	25.7		34.2	168	21.2	58	38.8	53	20	43	18 06	33	29 64	5 10 54		
11	342	25.5	-20	33.7	182	46.0	58	+22	33.3	10 N	17 59	18 21	18 47	16 47 61	4 51 56		
12	357	25.3	-20	33.2	197	10.8	58	+22	27.7	0	18 14	18 36	19 02	17 04 58	4 33 59		
13	12	25.1		32.7	211	35.6	58	21.9	58	10 S	29	18 52	18	21 55	4 15 61		
14	27	24.9		32.2	226	00.4	58	16.0	59	20	18 46	19 09	19 38	17 39 52	3 56 63		
15	42	24.7		31.7	240	25.2	58	09.9	61	30	19 04	31	20 03	18 00 48	33 66		
16	57	24.5		31.2	254	50.1	59	+22	03.7	35	16	19 44	19	12 46	20 68		
17	72	24.3	-20	30.6	269	14.9	58	+21	57.3	40	19 28	20 00	20 39	18 26 43	3 05 70		
18	87	24.1	-20	30.1	283	39.8	59	+21	50.7	45	19 44	20 19	21 04	18 42 40	2 47 72		
19	102	23.9		29.6	298	04.7	59	44.1	66	50	20 02	43	39	19 02 36	24 76		
20	117	23.7		29.1	312	29.6	59	37.2	69	52	11	20 55	21 58	12 34	14 77		
21	132	23.5		28.6	326	54.5	59	30.3	69	54	21	21 09	22 23	23 31	2 01 79		
22	147	23.3		28.1	341	19.5	60	23.2	71	56	33	26	22 58	35 29	1 47 82		
23	162	23.1		27.6	355	44.5	60	15.9	73	58	20 46	21 46	** **	19 49 25	31 84		
24	177	22.9	-20	27.0	10	09.5	60	+21	08.5	60 S	21 01	22 12	** **	20 05 21	1 11 88		
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO								
	PMG: 16 ^h 09 ^m 1		Mag: -4.5 PMG: 8 ^h 51 ^m		Mag: +1.1 PMG: 12 ^h 28 ^m		Mag: -2.3 PMG: 16 ^h 08 ^m		Mag: +0.7 PMG: 5 ^h 18 ^m								
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	°	'	°	'	°	'	°	'								
0	117	03.6	227 13.4	-18	50.2	172	57.6	-20	49.5	117	20.6	-1	26.4	280	16.9	-4	26.5
1	132	06.0	242 13.0		50.6	187	58.0		49.1	132	22.7		26.2	295	19.3		26.5
2	147	08.5	257 12.7		51.0	202	58.5		48.6	147	24.7		26.0	310	21.8		26.5
3	162	11.0	272 12.4		51.5	217	58.9		48.2	162	26.8		25.8	325	24.2		26.6
4	177	13.4	287 12.1		51.9	232	59.3		47.8	177	28.9		25.6	340	26.6		26.6
5	192	15.9	302 11.7	-18	52.4	247	59.7	-20	47.3	192	30.9	-1	25.5	355	29.1	-4	26.6
6	207	18.4	317 11.4	-18	52.8	263	00.2	-20	46.9	207	33.0	-1	25.3	10	31.5	-4	26.6
7	222	20.8	332 11.1		53.3	278	00.6		46.5	222	35.1		25.1	25	33.9		26.6
8	237	23.3	347 10.8		53.7	293	01.0		46.0	237	37.2		24.9	40	36.3		26.6
9	252	25.8	2 10.4		54.2	308	01.4		45.6	252	39.2		24.7	55	38.8		26.6
10	267	28.2	17 10.1		54.6	323	01.9		45.2	267	41.3		24.6	70	41.2		26.6
11	282	30.7	32 09.8	-18	55.0	338	02.3	-20	44.7	282	43.4	-1	24.4	85	43.6	-4	26.6
12	297	33.1	47 09.4	-18	55.5	353	02.7	-20	44.3	297	45.4	-1	24.2	100	46.0	-4	26.6
13	312	35.6	62 09.1		55.9	8	03.1		43.9	312	47.5		24.0	115	48.5		26.6
14	327	38.1	77 08.8		56.4	23	03.6		43.4	327	49.6		23.9	130	50.9		26.6
15	342	40.5	92 08.4		56.8	38	04.0		43.0	342	51.6		23.7	145	53.3		26.6
16	357	43.0	107 08.1		57.2	53	04.4		42.6	357	53.7		23.5	160	55.8		26.6
17	12	45.5	122 07.8	-18	57.7	68	04.8	-20	42.1	12	55.8	-1	23.3	175	58.2	-4	26.6
18	27	47.9	137 07.4	-18	58.1	83	05.3	-20	41.7	27	57.9	-1	23.1	191	00.6	-4	26.6
19	42	50.4	152 07.1		58.6	98	05.7		41.2	42	59.9		23.0	206	03.0		26.6
20	57	52.9	167 06.8		59.0	113	06.1		40.8	58	02.0		22.8	221	05.5		26.6
21	72	55.3	182 06.4		59.4	128	06.5		40.4	73	04.1		22.6	236	07.9		26.6
22	87	57.8	197 06.1	-18	59.9	143	07.0		39.9	88	06.1		22.4	251	10.3		26.6
23	103	00.3	212 05.7	-19	00.3	158	07.4		39.5	103	08.2		22.2	266	12.8		26.6
24	118	02.7	227 05.4	-19	00.7	173	07.8	-20	39.1	118	10.3	-1	22.1	281	15.2	-4	26.6
Dif	—	-3	-4		+4	+4		+21	+2		+24						

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16:3 PMG: 12 ^h 10 ^m 6			Edad: 14 ^d 6 PHE { 4 ^h : 59/5 12 ^h : 59/7 20 ^h : 59/9 R°: ***												
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico		Civil	Hora		R°	Hora	R°	
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m
0	177	22.9	-20 27.0	10	09.5	+21 08.5	76	60 N	6 57	7 50	8 42	15 31	100	8 13	18	
1	192	22.7	26.5	24	34.5	+21 00.9	76	58	51	41	28	45	95	8 00	21	
2	207	22.5	26.0	38	59.5	+20 53.2	77	56	46	33	17	15 56	92	7 47	25	
3	222	22.3	25.5	53	24.6	61	45.4	54	41	26	8 07	16 06	89	37	28	
4	237	22.1	25.0	67	49.7	61	37.4	52	37	19	7 58	15	86	28	30	
5	252	21.9	-20 24.5	82	14.9	+20 29.3	81	50	6 33	7 13	7 50	16 23	83	7 19	32	
6	267	21.7	-20 23.9	96	40.0	+20 21.0	83	45	6 24	7 00	7 32	16 40	78	7 01	37	
7	282	21.5	23.4	111	05.3	63	12.6	40	16	6 49	18	16 53	75	6 46	41	
8	297	21.3	22.9	125	30.5	+20 04.1	84	35	08	39	7 06	17 05	71	34	43	
9	312	21.2	22.4	139	55.8	+19 55.4	87	30	6 01	30	6 56	15	69	23	46	
10	327	21.0	21.9	154	21.1	63	46.6	20	5 47	14	38	33	64	6 04	50	
11	342	20.8	-20 21.3	168	46.4	+19 37.6	90	10 N	5 34	6 00	6 22	17 48	60	5 47	54	
12	357	20.6	-20 20.8	183	11.8	+19 28.5	91	0	5 19	5 45	6 07	18 02	56	5 32	57	
13	12	20.4	20.3	197	37.2	64	19.3	10 S	5 03	29	5 52	16	52	5 16	60	
14	27	20.2	19.8	212	02.7	65	09.9	20	4 43	5 12	36	31	48	4 59	64	
15	42	20.0	19.2	226	28.2	+19 00.5	94	30	18	4 50	17	48	44	39	69	
16	57	19.8	18.7	240	53.7	+18 50.8	97	35	4 02	37	5 06	18 58	41	28	71	
17	72	19.6	-20 18.2	255	19.3	+18 41.1	97	40	3 42	4 22	4 53	19 09	38	4 15	74	
18	87	19.4	-20 17.6	269	44.9	+18 31.2	99	45	3 17	4 03	4 38	19 22	34	3 59	78	
19	102	19.3	17.1	284	10.6	67	21.2	50	2 42	3 38	19	38	30	40	82	
20	117	19.1	16.6	298	36.3	67	11.1	52	2 23	26	10	46	27	31	84	
21	132	18.9	16.1	313	02.1	+18 00.9	102	54	1 59	3 12	4 00	19 54	25	20	87	
22	147	18.7	15.5	327	27.9	+17 50.5	104	56	1 24	2 56	3 49	20 04	21	3 09	90	
23	162	18.5	15.0	341	53.7	68	40.0	58	** **	35	36	14	18	2 55	94	
24	177	18.3	-20 14.5	356	19.6	+17 29.4	106	60 S	** **	2 09	3 20	20 26	14	2 39	99	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 16 ^h 05 ^m 2		Mag: -4.5 PMG: 8 ^h 52 ^m		Mag: +1.1 PMG: 12 ^h 27 ^m		Mag: -2.3 PMG: 16 ^h 05 ^m		Mag: +0.7 PMG: 5 ^h 14 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	118	02.7	227 05.4	-19 00.7	173 07.8	-20 39.1	118 10.3	-1 22.1	281 15.2	-4 26.6
1	133	05.2	242 05.1	01.2	188 08.2	38.6	133 12.3	21.9	296 17.6	26.6
2	148	07.6	257 04.7	01.6	203 08.7	38.2	148 14.4	21.7	311 20.0	26.6
3	163	10.1	272 04.4	02.0	218 09.1	37.7	163 16.5	21.5	326 22.5	26.6
4	178	12.6	287 04.0	02.5	233 09.5	37.3	178 18.5	21.3	341 24.9	26.6
5	193	15.0	302 03.7	-19 02.9	248 09.9	-20 36.9	193 20.6	-1 21.2	356 27.3	-4 26.6
6	208	17.5	317 03.4	-19 03.3	263 10.4	-20 36.4	208 22.7	-1 21.0	11 29.8	-4 26.6
7	223	20.0	332 03.0	03.8	278 10.8	36.0	223 24.7	20.8	26 32.2	26.6
8	238	22.4	347 02.7	04.2	293 11.2	35.5	238 26.8	20.6	41 34.6	26.6
9	253	24.9	2 02.3	04.6	308 11.6	35.1	253 28.9	20.4	56 37.1	26.6
10	268	27.4	17 02.0	05.0	323 12.1	34.6	268 30.9	20.3	71 39.5	26.6
11	283	29.8	32 01.6	-19 05.5	338 12.5	-20 34.2	283 33.0	-1 20.1	86 41.9	-4 26.6
12	298	32.3	47 01.3	-19 05.9	353 12.9	-20 33.8	298 35.1	-1 19.9	101 44.3	-4 26.6
13	313	34.8	62 00.9	06.3	8 13.4	33.3	313 37.1	19.7	116 46.8	26.6
14	328	37.2	77 00.6	06.8	23 13.8	32.9	328 39.2	19.5	131 49.2	26.6
15	343	39.7	92 00.2	07.2	38 14.2	32.4	343 41.3	19.3	146 51.6	26.6
16	358	42.1	106 59.9	07.6	53 14.6	32.0	358 43.3	19.2	161 54.1	26.6
17	13	44.6	121 59.5	-19 08.0	68 15.1	-20 31.5	13 45.4	-1 19.0	176 56.5	-4 26.6
18	28	47.1	136 59.2	-19 08.5	83 15.5	-20 31.1	28 47.5	-1 18.8	191 58.9	-4 26.6
19	43	49.5	151 58.8	08.9	98 15.9	30.6	43 49.5	18.6	207 01.4	26.6
20	58	52.0	166 58.5	09.3	113 16.4	30.2	58 51.6	18.4	222 03.8	26.6
21	73	54.5	181 58.1	09.7	128 16.8	29.7	73 53.7	18.3	237 06.2	26.6
22	88	56.9	196 57.7	10.1	143 17.2	29.3	88 55.7	18.1	252 08.7	26.6
23	103	59.4	211 57.4	10.6	158 17.6	28.8	103 57.8	17.9	267 11.1	26.6
24	119	01.9	226 57.0	-19 11.0	173 18.1	-20 28.4	118 59.9	-1 17.7	282 13.5	-4 26.6
Dif	—		-3	-4	+4	+4	+21	+2	+24	

UT	SOL				☉ LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna		
	SD: 16'3 PMG: 12 ^h 10 ^m 9				Edad: 15 ^d 6 PHE { 4 ^h : 60'0 12 ^h : 60'2 20 ^h : 60'3 PMG: 0 ^h 15 ^m R°: 56 ^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	177	18.3	-20	14.5	356	19.6	+17	29.4	60 N	15 43	16 34	17 27	17 11 100		8 31 12			
1	192	18.1		13.9	10	45.5	69	18.7	58	15 56	43	32	20 96		21 16			
2	207	17.9		13.4	25	11.5	70	+17 07.9	56	16 07	51	37	28 92		12 19			
3	222	17.8		12.9	39	37.6	71	+16 56.9	54	17	16 58	42	35 89		8 05 22			
4	237	17.6		12.3	54	03.7	71	45.8	52	26	17 04	46	41 87		7 58 24			
5	252	17.4	-20	11.8	68	29.8	71	+16 34.6	50	16 34	17 10	17 50	17 46 85		7 51 27			
6	267	17.2	-20	11.3	82	56.0	72	+16 23.4	45	16 51	17 23	17 59	17 58 79		7 38 31			
7	282	17.0		10.7	97	22.2	72	11.9	40	17 04	34	18 07	18 08 75		27 35			
8	297	16.8		10.2	111	48.5	73	+16 00.4	35	16	43	14	16 72		17 39			
9	312	16.6		09.7	126	14.8	73	+15 48.8	30	26	17 52	21	24 68		7 09 41			
10	327	16.5		09.1	140	41.2	74	37.1	20	17 44	18 08	35	37 62		6 54 47			
11	342	16.3	-20	08.6	155	07.6	74	+15 25.3	10 N	18 00	18 22	18 48	18 48 58		6 41 51			
12	357	16.1	-20	08.0	169	34.1	75	+15 13.3	0	18 15	18 37	19 02	18 58 54		6 29 55			
13	12	15.9		07.5	184	00.6	75	+15 01.3	10 S	29	18 52	18	19 08 50		16 60			
14	27	15.7		07.0	198	27.2	76	+14 49.1	20	18 45	19 09	19 38	19 45		6 03 64			
15	42	15.5		06.4	212	53.8	76	36.9	30	19 04	30	20 02	32 39		5 48 68			
16	57	15.4		05.9	227	20.5	77	24.6	35	15	43	18	39 37		39 72			
17	72	15.2	-20	05.3	241	47.2	77	+14 12.2	40	19 27	19 58	20 37	19 47 33		5 29 75			
18	87	15.0	-20	04.8	256	14.0	78	+13 59.6	45	19 42	20 17	21 02	19 56 30		5 17 79			
19	102	14.8		04.2	270	40.8	78	47.0	50	20 00	41	36	20 08 24		5 02 84			
20	117	14.6		03.7	285	07.7	79	34.3	52	09	20 53	21 54	13 22		4 55 87			
21	132	14.5		03.2	299	34.6	79	21.6	54	19	21 06	22 17	19 19		47 90			
22	147	14.3		02.6	314	01.6	80	+13 08.7	56	30	22	22 49	25 17		39 92			
23	162	14.1		02.1	328	28.6	80	+12 55.7	58	42	21 41	** **	32 14		29 96			
24	177	13.9	-20	01.5	342	55.7	81	+12 42.7	60 S	20 57	22 06	** **	20 40 10		4 18 100			
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 16 ^h 01 ^m 2		Mag: -4.4 PMG: 8 ^h 52 ^m				Mag: +1.1 PMG: 12 ^h 26 ^m				Mag: -2.3 PMG: 16 ^h 02 ^m				Mag: +0.7 PMG: 5 ^h 10 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	119	01.9	226	57.0	-19	11.0	173	18.1	-20	28.4	118	59.9	-1	17.7	282	13.5	-4	26.6
1	134	04.3	241	56.7		11.4	188	18.5		27.9	134	01.9		17.5	297	16.0		26.6
2	149	06.8	256	56.3		11.8	203	18.9		27.5	149	04.0		17.3	312	18.4		26.6
3	164	09.2	271	56.0		12.3	218	19.4		27.0	164	06.0		17.2	327	20.8		26.6
4	179	11.7	286	55.6		12.7	233	19.8		26.6	179	08.1		17.0	342	23.3		26.6
5	194	14.2	301	55.2	-19	13.1	248	20.2	-20	26.1	194	10.2	-1	16.8	357	25.7	-4	26.6
6	209	16.6	316	54.9	-19	13.5	263	20.7	-20	25.7	209	12.2	-1	16.6	12	28.1	-4	26.6
7	224	19.1	331	54.5		13.9	278	21.1		25.2	224	14.3		16.4	27	30.6		26.6
8	239	21.6	346	54.1		14.3	293	21.5		24.8	239	16.4		16.3	42	33.0		26.6
9	254	24.0	1	53.8		14.8	308	22.0		24.3	254	18.4		16.1	57	35.4		26.6
10	269	26.5	16	53.4		15.2	323	22.4		23.9	269	20.5		15.9	72	37.9		26.6
11	284	29.0	31	53.0	-19	15.6	338	22.8	-20	23.4	284	22.5	-1	15.7	87	40.3	-4	26.6
12	299	31.4	46	52.7	-19	16.0	353	23.2	-20	23.0	299	24.6	-1	15.5	102	42.8	-4	26.6
13	314	33.9	61	52.3		16.4	8	23.7		22.5	314	26.7		15.3	117	45.2		26.6
14	329	36.4	76	51.9		16.8	23	24.1		22.1	329	28.7		15.2	132	47.6		26.6
15	344	38.8	91	51.6		17.2	38	24.5		21.6	344	30.8		15.0	147	50.1		26.6
16	359	41.3	106	51.2		17.6	53	25.0		21.2	359	32.8		14.8	162	52.5		26.6
17	14	43.7	121	50.8	-19	18.1	68	25.4	-20	20.7	14	34.9	-1	14.6	177	54.9	-4	26.6
18	29	46.2	136	50.5	-19	18.5	83	25.8	-20	20.2	29	37.0	-1	14.4	192	57.4	-4	26.6
19	44	48.7	151	50.1		18.9	98	26.3		19.8	44	39.0		14.2	207	59.8		26.6
20	59	51.1	166	49.7		19.3	113	26.7		19.3	59	41.1		14.1	223	02.2		26.6
21	74	53.6	181	49.4		19.7	128	27.1		18.9	74	43.2		13.9	238	04.7		26.6
22	89	56.1	196	49.0		20.1	143	27.6		18.4	89	45.2		13.7	253	07.1		26.6
23	104	58.5	211	48.6		20.5	158	28.0		18.0	104	47.3		13.5	268	09.6		26.6
24	120	01.0	226	48.2	-19	20.9	173	28.4	-20	17.5	119	49.3	-1	13.3	283	12.0	-4	26.6
Dif	—		-4		-4		+4		+5		+21		+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 11 ^m 2				Edad: 16 ^d 6 PHE { 4 ^h : 60/4 12 ^h : 60/4 20 ^h : 60/4 PMG: 1 ^h 11 ^m R°: 53 ^m													
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m
0	177	13.9	-20	01.5	342	55.7	+12	42.7	60 N	6 54	7 47	8 38	18 51	99	8 43	9		
1	192	13.7		01.0	357	22.8		29.6	58	49	38	25	18 56	95	37	12		
2	207	13.6	-20	00.4	11	50.0		16.4	56	44	31	14	19 00	92	31	16		
3	222	13.4	-19	59.9	26	17.2		+12 03.1	54	40	24	8 04	04 89		27	18		
4	237	13.2		59.3	40	44.5		+11 49.7	52	35	17	7 55	08 86		22	21		
5	252	13.0	-19	58.8	55	11.9		+11 36.3	50	6 32	7 11	7 48	19 11	83	8 18	23		
6	267	12.8	-19	58.2	69	39.2		+11 22.8	45	6 23	6 59	7 31	19 17	79	8 09	28		
7	282	12.7		57.7	84	06.6		+11 09.2	40	15	48	17	23 74		8 02	32		
8	297	12.5		57.1	98	34.1		+10 55.5	35	08	38	7 06	28 70		7 56	35		
9	312	12.3		56.6	113	01.6		41.8	30	6 01	30	6 55	32 67		50	39		
10	327	12.1		56.0	127	29.2		28.0	20	5 47	14	38	39 62		41	43		
11	342	12.0	-19	55.4	141	56.8		+10 14.2	10 N	5 34	6 00	6 22	19 46	57	7 32	49		
12	357	11.8	-19	54.9	156	24.5		+10 00.3	0	5 20	5 46	6 08	19 52	52	7 24	53		
13	12	11.6		54.3	170	52.2		+9 46.3	10 S	5 04	30	5 53	19 58	48	16	57		
14	27	11.4		53.8	185	19.9		32.2	20	4 45	5 13	37	20 04	43	7 07	62		
15	42	11.3		53.2	199	47.7		18.1	30	20	4 52	18	11 38		6 56	68		
16	57	11.1		52.7	214	15.5		+9 04.0	35	4 05	39	5 08	16 34		51	71		
17	72	10.9	-19	52.1	228	43.4		+8 49.8	40	3 45	4 24	4 55	20 20	31	6 44	74		
18	87	10.7	-19	51.5	243	11.3		+8 35.5	45	3 21	4 06	4 40	20 26	27	6 36	79		
19	102	10.6		51.0	257	39.3		21.2	50	2 47	3 42	22	32 22		26	84		
20	117	10.4		50.4	272	07.3		+8 06.9	52	29	30	14	35 20		22	86		
21	132	10.2		49.9	286	35.4		+7 52.5	54	2 06	17	4 04	38 18		17	89		
22	147	10.0		49.3	301	03.4		38.0	56	1 34	3 01	3 53	42 15		11	93		
23	162	09.9		48.7	315	31.6		23.5	58	** **	2 41	40	46 12		6 05	96		
24	177	09.7	-19	48.2	329	59.7		+7 09.0	60 S	** **	2 17	3 26	20 50	9	5 58	100		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 15 ^h 57 ^m 3		Mag: -4.4 PMG: 8 ^h 53 ^m		Mag: +1.1 PMG: 12 ^h 26 ^m		Mag: -2.3 PMG: 15 ^h 59 ^m		Mag: +0.7 PMG: 5 ^h 06 ^m	
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄	
h	°	'	°	'	°	'	°	'	°	'
0	120	01.0	226	48.2	-19	20.9	173	28.4	-20	17.5
1	135	03.5	241	47.9		21.3	188	28.9		17.0
2	150	05.9	256	47.5		21.7	203	29.3		16.6
3	165	08.4	271	47.1		22.1	218	29.7		16.1
4	180	10.9	286	46.7		22.5	233	30.2		15.7
5	195	13.3	301	46.3	-19	22.9	248	30.6	-20	15.2
6	210	15.8	316	46.0	-19	23.3	263	31.0	-20	14.7
7	225	18.2	331	45.6		23.7	278	31.5		14.3
8	240	20.7	346	45.2		24.1	293	31.9		13.8
9	255	23.2	1	44.8		24.5	308	32.3		13.4
10	270	25.6	16	44.4		24.9	323	32.8		12.9
11	285	28.1	31	44.1	-19	25.3	338	33.2	-20	12.4
12	300	30.6	46	43.7	-19	25.7	353	33.6	-20	12.0
13	315	33.0	61	43.3		26.1	8	34.1		11.5
14	330	35.5	76	42.9		26.5	23	34.5		11.0
15	345	38.0	91	42.5		26.9	38	35.0		10.6
16	0	40.4	106	42.1		27.3	53	35.4		10.1
17	15	42.9	121	41.7	-19	27.7	68	35.8	-20	09.7
18	30	45.4	136	41.4	-19	28.1	83	36.3	-20	09.2
19	45	47.8	151	41.0		28.5	98	36.7		08.7
20	60	50.3	166	40.6		28.9	113	37.1		08.3
21	75	52.7	181	40.2		29.3	128	37.6		07.8
22	90	55.2	196	39.8		29.7	143	38.0		07.3
23	105	57.7	211	39.4		30.1	158	38.4		06.9
24	121	00.1	226	39.0	-19	30.5	173	38.9	-20	06.4
Dif	—		-4		-4		+4		+5	

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16:3 PMG: 12 ^h 11 ^m 5			Edad: 17 ^d 6 PHE { 4 ^h : 60'4 12 ^h : 60'4 20 ^h : 60'4 PMG: 2 ^h 04 ^m R°: 52 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	h m	h m	h m	h m m	h m m	h m m		
0	177	09.7	-19 48.2	329	59.7	+7 09.0	60 N	15 48	16 38	17 31	20 30 97	8 52	8		
1	192	09.5		344	27.9	+6 54.4 ¹⁴⁶	58	16 00		47	31 94	49	12		
2	207	09.4		358	56.2	39.7 ¹⁴⁷	56	11	16 54	41	32 91	47	14		
3	222	09.2		13	24.5	25.1 ¹⁴⁶	54	21	17 01	45	33 88	45	17		
4	237	09.0		27	52.8	+6 10.4 ¹⁴⁷	52	29	07	49	34 85	43	19		
5	252	08.8	-19 45.4	42	21.1	+5 55.7 ¹⁴⁷	50	16 37	17 13	17 53	20 34 83	8 41	22		
6	267	08.7	-19 44.8	56	49.5	+5 40.9 ¹⁴⁸	45	16 53	17 25	18 01	20 36 78	8 37	27		
7	282	08.5		71	17.9	26.1 ¹⁴⁸	40	17 07		36	37 74	34	31		
8	297	08.3		85	46.4	+5 11.3 ¹⁴⁸	35	18	45	16	38 70	31	34		
9	312	08.2		100	14.9	+4 56.4 ¹⁴⁹	30	28	17 54	23	39 67	29	37		
10	327	08.0		114	43.4	41.6 ¹⁴⁸	20	17 45	18 09	36	41 61	24	43		
11	342	07.8	-19 41.9	129	11.9	+4 26.7 ¹⁴⁹	10 N	18 01	18 23	18 49	20 43 56	8 21	47		
12	357	07.7	-19 41.4	143	40.5	+4 11.7 ¹⁵⁰	0	18 15	18 37	19 03	20 44 52	8 17	52		
13	12	07.5		158	09.1	+3 56.8 ¹⁴⁹	10 S	30	18 52	18	46 46	13	56		
14	27	07.3		172	37.8	41.8 ¹⁵⁰	20	18 45	19 09	19 37	47 42	09	61		
15	42	07.2		187	06.4	26.8 ¹⁵⁰	30	19 03	30	20 01	49 37	04	67		
16	57	07.0		201	35.1	+3 11.8 ¹⁵⁰	35	14	42	17	50 34	8 02	70		
17	72	06.8	-19 38.5	216	03.8	+2 56.8 ¹⁵⁰	40	19 26	19 57	20 35	20 51 30	7 58	74		
18	87	06.7	-19 37.9	230	32.6	+2 41.8 ¹⁵⁰	45	19 40	20 15	20 59	20 53 26	7 55	78		
19	102	06.5		245	01.3	26.8 ¹⁵⁰	50	19 58		38	54 22	50	84		
20	117	06.3		259	30.1	+2 11.7 ¹⁵¹	52	20 07	20 50	21 50	55 19	48	86		
21	132	06.2		273	58.9	+1 56.7 ¹⁵⁰	54	16	21 03	22 11	56 17	46	89		
22	147	06.0		288	27.8	41.6 ¹⁵¹	56	27	18	22 41	57 14	44	91		
23	162	05.8		302	56.6	26.6 ¹⁵⁰	58	39	21 36	23 33	58 11	41	94		
24	177	05.7	-19 34.5	317	25.5	+1 11.5 ¹⁵¹	60 S	20 53	22 00	** **	20 59 8	7 38	98		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 15 ^h 53 ^m 4		Mag: -4.4 PMG: 8 ^h 54 ^m		Mag: +1.1 PMG: 12 ^h 25 ^m		Mag: -2.3 PMG: 15 ^h 55 ^m		Mag: +0.7 PMG: 5 ^h 02 ^m					
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	°	°	'	°	'	°	'				
0	121	00.1	226	39.0	-19 30.5	173	38.9	-20 06.4	120	38.7	-1 08.9	284	10.6	-4 26.5
1	136	02.6	241	38.6	30.9	188	39.3	05.9	135	40.8	08.7	299	13.0	26.5
2	151	05.1	256	38.2	31.2	203	39.8	05.5	150	42.8	08.5	314	15.4	26.5
3	166	07.5	271	37.8	31.6	218	40.2	05.0	165	44.9	08.3	329	17.9	26.5
4	181	10.0	286	37.4	32.0	233	40.6	04.5	180	46.9	08.2	344	20.3	26.5
5	196	12.5	301	37.0	-19 32.4	248	41.1	-20 04.0	195	49.0	-1 08.0	359	22.8	-4 26.5
6	211	14.9	316	36.6	-19 32.8	263	41.5	-20 03.6	210	51.0	-1 07.8	14	25.2	-4 26.5
7	226	17.4	331	36.3	33.2	278	41.9	03.1	225	53.1	07.6	29	27.6	26.5
8	241	19.8	346	35.9	33.6	293	42.4	02.6	240	55.1	07.4	44	30.1	26.5
9	256	22.3	1	35.5	34.0	308	42.8	02.2	255	57.2	07.2	59	32.5	26.5
10	271	24.8	16	35.1	34.3	323	43.3	01.7	270	59.2	07.0	74	35.0	26.5
11	286	27.2	31	34.7	-19 34.7	338	43.7	-20 01.2	286	01.3	-1 06.9	89	37.4	-4 26.5
12	301	29.7	46	34.3	-19 35.1	353	44.1	-20 00.7	301	03.4	-1 06.7	104	39.9	-4 26.5
13	316	32.2	61	33.9	35.5	8	44.6	-20 00.3	316	05.4	06.5	119	42.3	26.5
14	331	34.6	76	33.5	35.9	23	45.0	-19 59.8	331	07.5	06.3	134	44.8	26.5
15	346	37.1	91	33.0	36.3	38	45.5	59.3	346	09.5	06.1	149	47.2	26.5
16	1	39.6	106	32.6	36.6	53	45.9	58.9	1	11.6	05.9	164	49.6	26.5
17	16	42.0	121	32.2	-19 37.0	68	46.3	-19 58.4	16	13.6	-1 05.7	179	52.1	-4 26.4
18	31	44.5	136	31.8	-19 37.4	83	46.8	-19 57.9	31	15.7	-1 05.5	194	54.5	-4 26.4
19	46	47.0	151	31.4	37.8	98	47.2	57.4	46	17.7	05.4	209	57.0	26.4
20	61	49.4	166	31.0	38.2	113	47.7	57.0	61	19.8	05.2	224	59.4	26.4
21	76	51.9	181	30.6	38.5	128	48.1	56.5	76	21.8	05.0	240	01.9	26.4
22	91	54.3	196	30.2	38.9	143	48.5	56.0	91	23.9	04.8	255	04.3	26.4
23	106	56.8	211	29.8	39.3	158	49.0	55.5	106	25.9	04.6	270	06.8	26.4
24	121	59.3	226	29.4	-19 39.7	173	49.4	-19 55.1	121	28.0	-1 04.4	285	09.2	-4 26.4
Dif	—		-4	-4		+4	+5		+21	+2		+24		

UT	SOL			LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16:3 PMG: 12 ^h 11 ^m 8			Edad: 18 ^d 6 PHE { SD: 16:4 PMG: 2 ^h 56 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	Rº	Hora	Rº	
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m
0	177	05.7	-19 34.5	317	25.5	+1 11.5		60 N	6 51	7 44	8 34	22 07	97	9 00	8	
1	192	05.5		331	54.4	+0 56.5	150	58	46	35	22	05	93	01	11	
2	207	05.4		346	23.3		99 41.4	56	42	28	11	03	89	01	15	
3	222	05.2			0 52.2		99 26.3	54	38	21	8 02	22 01	86	02	1	
4	237	05.0			15 21.2	100	+0 11.3	52	34	15	7 53	21 59	84	02	20	
5	252	04.9	-19 31.6	29	50.1	99	-0 03.8	50	6 30	7 10	7 46	21 57	82	9 03	21	
6	267	04.7	-19 31.0	44	19.1	100	-0 18.8	45	6 21	6 57	7 29	21 54	76	9 04	26	
7	282	04.5		58	48.1	100		40	14	47	16	51	72	05	30	
8	297	04.4		73	17.1	100	-0 48.9	35	07	38	7 05	48	69	05	34	
9	312	04.2		87	46.1	100	-1 03.9	30	6 00	29	6 55	46	66	06	37	
10	327	04.1		102	15.2	101		20	5 47	14	38	42	60	07	42	
11	342	03.9	-19 28.1	116	44.2	100	-1 33.9	10 N	5 35	6 00	6 22	21 39	55	9 08	47	
12	357	03.7	-19 27.5	131	13.2	100	-1 48.8	0	5 21	5 46	6 08	21 36	51	9 09	51	
13	12	03.6		145	42.3	101	-2 03.8	10 S	5 05	31	5 54	32	48	09	56	
14	27	03.4		160	11.3	100	18.7	20	4 46	5 14	38	29	43	10	61	
15	42	03.3		174	40.4	101	33.6	30	22	4 54	20	26	37	11	66	
16	57	03.1		189	09.5	101	-2 48.5	35	4 07	41	5 10	24	34	12	69	
17	72	02.9	-19 24.6	203	38.6	101	-3 03.3	40	3 48	4 27	4 58	21 21	31	9 12	73	
18	87	02.8	-19 24.0	218	07.6	100	-3 18.2	45	3 24	4 09	4 43	21 19	27	9 13	77	
19	102	02.6		232	36.7	101	33.0	50	2 52	3 45	26	16	22	14	82	
20	117	02.5		247	05.8	101	-3 47.8	52	34	34	17	14	20	14	85	
21	132	02.3		261	34.9	101	-4 02.5	54	2 12	21	4 08	13	17	15	87	
22	147	02.2		276	04.0	101	17.2	56	1 43	3 06	3 57	11	15	15	90	
23	162	02.0		290	33.1	101	31.9	58	0 51	2 48	45	09	12	15	94	
24	177	01.8	-19 20.4	305	02.1	100	-4 46.6	60 S	** **	2 24	3 31	21 07	9	9 16	97	

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 15 ^h 49 ^m 4		Mag: -4.4 PMG: 8 ^h 54 ^m			Mag: +1.1 PMG: 12 ^h 24 ^m			Mag: -2.3 PMG: 15 ^h 52 ^m			Mag: +0.7 PMG: 4 ^h 59 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	'	°	°	'	°	°	'	°	°	'	°
0	121	59.3	226	29.4	-19 39.7	173	49.4	-19 55.1	121	28.0	-1 04.4	285	09.2	-4 26.4
1	137	01.7	241	29.0	40.0	188	49.9	54.6	136	30.0	04.2	300	11.7	26.4
2	152	04.2	256	28.6	40.4	203	50.3	54.1	151	32.1	04.1	315	14.1	26.4
3	167	06.7	271	28.2	40.8	218	50.7	53.6	166	34.1	03.9	330	16.5	26.4
4	182	09.1	286	27.8	41.2	233	51.2	53.1	181	36.2	03.7	345	19.0	26.4
5	197	11.6	301	27.3	-19 41.5	248	51.6	-19 52.7	196	38.2	-1 03.5	0	21.4	-4 26.4
6	212	14.1	316	26.9	-19 41.9	263	52.1	-19 52.2	211	40.3	-1 03.3	15	23.9	-4 26.4
7	227	16.5	331	26.5	42.3	278	52.5	51.7	226	42.3	03.1	30	26.3	26.4
8	242	19.0	346	26.1	42.6	293	53.0	51.2	241	44.4	02.9	45	28.8	26.4
9	257	21.4	1	25.7	43.0	308	53.4	50.7	256	46.4	02.7	60	31.2	26.4
10	272	23.9	16	25.3	43.4	323	53.8	50.3	271	48.5	02.6	75	33.7	26.4
11	287	26.4	31	24.9	-19 43.7	338	54.3	-19 49.8	286	50.5	-1 02.4	90	36.1	-4 26.3
12	302	28.8	46	24.4	-19 44.1	353	54.7	-19 49.3	301	52.6	-1 02.2	105	38.6	-4 26.3
13	317	31.3	61	24.0	44.5	8	55.2	48.8	316	54.6	02.0	120	41.0	26.3
14	332	33.8	76	23.6	44.8	23	55.6	48.3	331	56.7	01.8	135	43.5	26.3
15	347	36.2	91	23.2	45.2	38	56.1	47.9	346	58.7	01.6	150	45.9	26.3
16	2	38.7	106	22.8	45.6	53	56.5	47.4	2	00.8	01.4	165	48.4	26.3
17	17	41.2	121	22.3	-19 45.9	68	56.9	-19 46.9	17	02.8	-1 01.2	180	50.8	-4 26.3
18	32	43.6	136	21.9	-19 46.3	83	57.4	-19 46.4	32	04.9	-1 01.0	195	53.3	-4 26.3
19	47	46.1	151	21.5	46.7	98	57.8	45.9	47	06.9	00.9	210	55.7	26.3
20	62	48.6	166	21.1	47.0	113	58.3	45.4	62	09.0	00.7	225	58.2	26.3
21	77	51.0	181	20.7	47.4	128	58.7	45.0	77	11.0	00.5	241	00.6	26.3
22	92	53.5	196	20.2	47.7	143	59.2	44.5	92	13.1	00.3	256	03.1	26.3
23	107	55.9	211	19.8	48.1	158	59.6	44.0	107	15.1	-1 00.1	271	05.5	26.3
24	122	58.4	226	19.4	-19 48.5	174	00.0	-19 43.5	122	17.2	-0 59.9	286	08.0	-4 26.3
Dif	—		-4		-4	+4		+5	+20		+2	+24		

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 16'2 PMG: 12 ^h 12 ^m 0			Edad: 19 ^d 6 PHE { 4 ^h : 59'9 12 ^h : 59'8 20 ^h : 59'6 R°: 51 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m m	h m m	h m m	
0	177	01.8	-19	20.4	305	02.1	-4	46.6	60 N	15 53	16 42	17 35	23 44 96	9 08 10	
1	192	01.7		19.8	319	31.2 ¹⁰¹	-5	01.2 ¹⁴⁶	58	16 05		51	40	38 92	12 13
2	207	01.5		19.2	334	00.3 ¹⁰¹		15.7 ¹⁴⁵	56	15	16 58	44	32 89	16 16	
3	222	01.4		18.6	348	29.4 ¹⁰¹		30.3 ¹⁴⁶	54	24	17 05	48	27 86	19 19	
4	237	01.2		18.0	2	58.4 ¹⁰⁰		44.8 ¹⁴⁵	52	33		11	52	23 83	22 21
5	252	01.1	-19	17.4	17	27.5 ¹⁰¹	-5	59.2 ¹⁴⁴	50	16 40	17 16	17 56	23 19 80	9 24 24	
6	267	00.9	-19	16.8	31	56.5 ¹⁰⁰	-6	13.6 ¹⁴⁴	45	16 56	17 28	18 04	23 10 76	9 30 28	
7	282	00.8		16.2	46	25.6 ¹⁰¹		28.0 ¹⁴⁴	40	17 09		38	11	23 03 72	35 32
8	297	00.6		15.6	60	54.6 ¹⁰⁰		42.3 ¹⁴³	35	20	47	18	22 57 68	39 35	
9	312	00.5		15.0	75	23.7 ¹⁰¹	-6	56.6 ¹⁴³	30	30	17 55	24	52 65	43 38	
10	327	00.3		14.5	89	52.7 ¹⁰⁰	-7	10.8 ¹⁴²	20	17 47	18 10	37	42 61	49 43	
11	342	00.2	-19	13.9	104	21.7 ¹⁰⁰	-7	24.9 ¹⁴¹	10 N	18 02	18 24	18 49	22 34 57	9 55 47	
12	357	00.0	-19	13.2	118	50.7 ¹⁰⁰	-7	39.1 ¹⁴²	0	18 16	18 37	19 03	22 27 52	10 00 52	
13	11	59.8		12.6	133	19.7 ¹⁰⁰	-7	53.1 ¹⁴⁰	10 S	30	18 52	18	20 48	05 56	
14	26	59.7		12.0	147	48.6 ⁹⁹	-8	07.1 ¹⁴⁰	20	18 45	19 09	19 37	12 44	11 60	
15	41	59.5		11.4	162	17.6 ¹⁰⁰		21.1 ¹⁴⁰	30	19 02	29	20 00	22 03 39	17 66	
16	56	59.4		10.8	176	46.5 ⁹⁹		35.0 ¹³⁹	35	13	41	15	21 58 36	21 69	
17	71	59.2	-19	10.2	191	15.4 ⁹⁹	-8	48.8 ¹³⁸	40	19 25	19 55	20 33	21 52 33	10 25 72	
18	86	59.1	-19	09.6	205	44.3 ⁹⁹	-9	02.6 ¹³⁸	45	19 39	20 13	20 57	21 46 29	10 30 76	
19	101	58.9		09.0	220	13.2 ⁹⁹		16.3 ¹³⁷	50	19 56	35	21 28	38 24	36 81	
20	116	58.8		08.4	234	42.1 ⁹⁹		30.0 ¹³⁷	52	20 04	46	21 45	34 23	39 83	
21	131	58.6		07.8	249	11.0 ⁹⁹		43.5 ¹³⁵	54	13	20 59	22 06	30 20	42 86	
22	146	58.5		07.2	263	39.8 ⁹⁸	-9	57.1 ¹³⁶	56	23	21 14	22 33	26 17	45 89	
23	161	58.4		06.6	278	08.6 ⁹⁸	-10	10.5 ¹³⁴	58	35	31	23 15	21 14	49 92	
24	176	58.2	-19	06.0	292	37.4 ⁹⁸	-10	23.9 ¹³⁴	60 S	20 49	21 53	** **	21 16 10	10 53 96	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 15 ^h 45 ^m 5		Mag: -4.4 PMG: 8 ^h 55 ^m			Mag: +1.1 PMG: 12 ^h 24 ^m			Mag: -2.2 PMG: 15 ^h 49 ^m			Mag: +0.7 PMG: 4 ^h 55 ^m			
	hG ♈		hG ♀		Dec	hG ♂		Dec	hG ♃		Dec	hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	122	58.4	226	19.4	-19 48.5	174	00.0	-19 43.5	122	17.2	-0 59.9	286	08.0	-4 26.3	
1	138	00.9	241	19.0	48.8	189	00.5	43.0	137	19.2	59.7	301	10.4	26.3	
2	153	03.3	256	18.5	49.2	204	00.9	42.5	152	21.2	59.5	316	12.9	26.2	
3	168	05.8	271	18.1	49.5	219	01.4	42.0	167	23.3	59.4	331	15.3	26.2	
4	183	08.3	286	17.7	49.9	234	01.8	41.5	182	25.3	59.2	346	17.8	26.2	
5	198	10.7	301	17.3	-19 50.2	249	02.3	-19 41.1	197	27.4	-0 59.0	1	20.2	-4 26.2	
6	213	13.2	316	16.8	-19 50.6	264	02.7	-19 40.6	212	29.4	-0 58.8	16	22.7	-4 26.2	
7	228	15.7	331	16.4	51.0	279	03.2	40.1	227	31.5	58.6	31	25.1	26.2	
8	243	18.1	346	16.0	51.3	294	03.6	39.6	242	33.5	58.4	46	27.6	26.2	
9	258	20.6	1	15.5	51.7	309	04.1	39.1	257	35.6	58.2	61	30.0	26.2	
10	273	23.1	16	15.1	52.0	324	04.5	38.6	272	37.6	58.0	76	32.5	26.2	
11	288	25.5	31	14.7	-19 52.4	339	05.0	-19 38.1	287	39.7	-0 57.8	91	34.9	-4 26.2	
12	303	28.0	46	14.2	-19 52.7	354	05.4	-19 37.6	302	41.7	-0 57.6	106	37.4	-4 26.2	
13	318	30.4	61	13.8	53.1	9	05.8	37.1	317	43.7	57.5	121	39.8	26.2	
14	333	32.9	76	13.4	53.4	24	06.3	36.7	332	45.8	57.3	136	42.3	26.2	
15	348	35.4	91	12.9	53.8	39	06.7	36.2	347	47.8	57.1	151	44.7	26.1	
16	3	37.8	106	12.5	54.1	54	07.2	35.7	2	49.9	56.9	166	47.2	26.1	
17	18	40.3	121	12.1	-19 54.5	69	07.6	-19 35.2	17	51.9	-0 56.7	181	49.6	-4 26.1	
18	33	42.8	136	11.6	-19 54.8	84	08.1	-19 34.7	32	54.0	-0 56.5	196	52.1	-4 26.1	
19	48	45.2	151	11.2	55.2	99	08.5	34.2	47	56.0	56.3	211	54.5	26.1	
20	63	47.7	166	10.8	55.5	114	09.0	33.7	62	58.1	56.1	226	57.0	26.1	
21	78	50.2	181	10.3	55.8	129	09.4	33.2	78	00.1	55.9	241	59.5	26.1	
22	93	52.6	196	09.9	56.2	144	09.9	32.7	93	02.1	55.7	257	01.9	26.1	
23	108	55.1	211	09.4	56.5	159	10.3	32.2	108	04.2	55.6	272	04.4	26.1	
24	123	57.5	226	09.0	-19 56.9	174	10.8	-19 31.7	123	06.2	-0 55.4	287	06.8	-4 26.1	
Dif	—		-4		-4	+4		+5	+20		+2	+25		0	

ALMANAQUE NÁUTICO PERSEIS

UT	SOL		☾ LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16'2 PMG: 12 ^h 12 ^m 5		Edad: 21 ^d 6 PHE { 4 ^h : 58'9 12 ^h : 58'7 20 ^h : 58'5 PMG: 5 ^h 32 ^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	m
0	176	54.8	-18	51.2	280	00.6	-15	21.6	60 N	15 58	16 47	17 39	1 20 94	9 30 18
1	191	54.6		50.6	294	28.7	91	32.9 ¹¹³	58	16 09	16 55	43	10 89	41 22
2	206	54.5		50.0	308	56.8	91	44.1 ¹¹²	56	19	17 02	48	1 01 86	9 51 25
3	221	54.3		49.3	323	24.8	90	-15 55.2 ¹¹¹	54	28	08	51	0 53 83	10 00 27
4	236	54.2		48.7	337	52.8	90	-16 06.2 ¹¹⁰	52	36	14	55	46 80	07 30
5	251	54.1	-18	48.1	352	20.8	90	-16 17.1 ¹⁰⁹	50	16 43	17 19	17 58	0 39 79	10 14 32
6	266	53.9	-18	47.5	6	48.7	89	-16 27.9 ¹⁰⁸	45	16 59	17 31	18 06	0 26 74	10 29 36
7	281	53.8		46.8	21	16.6	89	38.6 ¹⁰⁷	40	17 11	40	13	15 70	41 40
8	296	53.6		46.2	35	44.4	88	49.2 ¹⁰⁶	35	22	49	20	0 05 68	10 52 42
9	311	53.5		45.6	50	12.3	89	-16 59.7 ¹⁰⁵	30	32	17 57	26	** ** *	11 01 45
10	326	53.4		45.0	64	40.1	88	-17 10.0 ¹⁰³	20	17 48	18 11	38	** ** *	17 48
11	341	53.2	-18	44.3	79	07.8	87	-17 20.3 ¹⁰³	10 N	18 02	18 25	18 50	** ** *	11 31 52
12	356	53.1	-18	43.7	93	35.5	87	-17 30.4 ¹⁰¹	0	18 16	18 38	19 03	** ** *	11 44 55
13	11	53.0		43.1	108	03.2	87	40.5 ¹⁰¹	10 S	30	18 52	18	23 58 52	11 58 57
14	26	52.8		42.4	122	30.9	87	-17 50.4 ⁹⁹	20	18 45	19 08	36	42 50	12 12 60
15	41	52.7		41.8	136	58.5	86	-18 00.2 ⁹⁸	30	19 02	28	19 59	24 47	28 64
16	56	52.6		41.2	151	26.1	86	10.0 ⁹⁸	35	12	40	20 14	14 45	38 66
17	71	52.4	-18	40.5	165	53.6	85	-18 19.6 ⁹⁶	40	19 23	19 54	20 31	23 02 42	12 48 70
18	86	52.3	-18	39.9	180	21.1	85	-18 29.0 ⁹⁴	45	19 37	20 11	20 54	22 48 40	13 01 72
19	101	52.2		39.3	194	48.6	85	38.4 ⁹⁴	50	19 53	33	21 25	32 35	17 76
20	116	52.0		38.6	209	16.1	85	47.7 ⁹³	52	20 01	43	21 40	24 34	24 79
21	131	51.9		38.0	223	43.5	84	-18 56.8 ⁹¹	54	10	20 55	22 00	15 32	32 81
22	146	51.8		37.4	238	10.8	83	-19 05.8 ⁹⁰	56	20	21 09	22 25	22 05 29	42 83
23	161	51.6		36.7	252	38.2	84	14.7 ⁸⁹	58	31	26	23 02	21 54 26	13 52 87
24	176	51.5	-18	36.1	267	05.5	83	-19 23.5 ⁸⁸	60 S	20 44	21 47	** ** *	21 41 22	14 04 91
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 15 ^h 37 ^m 7		Mag: -4.4 PMG: 8 ^h 56 ^m			Mag: +1.1 PMG: 12 ^h 22 ^m			Mag: -2.2 PMG: 15 ^h 42 ^m			Mag: +0.7 PMG: 4 ^h 47 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	124	56.7	225	58.2	-20	04.9	174	21.6	-19	19.7	123	55.2	-0	50.8
1	139	59.2	240	57.8		05.2	189	22.0		19.2	138	57.2		50.6
2	155	01.6	255	57.3		05.5	204	22.5		18.7	153	59.3		50.4
3	170	04.1	270	56.9		05.8	219	22.9		18.2	169	01.3		50.2
4	185	06.5	285	56.4		06.2	234	23.4		17.7	184	03.4		50.0
5	200	09.0	300	55.9	-20	06.5	249	23.8	-19	17.2	199	05.4	-0	49.8
6	215	11.5	315	55.5	-20	06.8	264	24.3	-19	16.7	214	07.4	-0	49.6
7	230	13.9	330	55.0		07.1	279	24.8		16.2	229	09.5		49.4
8	245	16.4	345	54.6		07.4	294	25.2		15.7	244	11.5		49.2
9	260	18.9	0	54.1		07.8	309	25.7		15.2	259	13.5		49.0
10	275	21.3	15	53.6		08.1	324	26.1		14.7	274	15.6		48.9
11	290	23.8	30	53.2	-20	08.4	339	26.6	-19	14.2	289	17.6	-0	48.7
12	305	26.3	45	52.7	-20	08.7	354	27.0	-19	13.6	304	19.7	-0	48.5
13	320	28.7	60	52.3		09.0	9	27.5		13.1	319	21.7		48.3
14	335	31.2	75	51.8		09.3	24	27.9		12.6	334	23.7		48.1
15	350	33.6	90	51.3		09.6	39	28.4		12.1	349	25.8		47.9
16	5	36.1	105	50.9		10.0	54	28.8		11.6	4	27.8		47.7
17	20	38.6	120	50.4	-20	10.3	69	29.3	-19	11.1	19	29.8	-0	47.5
18	35	41.0	135	49.9	-20	10.6	84	29.8	-19	10.6	34	31.9	-0	47.3
19	50	43.5	150	49.5		10.9	99	30.2		10.1	49	33.9		47.1
20	65	46.0	165	49.0		11.2	114	30.7		09.6	64	35.9		46.9
21	80	48.4	180	48.5		11.5	129	31.1		09.1	79	38.0		46.7
22	95	50.9	195	48.1		11.8	144	31.6		08.5	94	40.0		46.5
23	110	53.4	210	47.6		12.1	159	32.0		08.0	109	42.1		46.3
24	125	55.8	225	47.1	-20	12.4	174	32.5	-19	07.5	124	44.1	-0	46.1
Dif	—		-5		-3		+5		+5		+20		+2	
														+25

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 16'2 PMG: 12 ^h 12 ^m 7			Edad: 22 ^d 6 PHE { 4 ^h : 58'3 12 ^h : 58'1 20 ^h : 57'9 R ^o : 55 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m		
0	176	51.5	-18	36.1	267	05.5	-19	23.5	60 N	6 45	7 37	8 26	2 54	87	9 48	27		
1	191	51.4		35.5	281	32.8	83	32.2	58	41	29	14	39	83	10 03	31		
2	206	51.2		34.8	296	00.0	82	40.7	56	37	22	8 05	27	80	16	34		
3	221	51.1		34.2	310	27.3	83	49.1	54	33	16	7 56	16	77	27	37		
4	236	51.0		33.5	324	54.4	81	-19 57.4	52	29	10	48	2 06	76	37	39		
5	251	50.8	-18	32.9	339	21.6	82	-20 05.6	50	6 26	7 05	7 41	1 58	73	10 46	40		
6	266	50.7	-18	32.3	353	48.7	81	-20 13.6	45	6 18	6 54	7 26	1 40	70	11 05	43		
7	281	50.6		31.6	8	15.8	81	21.5	40	11	44	13	25	67	21	45		
8	296	50.5		31.0	22	42.9	81	29.3	35	6 05	36	7 03	13	65	34	47		
9	311	50.3		30.3	37	09.9	80	37.0	30	5 59	28	6 53	1 02	63	11 46	48		
10	326	50.2		29.7	51	36.9	80	44.6	20	47	14	37	0 43	61	12 05	52		
11	341	50.1	-18	29.1	66	03.9	80	-20 52.0	10 N	5 35	6 01	6 23	0 28	57	12 23	53		
12	356	49.9	-18	28.4	80	30.8	79	-20 59.3	0	5 22	5 47	6 09	0 13	55	12 39	55		
13	11	49.8		27.8	94	57.7	79	-21 06.4	10 S	5 07	33	5 55	** ** *	**	12 55	57		
14	26	49.7		27.1	109	24.6	79	13.5	20	4 49	5 17	41	** ** *	**	13 12	60		
15	41	49.6		26.5	123	51.5	79	20.4	30	26	4 58	24	** ** *	**	32	62		
16	56	49.4		25.8	138	18.3	78	27.1	35	4 12	46	14	23 59	49	44	63		
17	71	49.3	-18	25.2	152	45.2	79	-21 33.8	40	3 54	4 32	5 02	23 44	49	13 58	65		
18	86	49.2	-18	24.5	167	12.0	78	-21 40.3	45	3 32	4 15	4 49	23 28	46	14 13	68		
19	101	49.1		23.9	181	38.7	77	46.7	50	3 01	3 53	32	23 07	45	33	70		
20	116	48.9		23.2	196	05.5	78	52.9	52	2 45	43	24	22 58	43	43	71		
21	131	48.8		22.6	210	32.2	77	-21 59.0	54	26	30	16	47	41	14 53	73		
22	146	48.7		21.9	224	58.9	77	-22 05.0	56	2 01	16	4 06	34	40	15 05	75		
23	161	48.6		21.3	239	25.6	77	10.8	58	1 24	3 00	3 55	20	37	19	78		
24	176	48.4	-18	20.6	253	52.2	76	-22 16.5	60 S	** ** *	2 39	3 42	22 03	34	15 35	82		
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 15 ^h 33 ^m 7		Mag: -4.4 PMG: 8 ^h 57 ^m				Mag: +1.1 PMG: 12 ^h 21 ^m				Mag: -2.2 PMG: 15 ^h 39 ^m				Mag: +0.7 PMG: 4 ^h 43 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	125	55.8	225	47.1	-20	12.4	174	32.5	-19	07.5	124	44.1	-0	46.1	289	04.8	-4	25.6
1	140	58.3	240	46.6		12.7	189	33.0		07.0	139	46.1		46.0	304	07.3		25.6
2	156	00.8	255	46.2		13.1	204	33.4		06.5	154	48.2		45.8	319	09.8		25.5
3	171	03.2	270	45.7		13.4	219	33.9		06.0	169	50.2		45.6	334	12.2		25.5
4	186	05.7	285	45.2		13.7	234	34.3		05.5	184	52.2		45.4	349	14.7		25.5
5	201	08.1	300	44.8	-20	14.0	249	34.8	-19	05.0	199	54.3	-0	45.2	4	17.1	-4	25.5
6	216	10.6	315	44.3	-20	14.3	264	35.2	-19	04.4	214	56.3	-0	45.0	19	19.6	-4	25.5
7	231	13.1	330	43.8		14.6	279	35.7		03.9	229	58.3		44.8	34	22.1		25.5
8	246	15.5	345	43.3		14.9	294	36.2		03.4	245	00.4		44.6	49	24.5		25.5
9	261	18.0	0	42.9		15.2	309	36.6		02.9	260	02.4		44.4	64	27.0		25.5
10	276	20.5	15	42.4		15.5	324	37.1		02.4	275	04.4		44.2	79	29.5		25.4
11	291	22.9	30	41.9	-20	15.8	339	37.5	-19	01.9	290	06.5	-0	44.0	94	31.9	-4	25.4
12	306	25.4	45	41.4	-20	16.1	354	38.0	-19	01.3	305	08.5	-0	43.8	109	34.4	-4	25.4
13	321	27.9	60	41.0		16.4	9	38.4		00.8	320	10.5		43.6	124	36.9		25.4
14	336	30.3	75	40.5		16.7	24	38.9	-19	00.3	335	12.6		43.4	139	39.3		25.4
15	351	32.8	90	40.0		17.0	39	39.4	-18	59.8	350	14.6		43.2	154	41.8		25.4
16	6	35.3	105	39.5		17.2	54	39.8		59.3	5	16.6		43.0	169	44.3		25.4
17	21	37.7	120	39.0	-20	17.5	69	40.3	-18	58.7	20	18.7	-0	42.8	184	46.7	-4	25.4
18	36	40.2	135	38.6	-20	17.8	84	40.7	-18	58.2	35	20.7	-0	42.6	199	49.2	-4	25.3
19	51	42.6	150	38.1		18.1	99	41.2		57.7	50	22.7		42.5	214	51.7		25.3
20	66	45.1	165	37.6		18.4	114	41.7		57.2	65	24.8		42.3	229	54.1		25.3
21	81	47.6	180	37.1		18.7	129	42.1		56.7	80	26.8		42.1	244	56.6		25.3
22	96	50.0	195	36.6		19.0	144	42.6		56.1	95	28.8		41.9	259	59.0		25.3
23	111	52.5	210	36.1		19.3	159	43.0		55.6	110	30.8		41.7	275	01.5		25.3
24	126	55.0	225	35.7	-20	19.6	174	43.5	-18	55.1	125	32.9	-0	41.5	290	04.0	-4	25.3
Dif	—		-5		-3		+5		+5		+20		+2		+25			

UT	SOL			 LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna				
	SD: 16:2 PMG: 12 ^h 12 ^m 9			Edad: 23 ^d 6 PHE { 4 ^h : 57:7 12 ^h : 57:5 20 ^h : 57:3 PMG: 7 ^h 21 ^m R°: 56 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	h m	h m	h m	h m	h m	h m	h m	h m			
0	176	48.4	-18	20.6	253	52.2	-22	16.5	60 N	16 03	16 51	17 43	4 21 74	10 15 42				
1	191	48.3		20.0	268	18.9	77	22.1	58	14	16 59	47	4 02 71	34 44				
2	206	48.2		19.3	282	45.5	76	27.5	56	24	17 06	51	3 47 69	10 50 46				
3	221	48.1		18.7	297	12.1	76	32.8	54	32	12	55	33 68	11 04 46				
4	236	47.9		18.0	311	38.7	76	38.0	52	40	17	58	22 66	16 48				
5	251	47.8	-18	17.4	326	05.3	76	-22	50	50	16 47	17 22	18 01	11 26 49				
6	266	47.7	-18	16.7	340	31.8	75	-22	49	45	17 02	17 33	18 09	11 48 51				
7	281	47.6		16.1	354	58.4	76	52.6	47	40	14	43	15	12 06 52				
8	296	47.5		15.4	9	24.9	75	-22	57.3	35	24	51	22	21 53				
9	311	47.3		14.8	23	51.5	76	-23	01.7	30	33	17 59	27	34 53				
10	326	47.2		14.1	38	18.0	75	06.1	44	20	17 49	18 12	39	12 57 54				
11	341	47.1	-18	13.4	52	44.5	75	-23	10.3	10 N	18 03	18 25	18 51	13 16 55				
12	356	47.0	-18	12.8	67	11.0	75	-23	14.3	0	18 16	18 38	19 03	13 34 56				
13	11	46.9		12.1	81	37.5	75	18.2	39	10 S	30	18 52	18	13 52 57				
14	26	46.7		11.5	96	03.9	74	22.0	38	20	18 44	19 08	35	14 12 57				
15	41	46.6		10.8	110	30.4	75	25.6	36	30	19 01	27	19 58	34 58				
16	56	46.5		10.1	124	56.9	75	29.1	35	35	10	38	20 12	14 47 59				
17	71	46.4	-18	09.5	139	23.4	75	-23	32.5	40	19 21	19 52	20 29	15 03 59				
18	86	46.3	-18	08.8	153	49.8	74	-23	35.7	45	19 35	20 08	20 51	15 21 59				
19	101	46.2		08.2	168	16.3	75	38.8	31	50	51	29	21 21	43 61				
20	116	46.0		07.5	182	42.8	75	41.7	29	52	19 58	40	36	15 54 61				
21	131	45.9		06.8	197	09.2	74	44.5	28	54	20 07	20 51	21 54	16 06 62				
22	146	45.8		06.2	211	35.7	75	47.2	27	56	16	21 05	22 17	20 62				
23	161	45.7		05.5	226	02.2	75	49.7	25	58	27	21	22 50	37 63				
24	176	45.6	-18	04.8	240	28.6	74	-23	52.0	60 S	20 40	21 40	** **	16 57 64				
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 15 ^h 29 ^m 8		Mag: -4.4 PMG: 8 ^h 58 ^m			Mag: +1.1 PMG: 12 ^h 21 ^m			Mag: -2.2 PMG: 15 ^h 36 ^m			Mag: +0.7 PMG: 4 ^h 39 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	126	55.0	225	35.7	-20	19.6	174	43.5	-18	55.1	125	32.9	-0	41.5	290	04.0	-4	25.3
1	141	57.4	240	35.2		19.9	189	44.0		54.6	140	34.9		41.3	305	06.5		25.2
2	156	59.9	255	34.7		20.2	204	44.4		54.1	155	36.9		41.1	320	08.9		25.2
3	172	02.4	270	34.2		20.4	219	44.9		53.5	170	39.0		40.9	335	11.4		25.2
4	187	04.8	285	33.7		20.7	234	45.3		53.0	185	41.0		40.7	350	13.9		25.2
5	202	07.3	300	33.2	-20	21.0	249	45.8	-18	52.5	200	43.0	-0	40.5	5	16.3	-4	25.2
6	217	09.8	315	32.7	-20	21.3	264	46.3	-18	52.0	215	45.1	-0	40.3	20	18.8	-4	25.2
7	232	12.2	330	32.3		21.6	279	46.7		51.4	230	47.1		40.1	35	21.3		25.2
8	247	14.7	345	31.8		21.9	294	47.2		50.9	245	49.1		39.9	50	23.7		25.1
9	262	17.1	0	31.3		22.1	309	47.7		50.4	260	51.2		39.7	65	26.2		25.1
10	277	19.6	15	30.8		22.4	324	48.1		49.9	275	53.2		39.5	80	28.7		25.1
11	292	22.1	30	30.3	-20	22.7	339	48.6	-18	49.3	290	55.2	-0	39.3	95	31.1	-4	25.1
12	307	24.5	45	29.8	-20	23.0	354	49.0	-18	48.8	305	57.2	-0	39.1	110	33.6	-4	25.1
13	322	27.0	60	29.3		23.3	9	49.5		48.3	320	59.3		38.9	125	36.1		25.1
14	337	29.5	75	28.8		23.5	24	50.0		47.8	336	01.3		38.7	140	38.5		25.1
15	352	31.9	90	28.3		23.8	39	50.4		47.2	351	03.3		38.5	155	41.0		25.0
16	7	34.4	105	27.8		24.1	54	50.9		46.7	6	05.4		38.3	170	43.5		25.0
17	22	36.9	120	27.3	-20	24.4	69	51.4	-18	46.2	21	07.4	-0	38.1	185	45.9	-4	25.0
18	37	39.3	135	26.9	-20	24.6	84	51.8	-18	45.7	36	09.4	-0	38.0	200	48.4	-4	25.0
19	52	41.8	150	26.4		24.9	99	52.3		45.1	51	11.4		37.8	215	50.9		25.0
20	67	44.2	165	25.9		25.2	114	52.7		44.6	66	13.5		37.6	230	53.4		25.0
21	82	46.7	180	25.4		25.5	129	53.2		44.1	81	15.5		37.4	245	55.8		25.0
22	97	49.2	195	24.9		25.7	144	53.7		43.5	96	17.5		37.2	260	58.3		24.9
23	112	51.6	210	24.4		26.0	159	54.1		43.0	111	19.5		37.0	276	00.8		24.9
24	127	54.1	225	23.9	-20	26.3	174	54.6	-18	42.5	126	21.6	-0	36.8	291	03.2	-4	24.9
Dif	—		-5			-3	+5		+5	+20		+2	+25					

UT	SOL				LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16:2 PMG: 12 ^h 13 ^m 1				Edad: 24 ^d 6 PHE { 4 ^h : 57:1 12 ^h : 56:9 20 ^h : 56:7 SD: 15:6 PMG: 8 ^h 17 ^m R ^o : 55 ^m												
	hG ☉		Dec		hG ☾ Dif		Dec Dif			Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	176	45.6	-18	04.8	240	28.6	-23	52.0	23	60 N	6 42	7 33	8 22	5 35	54	10 57	60
1	191	45.5		04.2	254	55.1	75	54.3	23	58	38	26	11	5 13	55	11 18	60
2	206	45.3		03.5	269	21.6	75	56.4	21	56	34	19	8 01	4 56	54	36	59
3	221	45.2		02.8	283	48.1	75	58.3	19	54	30	13	7 53	41	55	11 51	59
4	236	45.1		02.2	298	14.6	75	00.1	18	52	27	08	45	28	55	12 04	58
5	251	45.0	-18	01.5	312	41.1	75	01.8	17	50	6 24	7 03	7 38	4 17	55	12 15	58
6	266	44.9	-18	00.8	327	07.7	76	03.3	15	45	6 17	6 52	7 24	3 53	56	12 39	57
7	281	44.8	-18	00.2	341	34.2	75	04.7	14	40	10	43	12	35	55	12 58	57
8	296	44.7	-17	59.5	356	00.8	76	05.9	12	35	6 04	34	7 01	19	55	13 14	56
9	311	44.6		58.8	10	27.4	76	07.0	11	30	5 58	27	6 52	3 05	56	27	57
10	326	44.4		58.2	24	53.9	75	08.0	10	20	47	13	36	2 42	55	13 51	55
11	341	44.3	-17	57.5	39	20.6	77	08.8	8	10 N	5 35	6 01	6 23	2 22	55	14 11	55
12	356	44.2	-17	56.8	53	47.2	76	09.5	7	0	5 22	5 48	6 10	2 03	55	14 30	55
13	11	44.1		56.1	68	13.8	76	10.1	6	10 S	5 08	34	5 56	1 45	55	14 49	54
14	26	44.0		55.5	82	40.5	77	10.5	4	20	4 51	19	42	25	55	15 09	53
15	41	43.9		54.8	97	07.2	77	10.7	2	30	28	5 00	26	1 02	55	32	53
16	56	43.8		54.1	111	33.9	77	10.9	2	35	4 14	4 48	16	0 48	55	15 46	52
17	71	43.7	-17	53.5	126	00.7	78	10.8	1	40	3 57	4 35	5 05	0 33	54	16 02	51
18	86	43.6	-17	52.8	140	27.4	77	10.7	1	45	3 35	4 18	4 52	0 14	55	16 20	51
19	101	43.4		52.1	154	54.2	78	10.4	3	50	3 06	3 57	36	** ** *	**	44	49
20	116	43.3		51.4	169	21.0	78	10.0	4	52	2 51	47	28	** ** *	**	16 55	49
21	131	43.2		50.8	183	47.9	79	09.4	6	54	32	35	20	** ** *	**	17 08	48
22	146	43.1		50.1	198	14.8	79	08.7	7	56	2 09	22	10	** ** *	**	22	48
23	161	43.0		49.4	212	41.7	79	07.9	8	58	1 36	3 06	4 00	23 49	67	17 40	46
24	176	42.9	-17	48.7	227	08.6	79	06.9	10	60 S	** **	2 46	3 47	23 28	69	18 01	44

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 15 ^h 25 ^m 9		Mag: -4.4 PMG: 8 ^h 59 ^m		Mag: +1.1 PMG: 12 ^h 20 ^m		Mag: -2.2 PMG: 15 ^h 32 ^m		Mag: +0.7 PMG: 4 ^h 35 ^m	
	hG ♈		hG ♀ Dec		hG ♂ Dec		hG ♃ Dec		hG ♄ Dec	
h	°	'	°	'	°	'	°	'	°	'
0	127	54.1	225	23.9	-20	26.3	174	54.6	-18	42.5
1	142	56.6	240	23.4		26.5	189	55.1		42.0
2	157	59.0	255	22.9		26.8	204	55.5		41.4
3	173	01.5	270	22.4		27.1	219	56.0		40.9
4	188	04.0	285	21.9		27.3	234	56.5		40.4
5	203	06.4	300	21.4	-20	27.6	249	56.9	-18	39.8
6	218	08.9	315	20.9	-20	27.9	264	57.4	-18	39.3
7	233	11.4	330	20.4		28.1	279	57.9		38.8
8	248	13.8	345	19.9		28.4	294	58.3		38.2
9	263	16.3	0	19.4		28.7	309	58.8		37.7
10	278	18.7	15	18.9		28.9	324	59.3		37.2
11	293	21.2	30	18.4	-20	29.2	339	59.7	-18	36.6
12	308	23.7	45	17.9	-20	29.4	355	00.2	-18	36.1
13	323	26.1	60	17.4		29.7	10	00.7		35.6
14	338	28.6	75	16.9		30.0	25	01.1		35.0
15	353	31.1	90	16.3		30.2	40	01.6		34.5
16	8	33.5	105	15.8		30.5	55	02.1		34.0
17	23	36.0	120	15.3	-20	30.7	70	02.5	-18	33.4
18	38	38.5	135	14.8	-20	31.0	85	03.0	-18	32.9
19	53	40.9	150	14.3		31.2	100	03.5		32.3
20	68	43.4	165	13.8		31.5	115	03.9		31.8
21	83	45.9	180	13.3		31.8	130	04.4		31.3
22	98	48.3	195	12.8		32.0	145	04.9		30.7
23	113	50.8	210	12.3		32.3	160	05.3		30.2
24	128	53.2	225	11.8	-20	32.5	175	05.8	-18	29.7
Dif	—		-5 -3		+5 +5		+20 +2		+25 0	

UT	SOL		☉ LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16:2		Edad: 25 ^d 6 PHE { 4 ^h : 56:5 12 ^h : 56:4 20 ^h : 56:2						Civil		Náutico		Hora R°	
	PMG: 12 ^h 13 ^m 2		PMG: 9 ^h 12 ^m	R°: 53 ^m										
	hG ☉	Dec	hG ☾	Dif	Dec	Dif								
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m
0	176	42.9	-17 48.7		227 08.6	-24 06.9	11 60 N	16 08	16 56	17 47	6 29 35	11 57 75		
1	191	42.8	48.0		241 35.6	05.8	13 58	19	17 03	51	6 08 38	12 18 72		
2	206	42.7	47.4		256 02.6	04.5	13 56	28	09	55	5 50 41	35 70		
3	221	42.6	46.7		270 29.7	03.2	13 54	36	15	17 58	36 42	12 50 66		
4	236	42.5	46.0		284 56.8	-24 01.7	15 52	43	20	18 01	23 43	13 02 66		
5	251	42.4	-17 45.3		299 23.9	-24 00.0	17 50	16 50	17 25	18 04	5 12 44	13 13 65		
6	266	42.3	-17 44.6		313 51.1	-23 58.2	18 45	17 04	17 36	18 11	4 49 46	13 36 63		
7	281	42.2	44.0		328 18.3	56.3	19 40	16	45	18	30 47	13 55 61		
8	296	42.1	43.3		342 45.6	54.3	20 35	26	17 53	23	14 49	14 10 60		
9	311	42.0	42.6		357 12.9	52.1	22 30	35	18 00	29	4 01 49	24 58		
10	326	41.9	41.9		11 40.2	49.8	23 20	17 50	14	40	3 37 52	14 46 56		
11	341	41.8	-17 41.2		26 07.6	-23 47.3	25 10 N	18 04	18 26	18 51	3 17 53	15 06 54		
12	356	41.7	-17 40.5		40 35.0	-23 44.8	25 0	18 17	18 38	19 04	2 58 54	15 25 52		
13	11	41.6	39.9		55 02.5	42.1	27 10 S	30	18 52	18	40 55	15 43 51		
14	26	41.4	39.2		69 30.0	39.2	29 20	18 44	19 07	35	2 20 56	16 02 49		
15	41	41.3	38.5		83 57.6	36.3	29 30	19 00	25	19 56	1 57 57	25 47		
16	56	41.2	37.8		98 25.2	33.2	31 35	09	37	20 10	43 58	38 46		
17	71	41.1	-17 37.1		112 52.9	-23 30.0	32 40	19 20	19 50	20 27	1 27 59	16 53 44		
18	86	41.0	-17 36.4		127 20.7	-23 26.7	33 45	19 32	20 06	20 48	1 09 60	17 11 42		
19	101	40.9	35.7		141 48.4	23.2	35 50	48	26	21 16	0 45 62	33 40		
20	116	40.8	35.0		156 16.3	19.6	36 52	19 55	36	31	34 63	44 38		
21	131	40.7	34.4		170 44.2	15.9	37 54	20 03	20 47	21 48	21 64	17 56 36		
22	146	40.6	33.7		185 12.1	12.1	38 56	12	21 00	22 10	0 07 64	18 10 34		
23	161	40.5	33.0		199 40.1	08.1	40 58	23	15	22 40	** ** *	26 31		
24	176	40.4	-17 32.3		214 08.2	-23 04.0	41 60 S	20 35	21 34	23 32	** ** *	18 45 28		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 15 ^h 21 ^m 9		Mag: -4.4 PMG: 9 ^h 00 ^m		Mag: +1.1 PMG: 12 ^h 19 ^m		Mag: -2.2 PMG: 15 ^h 29 ^m		Mag: +0.7 PMG: 4 ^h 31 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	128	53.2	225 11.8	-20 32.5	175 05.8	-18 29.7	127 10.2	-0 32.0	292 02.6	-4 24.5
1	143	55.7	240 11.3	32.8	190 06.3	29.1	142 12.2	31.8	307 05.1	24.5
2	158	58.2	255 10.8	33.0	205 06.7	28.6	157 14.2	31.6	322 07.5	24.5
3	174	00.6	270 10.2	33.3	220 07.2	28.0	172 16.2	31.4	337 10.0	24.5
4	189	03.1	285 09.7	33.5	235 07.7	27.5	187 18.3	31.2	352 12.5	24.4
5	204	05.6	300 09.2	-20 33.7	250 08.2	-18 27.0	202 20.3	-0 31.0	7 15.0	-4 24.4
6	219	08.0	315 08.7	-20 34.0	265 08.6	-18 26.4	217 22.3	-0 30.8	22 17.4	-4 24.4
7	234	10.5	330 08.2	34.2	280 09.1	25.9	232 24.3	30.6	37 19.9	24.4
8	249	13.0	345 07.7	34.5	295 09.6	25.3	247 26.4	30.4	52 22.4	24.4
9	264	15.4	0 07.2	34.7	310 10.0	24.8	262 28.4	30.2	67 24.9	24.4
10	279	17.9	15 06.6	35.0	325 10.5	24.3	277 30.4	30.0	82 27.4	24.3
11	294	20.4	30 06.1	-20 35.2	340 11.0	-18 23.7	292 32.4	-0 29.8	97 29.8	-4 24.3
12	309	22.8	45 05.6	-20 35.4	355 11.4	-18 23.2	307 34.4	-0 29.6	112 32.3	-4 24.3
13	324	25.3	60 05.1	35.7	10 11.9	22.6	322 36.5	29.4	127 34.8	24.3
14	339	27.7	75 04.6	35.9	25 12.4	22.1	337 38.5	29.2	142 37.3	24.3
15	354	30.2	90 04.1	36.2	40 12.9	21.5	352 40.5	29.0	157 39.7	24.3
16	9	32.7	105 03.5	36.4	55 13.3	21.0	7 42.5	28.8	172 42.2	24.2
17	24	35.1	120 03.0	-20 36.6	70 13.8	-18 20.5	22 44.6	-0 28.7	187 44.7	-4 24.2
18	39	37.6	135 02.5	-20 36.9	85 14.3	-18 19.9	37 46.6	-0 28.5	202 47.2	-4 24.2
19	54	40.1	150 02.0	37.1	100 14.7	19.4	52 48.6	28.3	217 49.7	24.2
20	69	42.5	165 01.5	37.3	115 15.2	18.8	67 50.6	28.1	232 52.1	24.2
21	84	45.0	180 00.9	37.6	130 15.7	18.3	82 52.6	27.9	247 54.6	24.1
22	99	47.5	195 00.4	37.8	145 16.2	17.7	97 54.7	27.7	262 57.1	24.1
23	114	49.9	209 59.9	38.0	160 16.6	17.2	112 56.7	27.5	277 59.6	24.1
24	129	52.4	224 59.4	-20 38.3	175 17.1	-18 16.6	127 58.7	-0 27.3	293 02.1	-4 24.1
Dif	—		-5	-2	+5	+5	+20	+2	+25	

UT	SOL				● LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16'2 PMG: 12 ^h 13 ^m 4				Edad: 26 ^d 6 PHE { SD: 15'3 PMG: 10 ^h 05 ^m											
					R ^o : 50 ^m											
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m m		h m m	
0	176	40.4	-17	32.3	214	08.2	-23	04.0	60 N	6 38	7 29	8 17	7 04	21	13 12	82
1	191	40.3		31.6	228	36.3	91	-22 59.8	58	34	22	8 07	6 46	25	30	78
2	206	40.3		30.9	243	04.5	92	55.5	56	31	16	7 57	31	28	45	75
3	221	40.2		30.2	257	32.7	92	51.1	54	28	10	49	18	31	13 57	73
4	236	40.1		29.5	272	01.0	93	46.5	52	25	05	42	6 06	33	14 08	71
5	251	40.0	-17	28.8	286	29.3	93	-22 41.8	50	6 22	7 01	7 36	5 56	35	14 18	69
6	266	39.9	-17	28.1	300	57.8	95	-22 37.0	45	6 15	6 50	7 21	5 35	37	14 39	65
7	281	39.8		27.4	315	26.2	94	32.1	40	09	41	10	17	41	14 56	62
8	296	39.7		26.7	329	54.8	96	27.1	35	6 03	33	7 00	5 03	42	15 10	60
9	311	39.6		26.0	344	23.4	96	22.0	30	5 57	26	6 51	4 50	44	22	58
10	326	39.5		25.3	358	52.0	96	16.7	20	46	13	36	29	46	15 42	55
11	341	39.4	-17	24.6	13	20.8	98	-22 11.4	10 N	5 35	6 01	6 23	4 10	49	16 00	53
12	356	39.3	-17	23.9	27	49.6	98	-22 05.9	0	5 23	5 48	6 10	3 52	51	16 17	50
13	11	39.2		23.2	42	18.4	98	-22 00.3	10 S	5 09	35	5 57	35	53	34	47
14	26	39.1		22.5	56	47.3	99	-21 54.6	20	4 52	20	43	3 16	55	16 51	45
15	41	39.0		21.8	71	16.3	100	48.8	30	31	5 01	27	2 54	58	17 12	41
16	56	38.9		21.1	85	45.4	101	42.9	35	17	4 50	18	41	60	24	39
17	71	38.8	-17	20.4	100	14.5	101	-21 36.9	40	4 00	4 37	5 07	2 26	62	17 37	37
18	86	38.7	-17	19.7	114	43.7	102	-21 30.7	45	3 39	4 21	4 55	2 09	64	17 53	34
19	101	38.6		19.0	129	13.0	103	24.5	50	3 11	4 01	39	1 47	67	18 13	30
20	116	38.5		18.3	143	42.3	103	18.2	52	2 56	3 51	32	37	68	22	29
21	131	38.5		17.6	158	11.7	104	11.7	54	39	40	24	25	70	32	27
22	146	38.4		16.9	172	41.1	104	-21 05.2	56	2 17	27	15	1 11	73	44	25
23	161	38.3		16.2	187	10.7	106	-20 58.5	58	1 48	3 12	4 04	0 56	75	18 57	22
24	176	38.2	-17	15.5	201	40.3	106	-20 51.8	60 S	0 56	2 54	3 53	0 37	79	19 13	18

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 15 ^h 18 ^m 0		Mag: -4.3 PMG: 9 ^h 00 ^m		Mag: +1.1 PMG: 12 ^h 18 ^m		Mag: -2.2 PMG: 15 ^h 26 ^m		Mag: +0.7 PMG: 4 ^h 27 ^m	
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄	
h	°	'	°	'	°	'	°	'	°	'
0	129	52.4	224	59.4	-20	38.3	175	17.1	-18	16.6
1	144	54.9	239	58.9		38.5	190	17.6		16.1
2	159	57.3	254	58.3		38.7	205	18.1		15.5
3	174	59.8	269	57.8		39.0	220	18.5		15.0
4	190	02.2	284	57.3		39.2	235	19.0		14.4
5	205	04.7	299	56.8	-20	39.4	250	19.5	-18	13.9
6	220	07.2	314	56.2	-20	39.6	265	20.0	-18	13.3
7	235	09.6	329	55.7		39.9	280	20.4		12.8
8	250	12.1	344	55.2		40.1	295	20.9		12.2
9	265	14.6	359	54.6		40.3	310	21.4		11.7
10	280	17.0	14	54.1		40.5	325	21.9		11.1
11	295	19.5	29	53.6	-20	40.8	340	22.3	-18	10.6
12	310	22.0	44	53.1	-20	41.0	355	22.8	-18	10.0
13	325	24.4	59	52.5		41.2	10	23.3		09.5
14	340	26.9	74	52.0		41.4	25	23.8		08.9
15	355	29.3	89	51.5		41.6	40	24.2		08.4
16	10	31.8	104	50.9		41.9	55	24.7		07.8
17	25	34.3	119	50.4	-20	42.1	70	25.2	-18	07.3
18	40	36.7	134	49.9	-20	42.3	85	25.7	-18	06.7
19	55	39.2	149	49.4		42.5	100	26.1		06.2
20	70	41.7	164	48.8		42.7	115	26.6		05.6
21	85	44.1	179	48.3		42.9	130	27.1		05.1
22	100	46.6	194	47.8		43.1	145	27.6		04.5
23	115	49.1	209	47.2		43.4	160	28.0		04.0
24	130	51.5	224	46.7	-20	43.6	175	28.5	-18	03.4
Dif	—		-5		-2		+5		+6	

UT	SOL				● LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna		
	SD: 16:2 PMG: 12 ^h 13 ^m 5				Edad: 27 ^d 6 PHE { 4 ^h : 55:6 12 ^h : 55:4 20 ^h : 55:3 PMG: 10 ^h 55 ^m R°: 48 ^m													
	hG ☉		Dec		hG ☾		Dif				Dif		Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	'	°	'	h m	h m	h m	h m	h m	h m	h m	h m
0	176	38.2	-17	15.5	201	40.3	-20	51.8	60 N	16 13	17 01	17 51	7 25 15	14 34 83				
1	191	38.1		14.8	216	09.9 ¹⁰⁶		44.9 ⁶⁹	58	23	07	55	7 11 18	14 48 79				
2	206	38.0		14.1	230	39.7 ¹⁰⁸		38.0 ⁶⁹	56	32	13	17 58	6 59 21	15 00 76				
3	221	37.9		13.4	245	09.5 ¹⁰⁸		30.9 ⁷¹	54	40	19	18 02	49 23	10 73				
4	236	37.8		12.7	259	39.4 ¹⁰⁹		23.8 ⁷¹	52	47	24	05	39 26	19 71				
5	251	37.7	-17	12.0	274	09.3 ¹⁰⁹	-20	16.6 ⁷²	50	16 54	17 28	18 07	6 31 27	15 27 69				
6	266	37.7	-17	11.3	288	39.3 ¹¹⁰	-20	09.2 ⁷⁴	45	17 07	17 39	18 14	6 12 32	15 44 65				
7	281	37.6		10.6	303	09.4 ¹¹¹	-20	01.8 ⁷⁴	40	19	47	20	5 58 34	15 58 62				
8	296	37.5		09.9	317	39.6 ¹¹²	-19	54.3 ⁷⁵	35	28	17 55	25	45 37	16 10 59				
9	311	37.4		09.2	332	09.8 ¹¹²		46.7 ⁷⁶	30	37	18 02	31	34 39	20 57				
10	326	37.3		08.5	346	40.1 ¹¹³		39.0 ⁷⁷	20	17 52	15	41	5 15 43	37 54				
11	341	37.2	-17	07.8	1	10.5 ¹¹⁴	-19	31.2 ⁷⁸	10 N	18 05	18 27	18 52	4 59 45	16 53 50				
12	356	37.1	-17	07.0	15	40.9 ¹¹⁴	-19	23.3 ⁷⁹	0	18 17	18 39	19 04	4 43 48	17 07 47				
13	11	37.0		06.3	30	11.5 ¹¹⁶		15.3 ⁸⁰	10 S	29	18 52	17	28 51	21 44				
14	26	37.0		05.6	44	42.0 ¹¹⁵	-19	07.3 ⁸⁰	20	43	19 06	34	4 11 54	36 40				
15	41	36.9		04.9	59	12.7 ¹¹⁷	-18	59.1 ⁸²	30	18 58	24	19 55	3 52 58	17 53 37				
16	56	36.8		04.2	73	43.4 ¹¹⁷		50.9 ⁸²	35	19 07	35	20 08	41 60	18 03 34				
17	71	36.7	-17	03.5	88	14.2 ¹¹⁸	-18	42.6 ⁸³	40	19 18	19 48	20 24	3 28 62	18 14 32				
18	86	36.6	-17	02.8	102	45.1 ¹¹⁹	-18	34.2 ⁸⁴	45	19 30	20 03	20 45	3 13 65	18 27 29				
19	101	36.5		02.1	117	16.0 ¹¹⁹		25.7 ⁸⁵	50	45	23	21 12	2 54 69	43 25				
20	116	36.5		01.3	131	47.0 ¹²⁰		17.1 ⁸⁶	52	19 52	32	26	45 71	51 23				
21	131	36.4	-17	00.6	146	18.1 ¹²¹	-18	08.5 ⁸⁶	54	20 00	43	21 43	35 73	18 59 21				
22	146	36.3	-16	59.9	160	49.3 ¹²²	-17	59.8 ⁸⁷	56	09	20 55	22 03	24 75	19 09 18				
23	161	36.2		59.2	175	20.5 ¹²²		51.0 ⁸⁸	58	19	21 10	22 30	2 11 79	19 16				
24	176	36.1	-16	58.5	189	51.8 ¹²³	-17	42.1 ⁸⁹	60 S	20 30	21 27	23 12	1 56 82	19 31 12				
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 15 ^h 14 ^m 1		Mag: -4.3 PMG: 9 ^h 01 ^m				Mag: +1.1 PMG: 12 ^h 18 ^m				Mag: -2.2 PMG: 15 ^h 23 ^m				Mag: +0.6 PMG: 4 ^h 23 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	130	51.5	224	46.7	-20	43.6	175	28.5	-18	03.4	128	47.1	-0	22.4	294	01.6	-4	23.6
1	145	54.0	239	46.2		43.8	190	29.0		02.9	143	49.1		22.2	309	04.1		23.6
2	160	56.5	254	45.6		44.0	205	29.5		02.3	158	51.2		22.0	324	06.6		23.6
3	175	58.9	269	45.1		44.2	220	30.0		01.7	173	53.2		21.8	339	09.1		23.6
4	191	01.4	284	44.5		44.4	235	30.4		01.2	188	55.2		21.6	354	11.5		23.5
5	206	03.8	299	44.0	-20	44.6	250	30.9	-18	00.6	203	57.2	-0	21.4	9	14.0	-4	23.5
6	221	06.3	314	43.5	-20	44.8	265	31.4	-18	00.1	218	59.2	-0	21.2	24	16.5	-4	23.5
7	236	08.8	329	42.9		45.0	280	31.9	-17	59.5	234	01.2		21.0	39	19.0		23.5
8	251	11.2	344	42.4		45.2	295	32.3		59.0	249	03.2		20.8	54	21.5		23.5
9	266	13.7	359	41.9		45.4	310	32.8		58.4	264	05.3		20.6	69	24.0		23.4
10	281	16.2	14	41.3		45.6	325	33.3		57.8	279	07.3		20.4	84	26.4		23.4
11	296	18.6	29	40.8	-20	45.8	340	33.8	-17	57.3	294	09.3	-0	20.2	99	28.9	-4	23.4
12	311	21.1	44	40.2	-20	46.0	355	34.3	-17	56.7	309	11.3	-0	20.0	114	31.4	-4	23.4
13	326	23.6	59	39.7		46.2	10	34.7		56.2	324	13.3		19.8	129	33.9		23.3
14	341	26.0	74	39.2		46.4	25	35.2		55.6	339	15.3		19.6	144	36.4		23.3
15	356	28.5	89	38.6		46.6	40	35.7		55.0	354	17.3		19.4	159	38.9		23.3
16	11	31.0	104	38.1		46.8	55	36.2		54.5	9	19.4		19.2	174	41.4		23.3
17	26	33.4	119	37.5	-20	47.0	70	36.7	-17	53.9	24	21.4	-0	19.0	189	43.9	-4	23.3
18	41	35.9	134	37.0	-20	47.2	85	37.1	-17	53.4	39	23.4	-0	18.8	204	46.3	-4	23.2
19	56	38.3	149	36.4		47.4	100	37.6		52.8	54	25.4		18.6	219	48.8		23.2
20	71	40.8	164	35.9		47.6	115	38.1		52.2	69	27.4		18.4	234	51.3		23.2
21	86	43.3	179	35.4		47.8	130	38.6		51.7	84	29.4		18.2	249	53.8		23.2
22	101	45.7	194	34.8		48.0	145	39.1		51.1	99	31.4		18.0	264	56.3		23.2
23	116	48.2	209	34.3		48.2	160	39.5		50.6	114	33.5		17.8	279	58.8		23.1
24	131	50.7	224	33.7	-20	48.4	175	40.0	-17	50.0	129	35.5	-0	17.6	295	01.3	-4	23.1
Dif	—		-5		-2		+5		+6		+20		+2		+25			

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: 28 ^d 6 PHE { 4 ^h : 55:1 12 ^h : 55:0 20 ^h : 54:9 PMG: 11 ^h 43 ^m Rº: 44 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	Rº	Hora
h	°	'	°	'	°	'	°	h	m	h	m	h	m	m
0	176	36.1	-16	58.5	189	51.8	-17 42.1	60 N	6 35	7 25	8 12	7 40	10	15 57 82
1	191	36.0		57.8	204	23.1 ¹²³	33.1 ⁹⁰	58	31	19	8 02	29	13	16 07 78
2	206	36.0		57.0	218	54.6 ¹²⁵	24.1 ⁹⁰	56	28	13	7 54	20	16	16 75
3	221	35.9		56.3	233	26.1 ¹²⁵	15.0 ⁹¹	54	25	07	46	12	18	23 73
4	236	35.8		55.6	247	57.6 ¹²⁵	-17 05.8 ⁹²	52	22	7 02	39	7 05	20	30 70
5	251	35.7	-16	54.9	262	29.3 ¹²⁷	-16 56.6 ⁹²	50	6 19	6 58	7 33	6 58	22	16 36 68
6	266	35.6	-16	54.2	277	01.0 ¹²⁷	-16 47.3 ⁹³	45	6 13	6 48	7 19	6 44	26	16 49 64
7	281	35.6		53.4	291	32.7 ¹²⁷	37.9 ⁹⁴	40	07	39	7 08	32	29	17 00 61
8	296	35.5		52.7	306	04.6 ¹²⁹	28.4 ⁹⁵	35	6 02	32	6 58	22	32	09 58
9	311	35.4		52.0	320	36.5 ¹²⁹	18.9 ⁹⁵	30	5 56	25	50	6 13	34	17 55
10	326	35.3		51.3	335	08.4 ¹²⁹	-16 09.3 ⁹⁶	20	46	12	35	5 58	38	31 51
11	341	35.2	-16	50.6	349	40.5 ¹³¹	-15 59.7 ⁹⁶	10 N	5 35	6 00	6 22	5 44	42	17 43 47
12	356	35.2	-16	49.8	4	12.6 ¹³¹	-15 49.9 ⁹⁸	0	5 23	5 49	6 10	5 31	46	17 54 44
13	11	35.1		49.1	18	44.8 ¹³²	40.1 ⁹⁸	10 S	5 10	36	5 58	19	48	18 05 40
14	26	35.0		48.4	33	17.0 ¹³²	30.3 ⁹⁸	20	4 54	21	44	5 05	52	16 37
15	41	34.9		47.7	47	49.3 ¹³³	20.4 ⁹⁹	30	33	5 03	29	4 50	56	30 33
16	56	34.9		46.9	62	21.7 ¹³⁴	10.4 ¹⁰⁰	35	19	4 53	20	41	58	37 31
17	71	34.8	-16	46.2	76	54.1 ¹³⁴	-15 00.4 ¹⁰⁰	40	4 03	4 40	5 10	4 30	62	18 46 28
18	86	34.7	-16	45.5	91	26.6 ¹³⁵	-14 50.3 ¹⁰¹	45	3 43	4 24	4 58	4 18	65	18 56 25
19	101	34.6		44.8	105	59.1 ¹³⁵	40.1 ¹⁰²	50	16	4 05	43	4 03	69	19 08 21
20	116	34.6		44.0	120	31.7 ¹³⁶	29.9 ¹⁰²	52	3 02	3 55	36	3 56	71	14 19
21	131	34.5		43.3	135	04.4 ¹³⁷	19.6 ¹⁰³	54	2 45	45	28	48	73	20 17
22	146	34.4		42.6	149	37.2 ¹³⁸	-14 09.3 ¹⁰³	56	2 25	32	19	39	76	27 14
23	161	34.3		41.8	164	10.0 ¹³⁸	-13 58.9 ¹⁰⁴	58	1 58	18	4 09	30	78	35 11
24	176	34.3	-16	41.1	178	42.8 ¹³⁸	-13 48.5 ¹⁰⁴	60 S	1 16	3 01	3 58	3 18	82	19 43 9

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 15 ^h 10 ^m 1		Mag: -4.3 PMG: 9 ^h 02 ^m		Mag: +1.1 PMG: 12 ^h 17 ^m		Mag: -2.2 PMG: 15 ^h 20 ^m		Mag: +0.6 PMG: 4 ^h 19 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	131	50.7	224	33.7	-20	48.4	175	40.0	-17	50.0
1	146	53.1	239	33.2		48.6	190	40.5		49.4
2	161	55.6	254	32.6		48.7	205	41.0		48.9
3	176	58.1	269	32.1		48.9	220	41.5		48.3
4	192	00.5	284	31.5		49.1	235	42.0		47.7
5	207	03.0	299	31.0	-20	49.3	250	42.4	-17	47.2
6	222	05.5	314	30.4	-20	49.5	265	42.9	-17	46.6
7	237	07.9	329	29.9		49.7	280	43.4		46.0
8	252	10.4	344	29.3		49.9	295	43.9		45.5
9	267	12.8	359	28.8		50.0	310	44.4		44.9
10	282	15.3	14	28.2		50.2	325	44.9		44.3
11	297	17.8	29	27.7	-20	50.4	340	45.3	-17	43.8
12	312	20.2	44	27.1	-20	50.6	355	45.8	-17	43.2
13	327	22.7	59	26.6		50.8	10	46.3		42.6
14	342	25.2	74	26.0		50.9	25	46.8		42.1
15	357	27.6	89	25.5		51.1	40	47.3		41.5
16	12	30.1	104	24.9		51.3	55	47.8		40.9
17	27	32.6	119	24.4	-20	51.5	70	48.2	-17	40.4
18	42	35.0	134	23.8	-20	51.6	85	48.7	-17	39.8
19	57	37.5	149	23.3		51.8	100	49.2		39.2
20	72	39.9	164	22.7		52.0	115	49.7		38.7
21	87	42.4	179	22.2		52.2	130	50.2		38.1
22	102	44.9	194	21.6		52.3	145	50.7		37.5
23	117	47.3	209	21.1		52.5	160	51.2		37.0
24	132	49.8	224	20.5	-20	52.7	175	51.6	-17	36.4
Dif	—		-6	-2		+5	+6	+20		+2

UT	SOL				● LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna			Puesta de Luna			
	SD: 16:2 PMG: 12 ^h 13 ^m 8				Edad: 29 ^d 6 PHE { 4 ^h : 54 ^m 8 12 ^h : 54 ^m 7 20 ^h : 54 ^m 5 R°: 43 ^m															
	hG ☉		Dec		hG ☾		Dif				Dec		Dif		Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	m	
0	176	34.3	-16	41.1	178	42.8	-13	48.5	60 N	16 18	17 05	17 56	7 50	7	17 19	79				
1	191	34.2		40.4	193	15.8 ¹⁴⁰		38.0 ¹⁰⁵	58	28	12	17 59	42	11	25	76				
2	206	34.1		39.7	207	48.7 ¹³⁹		27.4 ¹⁰⁶	56	37	17	18 02	36	13	31	73				
3	221	34.0		38.9	222	21.8 ¹⁴¹		16.9 ¹⁰⁵	54	44	23	05	30	15	36	71				
4	236	34.0		38.2	236	54.9 ¹⁴¹		-13 06.2 ¹⁰⁷	52	51	27	08	25	17	40	69				
5	251	33.9	-16	37.5	251	28.0 ¹⁴¹		-12 55.5 ¹⁰⁷	50	16 57	17 32	18 10	7 20	19	17 44	67				
6	266	33.8	-16	36.7	266	01.2 ¹⁴²		-12 44.8 ¹⁰⁷	45	17 10	17 41	18 16	7 10	23	17 53	63				
7	281	33.8		36.0	280	34.5 ¹⁴³		34.0 ¹⁰⁸	40	21	50	22	7 01	27	18 01	59				
8	296	33.7		35.3	295	07.8 ¹⁴³		23.2 ¹⁰⁸	35	30	17 57	27	6 54	29	07	56				
9	311	33.6		34.5	309	41.2 ¹⁴⁴		12.3 ¹⁰⁹	30	39	18 04	32	47	32	12	54				
10	326	33.6		33.8	324	14.7 ¹⁴⁵		-12 01.4 ¹⁰⁹	20	17 53	16	42	36	36	22	49				
11	341	33.5	-16	33.1	338	48.2 ¹⁴⁵		-11 50.4 ¹¹⁰	10 N	18 05	18 27	18 52	6 26	40	18 30	46				
12	356	33.4	-16	32.3	353	21.7 ¹⁴⁵		-11 39.4 ¹¹⁰	0	18 17	18 39	19 04	6 17	43	18 38	42				
13	11	33.3		31.6	7	55.3 ¹⁴⁶		28.3 ¹¹¹	10 S	29	18 51	17	6 07	47	45	39				
14	26	33.3		30.9	22	29.0 ¹⁴⁷		17.2 ¹¹¹	20	42	19 05	33	5 57	51	18 53	35				
15	41	33.2		30.1	37	02.7 ¹⁴⁷		-11 06.1 ¹¹¹	30	18 57	23	19 53	46	54	19 03	30				
16	56	33.1		29.4	51	36.4 ¹⁴⁷		-10 54.9 ¹¹²	35	19 06	33	20 06	39	57	08	28				
17	71	33.1	-16	28.7	66	10.2 ¹⁴⁸		-10 43.7 ¹¹²	40	19 16	19 46	20 22	5 32	60	19 14	25				
18	86	33.0	-16	27.9	80	44.1 ¹⁴⁹		-10 32.5 ¹¹²	45	19 28	20 01	20 42	5 23	63	19 21	22				
19	101	32.9		27.2	95	18.0 ¹⁴⁹		21.2 ¹¹³	50	42	19	21 08	12	67	29	18				
20	116	32.9		26.4	109	51.9 ¹⁴⁹		-10 09.9 ¹¹³	52	49	29	21	07	69	33	16				
21	131	32.8		25.7	124	25.9 ¹⁵⁰		-9 58.5 ¹¹⁴	54	19 56	39	37	5 01	72	37	14				
22	146	32.7		25.0	139	00.0 ¹⁵¹		47.1 ¹¹⁴	56	20 05	20 51	21 56	4 55	74	41	12				
23	161	32.7		24.2	153	34.1 ¹⁵¹		35.7 ¹¹⁴	58	14	21 04	22 21	48	77	46	10				
24	176	32.6	-16	23.5	168	08.2 ¹⁵¹		-9 24.2 ¹¹⁵	60 S	20 25	21 21	22 56	4 40	80	19 52	7				
UT	ARIES				VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 15 ^h 06 ^m 2				Mag: -4.3 PMG: 9 ^h 03 ^m				Mag: +1.1 PMG: 12 ^h 16 ^m				Mag: -2.2 PMG: 15 ^h 16 ^m				Mag: +0.6 PMG: 4 ^h 15 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	132	49.8	224	20.5	-20	52.7	175	51.6	-17	36.4	130	23.7	-0	12.7	296	01.0	-4	22.6		
1	147	52.3	239	19.9		52.8	190	52.1		35.8	145	25.7		12.5	311	03.5		22.5		
2	162	54.7	254	19.4		53.0	205	52.6		35.2	160	27.7		12.3	326	06.0		22.5		
3	177	57.2	269	18.8		53.2	220	53.1		34.7	175	29.7		12.1	341	08.5		22.5		
4	192	59.7	284	18.3		53.3	235	53.6		34.1	190	31.8		11.9	356	11.0		22.5		
5	208	02.1	299	17.7	-20	53.5	250	54.1	-17	33.5	205	33.8	-0	11.7	11	13.5	-4	22.4		
6	223	04.6	314	17.2	-20	53.7	265	54.6	-17	33.0	220	35.8	-0	11.5	26	16.0	-4	22.4		
7	238	07.1	329	16.6		53.8	280	55.0		32.4	235	37.8		11.3	41	18.5		22.4		
8	253	09.5	344	16.0		54.0	295	55.5		31.8	250	39.8		11.1	56	21.0		22.4		
9	268	12.0	359	15.5		54.2	310	56.0		31.2	265	41.8		10.9	71	23.4		22.3		
10	283	14.4	14	14.9		54.3	325	56.5		30.7	280	43.8		10.7	86	25.9		22.3		
11	298	16.9	29	14.4	-20	54.5	340	57.0	-17	30.1	295	45.8	-0	10.5	101	28.4	-4	22.3		
12	313	19.4	44	13.8	-20	54.6	355	57.5	-17	29.5	310	47.8	-0	10.3	116	30.9	-4	22.3		
13	328	21.8	59	13.2		54.8	10	58.0		28.9	325	49.8		10.1	131	33.4		22.2		
14	343	24.3	74	12.7		54.9	25	58.5		28.4	340	51.8		09.9	146	35.9		22.2		
15	358	26.8	89	12.1		55.1	40	58.9		27.8	355	53.8		09.6	161	38.4		22.2		
16	13	29.2	104	11.6		55.3	55	59.4		27.2	10	55.8		09.4	176	40.9		22.2		
17	28	31.7	119	11.0	-20	55.4	70	59.9	-17	26.6	25	57.9	-0	09.2	191	43.4	-4	22.1		
18	43	34.2	134	10.4	-20	55.6	86	00.4	-17	26.1	40	59.9	-0	09.0	206	45.9	-4	22.1		
19	58	36.6	149	09.9		55.7	101	00.9		25.5	56	01.9		08.8	221	48.4		22.1		
20	73	39.1	164	09.3		55.9	116	01.4		24.9	71	03.9		08.6	236	50.9		22.1		
21	88	41.6	179	08.7		56.0	131	01.9		24.3	86	05.9		08.4	251	53.4		22.0		
22	103	44.0	194	08.2		56.2	146	02.4		23.8	101	07.9		08.2	266	55.9		22.0		
23	118	46.5	209	07.6		56.3	161	02.9		23.2	116	09.9		08.0	281	58.4		22.0		
24	133	48.9	224	07.0	-20	56.5	176	03.4	-17	22.6	131	11.9	-0	07.8	297	00.9	-4	22.0		
Dif	—		-6		-2		+5		+6		+20		+2		+25					

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: 0 ^d 9 PHE { SD: 14'8 PMG: 13 ^h 10 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	Rº	Hora	Rº			
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m		
0	176	32.6	-16	23.5	168	08.2	-9	24.2	60 N	6 31	7 21	8 08	7 57	7	18 38	78		
1	191	32.5		22.7	182	42.4 ¹⁵²		12.7 ¹¹⁵	58	27	15	7 58	53	9	41	75		
2	206	32.5		22.0	197	16.6 ¹⁵²	-9	01.2 ¹¹⁵	56	25	09	50	49	11	44	72		
3	221	32.4		21.2	211	50.9 ¹⁵³	-8	49.7 ¹¹⁵	54	22	7 04	42	45	14	47	70		
4	236	32.4		20.5	226	25.2 ¹⁵³		38.1 ¹¹⁶	52	19	6 59	36	42	16	49	68		
5	251	32.3	-16	19.8	240	59.5 ¹⁵³	-8	26.5 ¹¹⁶	50	6 17	6 55	7 30	7 39	18	18 51	66		
6	266	32.2	-16	19.0	255	33.9 ¹⁵⁴	-8	14.8 ¹¹⁷	45	6 11	6 46	7 17	7 33	21	18 56	62		
7	281	32.2		18.3	270	08.4 ¹⁵⁵	-8	03.2 ¹¹⁶	40	05	38	7 06	28	24	19 00	58		
8	296	32.1		17.5	284	42.8 ¹⁵⁴	-7	51.5 ¹¹⁷	35	6 00	30	6 57	23	27	03	56		
9	311	32.0		16.8	299	17.3 ¹⁵⁵		39.8 ¹¹⁷	30	5 55	24	49	19	30	06	53		
10	326	32.0		16.0	313	51.9 ¹⁵⁶		28.0 ¹¹⁸	20	45	12	35	12	34	11	49		
11	341	31.9	-16	15.3	328	26.5 ¹⁵⁶	-7	16.3 ¹¹⁷	10 N	5 35	6 00	6 22	7 06	37	19 16	44		
12	356	31.9	-16	14.5	343	01.1 ¹⁵⁶	-7	04.5 ¹¹⁸	0	5 24	5 49	6 10	7 00	41	19 20	41		
13	11	31.8		13.8	357	35.8 ¹⁵⁷	-6	52.7 ¹¹⁸	10 S	5 11	37	5 58	6 54	45	24	37		
14	26	31.7		13.0	12	10.5 ¹⁵⁷		40.8 ¹¹⁹	20	4 55	22	46	48	48	28	34		
15	41	31.7		12.3	26	45.2 ¹⁵⁷		29.0 ¹¹⁸	30	35	5 05	31	40	54	33	29		
16	56	31.6		11.6	41	20.0 ¹⁵⁸		17.1 ¹¹⁹	35	22	4 55	22	36	56	36	27		
17	71	31.6	-16	10.8	55	54.8 ¹⁵⁸	-6	05.2 ¹¹⁹	40	4 06	4 43	5 12	6 32	58	19 39	24		
18	86	31.5	-16	10.1	70	29.6 ¹⁵⁸	-5	53.3 ¹¹⁹	45	3 46	4 28	5 01	6 26	62	19 43	20		
19	101	31.4		09.3	85	04.5 ¹⁵⁹		41.4 ¹¹⁹	50	20	09	4 46	19	67	47	17		
20	116	31.4		08.6	99	39.3 ¹⁵⁸		29.5 ¹¹⁹	52	3 07	4 00	40	16	68	49	15		
21	131	31.3		07.8	114	14.3 ¹⁶⁰		17.5 ¹²⁰	54	2 51	3 50	32	13	70	51	13		
22	146	31.3		07.0	128	49.2 ¹⁵⁹	-5	05.5 ¹²⁰	56	32	38	24	09	73	53	11		
23	161	31.2		06.3	143	24.2 ¹⁶⁰	-4	53.6 ¹¹⁹	58	2 08	24	14	05	75	56	9		
24	176	31.2	-16	05.5	157	59.2 ¹⁶⁰	-4	41.6 ¹²⁰	60 S	1 32	3 08	4 04	6 00	79	19 59	6		
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO					
	PMG: 15 ^h 02 ^m 3			Mag: -4.3 PMG: 9 ^h 04 ^m			Mag: +1.1 PMG: 12 ^h 15 ^m			Mag: -2.2 PMG: 15 ^h 13 ^m			Mag: +0.6 PMG: 4 ^h 11 ^m					
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	133	48.9	224	07.0	-20	56.5	176	03.4	-17	22.6	131	11.9	-0	07.8	297	00.9	-4	22.0
1	148	51.4	239	06.5		56.6	191	03.8		22.0	146	13.9		07.6	312	03.4		21.9
2	163	53.9	254	05.9		56.8	206	04.3		21.4	161	15.9		07.4	327	05.9		21.9
3	178	56.3	269	05.3		56.9	221	04.8		20.9	176	17.9		07.2	342	08.4		21.9
4	193	58.8	284	04.8		57.1	236	05.3		20.3	191	19.9		07.0	357	10.9		21.9
5	209	01.3	299	04.2	-20	57.2	251	05.8	-17	19.7	206	21.9	-0	06.8	12	13.3	-4	21.8
6	224	03.7	314	03.6	-20	57.3	266	06.3	-17	19.1	221	23.9	-0	06.6	27	15.8	-4	21.8
7	239	06.2	329	03.1		57.5	281	06.8		18.5	236	25.9		06.4	42	18.3		21.8
8	254	08.7	344	02.5		57.6	296	07.3		18.0	251	27.9		06.2	57	20.8		21.8
9	269	11.1	359	01.9		57.8	311	07.8		17.4	266	29.9		06.0	72	23.3		21.7
10	284	13.6	14	01.4		57.9	326	08.3		16.8	281	31.9		05.7	87	25.8		21.7
11	299	16.0	29	00.8	-20	58.0	341	08.8	-17	16.2	296	33.9	-0	05.5	102	28.3	-4	21.7
12	314	18.5	44	00.2	-20	58.2	356	09.3	-17	15.6	311	36.0	-0	05.3	117	30.8	-4	21.7
13	329	21.0	58	59.6		58.3	11	09.7		15.0	326	38.0		05.1	132	33.3		21.6
14	344	23.4	73	59.1		58.4	26	10.2		14.5	341	40.0		04.9	147	35.8		21.6
15	359	25.9	88	58.5		58.6	41	10.7		13.9	356	42.0		04.7	162	38.3		21.6
16	14	28.4	103	57.9		58.7	56	11.2		13.3	11	44.0		04.5	177	40.8		21.6
17	29	30.8	118	57.4	-20	58.8	71	11.7	-17	12.7	26	46.0	-0	04.3	192	43.3	-4	21.5
18	44	33.3	133	56.8	-20	59.0	86	12.2	-17	12.1	41	48.0	-0	04.1	207	45.8	-4	21.5
19	59	35.8	148	56.2		59.1	101	12.7		11.5	56	50.0		03.9	222	48.3		21.5
20	74	38.2	163	55.6		59.2	116	13.2		11.0	71	52.0		03.7	237	50.8		21.4
21	89	40.7	178	55.1		59.4	131	13.7		10.4	86	54.0		03.5	252	53.3		21.4
22	104	43.2	193	54.5		59.5	146	14.2		09.8	101	56.0		03.3	267	55.8		21.4
23	119	45.6	208	53.9		59.6	161	14.7		09.2	116	58.0		03.1	282	58.3		21.4
24	134	48.1	223	53.3	-20	59.8	176	15.2	-17	08.6	132	00.0	-0	02.9	298	00.8	-4	21.3
Dif	—			-6 -1			+5 +6			+20 +2			+25 0					

UT	SOL				● LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna				
	SD: 16:2 PMG: 12 ^h 14 ^m 0				Edad: 1 ^d 9 PHE { 4 ^h : 54/2 SD: 14:8 12 ^h : 54/1 PMG: 13 ^h 51 ^m R°: 40 ^m															
	hG ☉	Dec			hG ☾	Dif	Dec				Dif	Civil	Náutico	Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m				
0	176	31.2	-16	05.5	157	59.2	-4	41.6	60 N	16 24	17 10	18 00	8 04 5	19 56 76						
1	191	31.1		04.8	172	34.2 ¹⁶⁰		29.6 ¹²⁰	58	33	16	03	02 8	56 74						
2	206	31.1		04.0	187	09.3 ¹⁶¹		17.5 ¹²¹	56	41	21	06	8 00 11	56 72						
3	221	31.0		03.3	201	44.4 ¹⁶¹	-4	05.5 ¹²⁰	54	48	26	09	7 59 13	57 69						
4	236	30.9		02.5	216	19.5 ¹⁶¹	-3	53.5 ¹²⁰	52	16 55	31	11	58 14	57 67						
5	251	30.9	-16	01.8	230	54.6 ¹⁶¹	-3	41.4 ¹²¹	50	17 00	17 35	18 13	7 57 16	19 57 65						
6	266	30.8	-16	01.0	245	29.7 ¹⁶¹	-3	29.3 ¹²¹	45	17 13	17 44	18 19	7 54 20	19 58 61						
7	281	30.8	-16	00.3	260	04.9 ¹⁶²		17.3 ¹²⁰	40	23	52	24	52 24	58 58						
8	296	30.7	-15	59.5	274	40.1 ¹⁶²	-3	05.2 ¹²¹	35	32	17 59	29	50 27	59 55						
9	311	30.7		58.7	289	15.3 ¹⁶²	-2	53.1 ¹²¹	30	40	18 05	34	49 28	19 59 52						
10	326	30.6		58.0	303	50.5 ¹⁶²		41.0 ¹²¹	20	17 54	17	43	46 33	20 00 48						
11	341	30.6	-15	57.2	318	25.8 ¹⁶³	-2	28.9 ¹²¹	10 N	18 06	18 28	18 53	7 43 37	20 00 44						
12	356	30.5	-15	56.5	333	01.1 ¹⁶³	-2	16.8 ¹²¹	0	18 17	18 39	19 04	7 41 41	20 01 40						
13	11	30.5		55.7	347	36.3 ¹⁶²	-2	04.7 ¹²¹	10 S	29	18 51	17	39 44	01 37						
14	26	30.4		55.0	2	11.6 ¹⁶³	-1	52.6 ¹²¹	20	41	19 05	32	36 48	02 33						
15	41	30.4		54.2	16	47.0 ¹⁶⁴		40.5 ¹²¹	30	18 56	21	19 52	34 52	02 29						
16	56	30.3		53.4	31	22.3 ¹⁶³		28.3 ¹²²	35	19 04	31	20 04	32 55	03 26						
17	71	30.3	-15	52.7	45	57.6 ¹⁶³	-1	16.2 ¹²¹	40	19 14	19 43	20 19	7 30 58	20 03 23						
18	86	30.2	-15	51.9	60	33.0 ¹⁶⁴	-1	04.1 ¹²¹	45	19 25	19 58	20 38	7 28 61	20 03 21						
19	101	30.2		51.2	75	08.3 ¹⁶³	-0	52.0 ¹²¹	50	39	20 16	21 04	26 65	04 16						
20	116	30.1		50.4	89	43.7 ¹⁶⁴		39.9 ¹²¹	52	45	25	16	24 68	04 15						
21	131	30.1		49.6	104	19.1 ¹⁶⁴		27.7 ¹²²	54	19 52	34	31	23 70	04 13						
22	146	30.0		48.9	118	54.5 ¹⁶⁴		15.6 ¹²¹	56	20 00	46	21 49	22 71	04 11						
23	161	30.0		48.1	133	29.9 ¹⁶⁴	-0	03.5 ¹²¹	58	09	20 59	22 12	20 74	05 8						
24	176	29.9	-15	47.3	148	05.3 ¹⁶⁴	+0	08.6 ¹²¹	60 S	20 20	21 14	22 43	7 19 76	20 05 6						
UT	ARIES				VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 14 ^h 58 ^m 3				Mag: -4.3 PMG: 9 ^h 05 ^m				Mag: +1.1 PMG: 12 ^h 15 ^m				Mag: -2.2 PMG: 15 ^h 10 ^m				Mag: +0.6 PMG: 4 ^h 07 ^m			
	hG ♈	Dec			hG ♀	Dec			hG ♂	Dec			hG ♃	Dec			hG ♄	Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	134	48.1	223	53.3	-20	59.8	176	15.2	-17	08.6	132	00.0	-0	02.9	298	00.8	-4	21.3		
1	149	50.5	238	52.8	-20	59.9	191	15.7		08.0	147	02.0		02.6	313	03.3		21.3		
2	164	53.0	253	52.2	-21	00.0	206	16.2		07.4	162	04.0		02.4	328	05.8		21.3		
3	179	55.5	268	51.6	-21	00.1	221	16.7		06.9	177	06.0		02.2	343	08.3		21.3		
4	194	57.9	283	51.0		00.3	236	17.2		06.3	192	08.0		02.0	358	10.8		21.2		
5	210	00.4	298	50.5	-21	00.4	251	17.7	-17	05.7	207	10.0	-0	01.8	13	13.3	-4	21.2		
6	225	02.9	313	49.9	-21	00.5	266	18.2	-17	05.1	222	12.0	-0	01.6	28	15.8	-4	21.2		
7	240	05.3	328	49.3		00.6	281	18.6		04.5	237	14.0		01.4	43	18.3		21.1		
8	255	07.8	343	48.7		00.7	296	19.1		03.9	252	16.0		01.2	58	20.8		21.1		
9	270	10.3	358	48.1		00.9	311	19.6		03.3	267	18.0		01.0	73	23.3		21.1		
10	285	12.7	13	47.6		01.0	326	20.1		02.7	282	20.0		00.8	88	25.8		21.1		
11	300	15.2	28	47.0	-21	01.1	341	20.6	-17	02.1	297	22.0	-0	00.6	103	28.3	-4	21.0		
12	315	17.6	43	46.4	-21	01.2	356	21.1	-17	01.6	312	24.0	-0	00.4	118	30.8	-4	21.0		
13	330	20.1	58	45.8		01.3	11	21.6		01.0	327	26.0	-0	00.2	133	33.3		21.0		
14	345	22.6	73	45.2		01.4	26	22.1	-17	00.4	342	28.0	+0	00.0	148	35.8		21.0		
15	0	25.0	88	44.7		01.5	41	22.6	-16	59.8	357	30.0	+0	00.2	163	38.3		20.9		
16	15	27.5	103	44.1		01.7	56	23.1		59.2	12	32.0		00.5	178	40.8		20.9		
17	30	30.0	118	43.5	-21	01.8	71	23.6	-16	58.6	27	34.0	+0	00.7	193	43.3	-4	20.9		
18	45	32.4	133	42.9	-21	01.9	86	24.1	-16	58.0	42	36.0	+0	00.9	208	45.8	-4	20.8		
19	60	34.9	148	42.3		02.0	101	24.6		57.4	57	38.0		01.1	223	48.3		20.8		
20	75	37.4	163	41.8		02.1	116	25.1		56.8	72	40.0		01.3	238	50.9		20.8		
21	90	39.8	178	41.2		02.2	131	25.6		56.2	87	42.0		01.5	253	53.4		20.8		
22	105	42.3	193	40.6		02.3	146	26.1		55.6	102	44.0		01.7	268	55.9		20.7		
23	120	44.8	208	40.0		02.4	161	26.6		55.0	117	46.0		01.9	283	58.4		20.7		
24	135	47.2	223	39.4	-21	02.5	176	27.1	-16	54.5	132	48.0	+0	02.1	299	00.9	-4	20.7		
Dif	—				-6 -1				+5 +6				+20 +2				+25 0			

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'2 PMG: 12 ^h 14 ^m 0			Edad: 2 ^d 9	PHE { 4 ^h : 54'1 12 ^h : 54'0 20 ^h : 54'0 R°: 41 ^m										
	hG ☉	Dec		hG ☾		Dif		Dec	Dif		Náutico	Civil	Hora	R°	Hora
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	176	29.9	-15	47.3	148	05.3	+0 08.6	60 N	6 27	7 17	8 03	8 09	6	21 12	77
1	191	29.9		46.6	162	40.7 ¹⁶⁴	20.7 ¹²¹	58	24	11	7 54	10 9		10 74	
2	206	29.8		45.8	177	16.1 ¹⁶⁴	32.8 ¹²¹	56	21	05	46	11 11		08 71	
3	221	29.8		45.0	191	51.6 ¹⁶⁵	44.9 ¹²¹	54	19	7 01	39	12 13		06 69	
4	236	29.7		44.3	206	27.0 ¹⁶⁴	+0 57.0 ¹²¹	52	16	6 56	32	12 15		04 67	
5	251	29.7	-15	43.5	221	02.4 ¹⁶⁴	+1 09.1 ¹²¹	50	6 14	6 52	7 27	8 13	17	21 02	66
6	266	29.6	-15	42.7	235	37.9 ¹⁶⁵	+1 21.2 ¹²¹	45	6 08	6 43	7 14	8 14	21	20 59	61
7	281	29.6		42.0	250	13.3 ¹⁶⁴	33.2 ¹²⁰	40	6 04	36	7 04	16 23		56 58	
8	296	29.5		41.2	264	48.8 ¹⁶⁵	45.3 ¹²¹	35	5 59	29	6 55	17 26		54 55	
9	311	29.5		40.4	279	24.2 ¹⁶⁴	+1 57.3 ¹²⁰	30	54	23	47	17 29		51 53	
10	326	29.5		39.7	293	59.6 ¹⁶⁴	+2 09.4 ¹²¹	20	45	11	34	19 33		48 48	
11	341	29.4	-15	38.9	308	35.1 ¹⁶⁵	+2 21.4 ¹²⁰	10 N	5 35	6 00	6 22	8 20	37	20 44	45
12	356	29.4	-15	38.1	323	10.5 ¹⁶⁴	+2 33.4 ¹²⁰	0	5 24	5 49	6 11	8 22	40	20 41	41
13	11	29.3		37.4	337	45.9 ¹⁶⁴	45.4 ¹²⁰	10 S	5 12	37	5 59	23 44		38 37	
14	26	29.3		36.6	352	21.3 ¹⁶⁴	+2 57.4 ¹²⁰	20	4 56	24	47	24 48		35 33	
15	41	29.2		35.8	6	56.8 ¹⁶⁵	+3 09.4 ¹²⁰	30	37	5 07	33	26 52		31 29	
16	56	29.2		35.0	21	32.2 ¹⁶⁴	21.4 ¹²⁰	35	24	4 57	24	27 55		29 27	
17	71	29.2	-15	34.3	36	07.6 ¹⁶⁴	+3 33.3 ¹¹⁹	40	4 09	4 45	5 15	8 28	58	20 26	25
18	86	29.1	-15	33.5	50	43.0 ¹⁶⁴	+3 45.3 ¹²⁰	45	3 50	4 31	5 03	8 29	62	20 24	21
19	101	29.1		32.7	65	18.4 ¹⁶⁴	+3 57.2 ¹¹⁹	50	25	13	4 50	31 65		20 17	
20	116	29.0		32.0	79	53.7 ¹⁶³	+4 09.1 ¹¹⁹	52	3 12	4 04	43	32 67		19 15	
21	131	29.0		31.2	94	29.1 ¹⁶⁴	21.0 ¹¹⁹	54	2 58	3 54	36	33 69		17 14	
22	146	29.0		30.4	109	04.5 ¹⁶⁴	32.8 ¹¹⁸	56	40	43	28	33 72		15 12	
23	161	28.9		29.6	123	39.8 ¹⁶³	44.7 ¹¹⁹	58	2 17	30	19	34 74		13 9	
24	176	28.9	-15	28.9	138	15.1 ¹⁶³	+4 56.5 ¹¹⁸	60 S	1 46	3 14	4 09	8 35	77	20 11	6

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG 14 ^h 54 ^m 4		Mag: -4.3 PMG: 9 ^h 06 ^m		Mag: +1.1 PMG: 12 ^h 14 ^m		Mag: -2.2 PMG: 15 ^h 07 ^m		Mag: +0.6 PMG: 4 ^h 03 ^m						
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'					
0	135	47.2	223	39.4	-21	02.5	176	27.1	-16	54.5	299	00.9	-4	20.7	
1	150	49.7	238	38.8		02.6	191	27.6		53.9	314	03.4		20.6	
2	165	52.1	253	38.3		02.7	206	28.1		53.3	329	05.9		20.6	
3	180	54.6	268	37.7		02.8	221	28.6		52.7	344	08.4		20.6	
4	195	57.1	283	37.1		02.9	236	29.1		52.1	359	10.9		20.6	
5	210	59.5	298	36.5	-21	03.0	251	29.6	-16	51.5	14	13.4	-4	20.5	
6	226	02.0	313	35.9	-21	03.1	266	30.1	-16	50.9	29	15.9	-4	20.5	
7	241	04.5	328	35.3		03.2	281	30.6		50.3	44	18.4		20.5	
8	256	06.9	343	34.7		03.3	296	31.1		49.7	59	20.9		20.4	
9	271	09.4	358	34.2		03.4	311	31.6		49.1	74	23.4		20.4	
10	286	11.9	13	33.6		03.5	326	32.1		48.5	89	25.9		20.4	
11	301	14.3	28	33.0	-21	03.6	341	32.6	-16	47.9	104	28.4	-4	20.4	
12	316	16.8	43	32.4	-21	03.7	356	33.1	-16	47.3	119	30.9	-4	20.3	
13	331	19.3	58	31.8		03.8	11	33.6		46.7	134	33.4		20.3	
14	346	21.7	73	31.2		03.9	26	34.1		46.1	149	35.9		20.3	
15	1	24.2	88	30.6		04.0	41	34.6		45.5	164	38.4		20.2	
16	16	26.6	103	30.0		04.1	56	35.1		44.9	179	41.0		20.2	
17	31	29.1	118	29.4	-21	04.2	71	35.6	-16	44.3	194	43.5	-4	20.2	
18	46	31.6	133	28.9	-21	04.2	86	36.1	-16	43.7	209	46.0	-4	20.1	
19	61	34.0	148	28.3		04.3	101	36.6		43.1	224	48.5		20.1	
20	76	36.5	163	27.7		04.4	116	37.1		42.5	239	51.0		20.1	
21	91	39.0	178	27.1		04.5	131	37.6		41.9	254	53.5		20.1	
22	106	41.4	193	26.5		04.6	146	38.1		41.3	269	56.0		20.0	
23	121	43.9	208	25.9		04.7	161	38.6		40.7	284	58.5		20.0	
24	136	46.4	223	25.3	-21	04.8	176	39.1	-16	40.1	300	01.0	-4	20.0	
Dif	—		-6	-1		+5	+6	+20		+2	+25	0			

UT	SOL		☾ LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna						
	SD: 16:2		Edad: 3 ^d 9	PHE { 4 ^h : 54:0 12 ^h : 54:0 20 ^h : 54:1	SD: 14:7				R°: 42 ^m										
	PMG: 12 ^h 14 ^m 1				PMG: 15 ^h 12 ^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	28.9	-15	28.9	138	15.1	+4 56.5	60 N	16 29	17 15	18 05	8 15 7	22 29 78						
1	191	28.8		28.1	152	50.5 ¹⁶⁴	+5 08.3 ¹¹⁸	58	38	20	07	19 10	24 75						
2	206	28.8		27.3	167	25.8 ¹⁶³	20.1 ¹¹⁸	56	45	25	10	22 12	19 73						
3	221	28.8		26.5	182	01.0 ¹⁶²	31.9 ¹¹⁸	54	52	30	12	25 14	15 70						
4	236	28.7		25.8	196	36.3 ¹⁶³	43.7 ¹¹⁸	52	16 58	34	14	27 17	11 68						
5	251	28.7	-15	25.0	211	11.6 ¹⁶³	+5 55.4 ¹¹⁷	50	17 04	17 38	18 17	8 30 18	22 08 66						
6	266	28.6	-15	24.2	225	46.8 ¹⁶²	+6 07.1 ¹¹⁷	45	17 16	17 47	18 22	8 35 22	22 00 62						
7	281	28.6		23.4	240	22.0 ¹⁶²	18.8 ¹¹⁷	40	26	17 54	26	39 25	21 54 59						
8	296	28.6		22.6	254	57.2 ¹⁶²	30.4 ¹¹⁶	35	34	18 01	31	43 28	49 55						
9	311	28.5		21.9	269	32.4 ¹⁶²	42.1 ¹¹⁷	30	42	07	35	46 31	44 53						
10	326	28.5		21.1	284	07.5 ¹⁶¹	+6 53.7 ¹¹⁶	20	17 55	18	44	52 35	36 49						
11	341	28.5	-15	20.3	298	42.7 ¹⁶²	+7 05.3 ¹¹⁶	10 N	18 07	18 28	18 53	8 57 38	21 29 45						
12	356	28.4	-15	19.5	313	17.8 ¹⁶¹	+7 16.8 ¹¹⁵	0	18 18	18 39	19 04	9 02 42	21 22 42						
13	11	28.4		18.7	327	52.9 ¹⁶¹	28.3 ¹¹⁵	10 S	29	18 50	16	07 45	15 39						
14	26	28.4		18.0	342	27.9 ¹⁶⁰	39.8 ¹¹⁵	20	41	19 04	31	12 49	08 36						
15	41	28.3		17.2	357	03.0 ¹⁶¹	+7 51.3 ¹¹⁵	30	18 54	20	19 50	18 53	21 00 32						
16	56	28.3		16.4	11	38.0 ¹⁶⁰	+8 02.8 ¹¹⁵	35	19 02	29	20 02	22 55	20 56 29						
17	71	28.3	-15	15.6	26	12.9 ¹⁵⁹	+8 14.2 ¹¹⁴	40	19 12	19 41	20 17	9 26 58	20 51 26						
18	86	28.2	-15	14.8	40	47.9 ¹⁶⁰	+8 25.5 ¹¹³	45	19 22	19 55	20 35	9 31 61	20 45 23						
19	101	28.2		14.0	55	22.8 ¹⁵⁹	36.9 ¹¹⁴	50	36	20 12	20 59	36 66	37 20						
20	116	28.2		13.3	69	57.7 ¹⁵⁹	48.2 ¹¹³	52	42	21	21 11	39 67	34 18						
21	131	28.1		12.5	84	32.6 ¹⁵⁹	+8 59.5 ¹¹³	54	48	30	25	42 69	31 15						
22	146	28.1		11.7	99	07.4 ¹⁵⁸	+9 10.8 ¹¹³	56	19 56	41	21 42	45 72	27 13						
23	161	28.1		10.9	113	42.2 ¹⁵⁸	22.0 ¹¹²	58	20 05	20 53	22 03	48 75	22 11						
24	176	28.0	-15	10.1	128	17.0 ¹⁵⁸	+9 33.2 ¹¹²	60 S	20 14	21 08	22 31	9 52 78	20 17 8						
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO							
	PMG: 14 ^h 50 ^m 5		Mag: -4.3 PMG: 9 ^h 07 ^m			Mag: +1.1 PMG: 12 ^h 13 ^m			Mag: -2.2 PMG: 15 ^h 04 ^m			Mag: +0.6 PMG: 3 ^h 59 ^m							
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec						
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'					
0	136	46.4	223	25.3	-21	04.8	176	39.1	-16	40.1	133	35.9	+0	07.1	300	01.0	-4	20.0	
1	151	48.8	238	24.7		04.8	191	39.6		39.5	148	37.9		07.3	315	03.5		19.9	
2	166	51.3	253	24.1		04.9	206	40.2		38.9	163	39.9		07.5	330	06.0		19.9	
3	181	53.7	268	23.5		05.0	221	40.7		38.3	178	41.9		07.8	345	08.5		19.9	
4	196	56.2	283	22.9		05.1	236	41.2		37.7	193	43.9		08.0	0	11.0		19.8	
5	211	58.7	298	22.3	-21	05.2	251	41.7	-16	37.1	208	45.9	+0	08.2	15	13.6	-4	19.8	
6	227	01.1	313	21.8	-21	05.2	266	42.2	-16	36.5	223	47.9	+0	08.4	30	16.1	-4	19.8	
7	242	03.6	328	21.2		05.3	281	42.7		35.9	238	49.9		08.6	45	18.6		19.8	
8	257	06.1	343	20.6		05.4	296	43.2		35.3	253	51.9		08.8	60	21.1		19.7	
9	272	08.5	358	20.0		05.5	311	43.7		34.7	268	53.9		09.0	75	23.6		19.7	
10	287	11.0	13	19.4		05.5	326	44.2		34.1	283	55.9		09.2	90	26.1		19.7	
11	302	13.5	28	18.8	-21	05.6	341	44.7	-16	33.5	298	57.9	+0	09.4	105	28.6	-4	19.6	
12	317	15.9	43	18.2	-21	05.7	356	45.2	-16	32.9	313	59.9	+0	09.6	120	31.1	-4	19.6	
13	332	18.4	58	17.6		05.7	11	45.7		32.3	329	01.9		09.8	135	33.6		19.6	
14	347	20.9	73	17.0		05.8	26	46.2		31.7	344	03.9		10.1	150	36.1		19.5	
15	2	23.3	88	16.4		05.9	41	46.7		31.1	359	05.9		10.3	165	38.7		19.5	
16	17	25.8	103	15.8		06.0	56	47.2		30.5	14	07.8		10.5	180	41.2		19.5	
17	32	28.2	118	15.2	-21	06.0	71	47.7	-16	29.9	29	09.8	+0	10.7	195	43.7	-4	19.4	
18	47	30.7	133	14.6	-21	06.1	86	48.2	-16	29.2	44	11.8	+0	10.9	210	46.2	-4	19.4	
19	62	33.2	148	14.0		06.1	101	48.7		28.6	59	13.8		11.1	225	48.7		19.4	
20	77	35.6	163	13.4		06.2	116	49.3		28.0	74	15.8		11.3	240	51.2		19.3	
21	92	38.1	178	12.8		06.3	131	49.8		27.4	89	17.8		11.5	255	53.7		19.3	
22	107	40.6	193	12.2		06.3	146	50.3		26.8	104	19.8		11.7	270	56.2		19.3	
23	122	43.0	208	11.6		06.4	161	50.8		26.2	119	21.8		11.9	285	58.7		19.3	
24	137	45.5	223	11.0	-21	06.5	176	51.3	-16	25.6	134	23.8	+0	12.2	301	01.3	-4	19.2	
Dif	—		-6		-1		+5		+6		+20		+2		+25			0	

UT	SOL				 LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'2 PMG: 12 ^h 14 ^m 2				Edad: 4 ^d 9 PHE { 4 ^h : 54'1 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	176	28.0	-15	10.1	128	17.0	+9	33.2	60 N	6	22	7	12	7	58	8	22
1	191	28.0		09.3	142	51.7 ¹⁵⁷		44.3 ¹¹¹	58	20	07		49		29	12	
2	206	28.0		08.5	157	26.4 ¹⁵⁷	+9	55.4 ¹¹¹	56	17	02		42		34	15	
3	221	27.9		07.8	172	01.1 ¹⁵⁷	+10	06.5 ¹¹¹	54	15	6	57		35		39	17
4	236	27.9		07.0	186	35.7 ¹⁵⁶		17.5 ¹¹⁰	52	13	53		29		44	19	
5	251	27.9	-15	06.2	201	10.3 ¹⁵⁶	+10	28.5 ¹¹⁰	50	6	11	6	49	7	23	8	48
6	266	27.9	-15	05.4	215	44.8 ¹⁵⁵	+10	39.5 ¹¹⁰	45	6	06	6	41	7	12	8	57
7	281	27.8		04.6	230	19.3 ¹⁵⁵	+10	50.4 ¹⁰⁹	40	6	02		34	7	02	9	04
8	296	27.8		03.8	244	53.8 ¹⁵⁵	+11	01.3 ¹⁰⁹	35	5	57		27	6	53	11	30
9	311	27.8		03.0	259	28.2 ¹⁵⁴		12.1 ¹⁰⁸	30	53	21		46		17	32	
10	326	27.7		02.2	274	02.6 ¹⁵⁴		22.9 ¹⁰⁸	20	44	10		33		27	36	
11	341	27.7	-15	01.4	288	37.0 ¹⁵⁴	+11	33.7 ¹⁰⁸	10 N	5	35	6	00	6	22	9	35
12	356	27.7	-15	00.7	303	11.3 ¹⁵³	+11	44.4 ¹⁰⁷	0	5	24	5	49	6	11	9	44
13	11	27.7	-14	59.9	317	45.5 ¹⁵²	+11	55.1 ¹⁰⁷	10 S	5	12		38	6	00	9	52
14	26	27.6		59.1	332	19.7 ¹⁵²	+12	05.7 ¹⁰⁶	20	4	58		25	5	48	10	01
15	41	27.6		58.3	346	53.9 ¹⁵²		16.3 ¹⁰⁶	30	39	5	09		34		11	54
16	56	27.6		57.5	1	28.0 ¹⁵¹		26.8 ¹⁰⁵	35	27	4	59		26		17	57
17	71	27.6	-14	56.7	16	02.1 ¹⁵¹	+12	37.3 ¹⁰⁵	40	4	12	4	48	5	17	10	24
18	86	27.5	-14	55.9	30	36.1 ¹⁵⁰	+12	47.7 ¹⁰⁴	45	3	54	4	34	5	06	10	32
19	101	27.5		55.1	45	10.1 ¹⁵⁰	+12	58.1 ¹⁰⁴	50	30	17		4	53		42	66
20	116	27.5		54.3	59	44.0 ¹⁴⁹	+13	08.5 ¹⁰⁴	52	18	4	08		47		46	69
21	131	27.5		53.5	74	17.9 ¹⁴⁹		18.8 ¹⁰³	54	3	04	3	59	41		51	71
22	146	27.4		52.7	88	51.8 ¹⁴⁹		29.0 ¹⁰²	56	2	47		48	33		10	57
23	161	27.4		51.9	103	25.5 ¹⁴⁷		39.2 ¹⁰²	58	2	26		36	24		11	03
24	176	27.4	-14	51.1	117	59.3 ¹⁴⁸	+13	49.4 ¹⁰²	60 S	1	58	3	21	4	15	11	10

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 14 ^h 46 ^m 5		Mag: -4.3 PMG: 9 ^h 08 ^m		Mag: +1.1 PMG: 12 ^h 12 ^m		Mag: -2.2 PMG: 15 ^h 00 ^m		Mag: +0.6 PMG: 3 ^h 55 ^m	
	hG ♈		hG ♀ Dec		hG ♂ Dec		hG ♃ Dec		hG ♄ Dec	
h	°	'	°	'	°	'	°	'	°	'
0	137	45.5	223	11.0	-21	06.5	176	51.3	-16	25.6
1	152	48.0	238	10.4		06.5	191	51.8		25.0
2	167	50.4	253	09.8		06.6	206	52.3		24.4
3	182	52.9	268	09.2		06.6	221	52.8		23.8
4	197	55.3	283	08.6		06.7	236	53.3		23.2
5	212	57.8	298	08.0	-21	06.7	251	53.8	-16	22.6
6	228	00.3	313	07.4	-21	06.8	266	54.3	-16	21.9
7	243	02.7	328	06.8		06.9	281	54.8		21.3
8	258	05.2	343	06.2		06.9	296	55.4		20.7
9	273	07.7	358	05.6		07.0	311	55.9		20.1
10	288	10.1	13	05.0		07.0	326	56.4		19.5
11	303	12.6	28	04.4	-21	07.1	341	56.9	-16	18.9
12	318	15.1	43	03.8	-21	07.1	356	57.4	-16	18.3
13	333	17.5	58	03.2		07.2	11	57.9		17.7
14	348	20.0	73	02.6		07.2	26	58.4		17.1
15	3	22.5	88	02.0		07.2	41	58.9		16.4
16	18	24.9	103	01.4		07.3	56	59.4		15.8
17	33	27.4	118	00.8	-21	07.3	72	00.0	-16	15.2
18	48	29.8	133	00.2	-21	07.4	87	00.5	-16	14.6
19	63	32.3	147	59.6		07.4	102	01.0		14.0
20	78	34.8	162	58.9		07.5	117	01.5		13.4
21	93	37.2	177	58.3		07.5	132	02.0		12.8
22	108	39.7	192	57.7		07.5	147	02.5		12.1
23	123	42.2	207	57.1		07.6	162	03.0		11.5
24	138	44.6	222	56.5	-21	07.6	177	03.5	-16	10.9
Dif	—		-6		0		+5		+6	

UT	SOL				 LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna		
	SD: 16:2 PMG: 12 ^h 14 ^m 2				Edad: 5 ^d 9 PHE { 4 ^h : 54:4 12 ^h : 54:5 20 ^h : 54:6 R°: 46 ^m													
	hG ☉		Dec		hG ☾		Dif				Dec		Dif		Civil	Náutico	Hora	R°
h	°	'	°	'	°	'	°	'	°	'	h m	h m	h m	h m	m	m	m	m
0	176	27.4	-14	51.1	117	59.3	+13	49.4	60 N	16 34	17 20	18 09	8 31	13	***	***	***	***
1	191	27.4		50.3	132	32.9 ¹⁴⁶	+13	59.5 ¹⁰¹	58	43		25	41	16	***	***	***	***
2	206	27.4		49.5	147	06.6 ¹⁴⁷	+14	09.5 ¹⁰⁰	56	50	30	14	49	19	***	***	***	***
3	221	27.3		48.7	161	40.1 ¹⁴⁵		19.5 ¹⁰⁰	54	16 56	34	16	8 56	21	***	***	***	***
4	236	27.3		47.9	176	13.6 ¹⁴⁵		29.4 ⁹⁹	52	17 02	38	18	9 03	23	***	***	***	***
5	251	27.3	-14	47.1	190	47.1 ¹⁴⁵	+14	39.3 ⁹⁹	50	17 07	17 41	18 20	9 09	24	***	***	***	***
6	266	27.3	-14	46.3	205	20.5 ¹⁴⁴	+14	49.1 ⁹⁸	45	17 19	17 49	18 24	9 21	29	***	***	***	***
7	281	27.3		45.5	219	53.8 ¹⁴³	+14	58.9 ⁹⁸	40	28	17 56	28	32	32	23 52	60		
8	296	27.2		44.7	234	27.1 ¹⁴³	+15	08.6 ⁹⁷	35	36	18 03	33	41	34	41	58		
9	311	27.2		43.9	249	00.3 ¹⁴²		18.3 ⁹⁷	30	44	08	37	9 49	36	32	56		
10	326	27.2		43.1	263	33.5 ¹⁴²		27.9 ⁹⁶	20	17 56	19	45	10 03	40	16	52		
11	341	27.2	-14	42.3	278	06.6 ¹⁴¹	+15	37.4 ⁹⁵	10 N	18 07	18 29	18 54	10 15	43	23 02	50		
12	356	27.2	-14	41.5	292	39.7 ¹⁴¹	+15	46.9 ⁹⁵	0	18 18	18 39	19 04	10 27	46	22 49	47		
13	11	27.1		40.7	307	12.7 ¹⁴⁰	+15	56.3 ⁹⁴	10 S	28	18 50	15	39	48	36	44		
14	26	27.1		39.9	321	45.6 ¹³⁹	+16	05.6 ⁹³	20	40	19 03	30	10 51	52	22	41		
15	41	27.1		39.1	336	18.4 ¹³⁸		14.9 ⁹³	30	18 53	18	19 48	11 05	56	22 06	38		
16	56	27.1		38.3	350	51.2 ¹³⁸		24.1 ⁹²	35	19 01	27	20 00	14	57	21 57	36		
17	71	27.1	-14	37.5	5	24.0 ¹³⁸	+16	33.3 ⁹²	40	19 09	19 38	20 14	11 23	60	21 46	34		
18	86	27.1	-14	36.7	19	56.7 ¹³⁷	+16	42.4 ⁹¹	45	19 20	19 52	20 31	11 35	63	21 34	31		
19	101	27.0		35.9	34	29.3 ¹³⁶	+16	51.4 ⁹⁰	50	32	20 08	20 55	48	67	19	28		
20	116	27.0		35.1	49	01.8 ¹³⁵	+17	00.4 ⁹⁰	52	38	16	21 06	11 55	69	12	26		
21	131	27.0		34.3	63	34.3 ¹³⁵		09.3 ⁸⁹	54	44	25	19	12 02	71	21 04	24		
22	146	27.0		33.5	78	06.7 ¹³⁴		18.1 ⁸⁸	56	19 52	36	35	10	73	20 56	21		
23	161	27.0		32.7	92	39.0 ¹³³		26.8 ⁸⁷	58	20 00	20 47	21 55	19	76	46	19		
24	176	27.0	-14	31.9	107	11.3 ¹³³	+17	35.5 ⁸⁷	60 S	20 09	21 01	22 20	12 29	80	20 35	15		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 14 ^h 42 ^m 6		Mag: -4.3 PMG: 9 ^h 09 ^m		Mag: +1.1 PMG: 12 ^h 11 ^m		Mag: -2.2 PMG: 14 ^h 57 ^m		Mag: +0.6 PMG: 3 ^h 51 ^m	
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄	
h	°	'	°	'	°	'	°	'	°	'
0	138	44.6	222	56.5	-21	07.6	177	03.5	+0	17.2
1	153	47.1	237	55.9		07.7	192	04.0		17.4
2	168	49.6	252	55.3		07.7	207	04.6		17.6
3	183	52.0	267	54.7		07.7	222	05.1		17.9
4	198	54.5	282	54.1		07.8	237	05.6		18.1
5	213	57.0	297	53.5	-21	07.8	252	06.1	-16	07.8
6	228	59.4	312	52.9	-21	07.8	267	06.6	-16	07.2
7	244	01.9	327	52.3		07.9	282	07.1		06.6
8	259	04.3	342	51.7		07.9	297	07.6		06.0
9	274	06.8	357	51.0		07.9	312	08.2		05.4
10	289	09.3	12	50.4		07.9	327	08.7		04.7
11	304	11.7	27	49.8	-21	08.0	342	09.2	-16	04.1
12	319	14.2	42	49.2	-21	08.0	357	09.7	-16	03.5
13	334	16.7	57	48.6		08.0	12	10.2		02.9
14	349	19.1	72	48.0		08.0	27	10.7		02.3
15	4	21.6	87	47.4		08.1	42	11.2		01.7
16	19	24.1	102	46.8		08.1	57	11.8		01.0
17	34	26.5	117	46.2	-21	08.1	72	12.3	-16	00.4
18	49	29.0	132	45.6	-21	08.1	87	12.8	-15	59.8
19	64	31.4	147	44.9		08.2	102	13.3		59.2
20	79	33.9	162	44.3		08.2	117	13.8		58.6
21	94	36.4	177	43.7		08.2	132	14.3		57.9
22	109	38.8	192	43.1		08.2	147	14.9		57.3
23	124	41.3	207	42.5		08.2	162	15.4		56.7
24	139	43.8	222	41.9	-21	08.2	177	15.9	-15	56.1
Dif	—		-6		0		+5		+6	
							+20		+2	
									+25	
									0	

UT	SOL				 LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'2 PMG: 12 ^h 14 ^m 2				Edad: 6 ^d 9 PHE { 4 ^h : 54'8 12 ^h : 54'9 20 ^h : 55'1 R°: 50 ^m												
	hG ☉		Dec		hG ☾ Dif		Dec Dif			Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	176	27.0	-14	31.9	107	11.3	+17	35.5	60 N	6 18	7 07	7 52	8 44	19	1 07	80	
1	191	27.0		31.1	121	43.5 ¹³²		44.1 ⁸⁶	58	16	7 02	44	8 57	22	0 55	76	
2	206	26.9		30.3	136	15.6 ¹³¹	+17	52.7 ⁸⁶	56	14	6 58	37	9 08	25	45	73	
3	221	26.9		29.5	150	47.7 ¹³¹	+18	01.1 ⁸⁴	54	12	54	31	17 28		36	70	
4	236	26.9		28.7	165	19.7 ¹³⁰		09.5 ⁸⁴	52	10	50	25	26 29		28	68	
5	251	26.9	-14	27.8	179	51.6 ¹²⁹	+18	17.9 ⁸⁴	50	6 08	6 46	7 20	9 33	32	0 20	67	
6	266	26.9	-14	27.0	194	23.5 ¹²⁹	+18	26.1 ⁸²	45	6 04	6 38	7 09	9 50	34	0 05	63	
7	281	26.9		26.2	208	55.3 ¹²⁸		34.3 ⁸²	40	6 00	31	7 00	10 04	37	** ** *	**	
8	296	26.9		25.4	223	27.0 ¹²⁷		42.4 ⁸¹	35	5 55	25	6 51	15 39		** ** *	**	
9	311	26.9		24.6	237	58.6 ¹²⁶		50.4 ⁸⁰	30	51	20	44	25 41		** ** *	**	
10	326	26.8		23.8	252	30.2 ¹²⁶	+18	58.3 ⁷⁹	20	43	6 09	32	43 44		** ** *	**	
11	341	26.8	-14	23.0	267	01.7 ¹²⁵	+19	06.2 ⁷⁹	10 N	5 34	5 59	6 21	10 58	47	23 52	52	
12	356	26.8	-14	22.2	281	33.1 ¹²⁴	+19	13.9 ⁷⁷	0	5 25	5 49	6 11	11 13	49	23 36	50	
13	11	26.8		21.4	296	04.5 ¹²⁴		21.6 ⁷⁷	10 S	5 13	39	6 00	27 51		20	48	
14	26	26.8		20.5	310	35.8 ¹²³		29.3 ⁷⁷	20	4 59	26	5 49	11 43	54	23 03	47	
15	41	26.8		19.7	325	07.0 ¹²²		36.8 ⁷⁵	30	41	11	36	12 01	56	22 44	44	
16	56	26.8		18.9	339	38.1 ¹²¹		44.2 ⁷⁴	35	29	5 01	28	11 59		33	42	
17	71	26.8	-14	18.1	354	09.1 ¹²⁰	+19	51.6 ⁷⁴	40	4 15	4 50	5 20	12 23	61	22 20	40	
18	86	26.8	-14	17.3	8	40.1 ¹²⁰	+19	58.9 ⁷³	45	3 57	4 37	5 09	12 38	63	22 05	38	
19	101	26.8		16.5	23	11.0 ¹¹⁹	+20	06.1 ⁷²	50	34	21	4 57	12 55	67	21 47	34	
20	116	26.8		15.7	37	41.8 ¹¹⁸		13.2 ⁷¹	52	23	13	51	13 04	68	38	33	
21	131	26.7		14.8	52	12.6 ¹¹⁸		20.2 ⁷⁰	54	3 10	4 04	45	13 70		28	32	
22	146	26.7		14.0	66	43.3 ¹¹⁷		27.1 ⁶⁹	56	2 54	3 54	38	23 73		17	30	
23	161	26.7		13.2	81	13.9 ¹¹⁶		33.9 ⁶⁸	58	34	42	29	35 76		21	05	
24	176	26.7	-14	12.4	95	44.4 ¹¹⁵	+20	40.7 ⁶⁸	60 S	2 09	3 28	4 20	13 49	79	20 50	23	

UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 14 ^h 38 ^m 7		Mag: -4.3 PMG: 9 ^h 10 ^m				Mag: +1.1 PMG: 12 ^h 11 ^m				Mag: -2.2 PMG: 14 ^h 54 ^m				Mag: +0.6 PMG: 3 ^h 47 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	139	43.8	222	41.9	-21	08.2	177	15.9	-15	56.1	135	59.3	+0	22.3	303	02.0	-4	17.6
1	154	46.2	237	41.3		08.2	192	16.4		55.4	151	01.3		22.5	318	04.5		17.6
2	169	48.7	252	40.7		08.3	207	16.9		54.8	166	03.3		22.7	333	07.1		17.6
3	184	51.2	267	40.0		08.3	222	17.4		54.2	181	05.2		22.9	348	09.6		17.5
4	199	53.6	282	39.4		08.3	237	18.0		53.6	196	07.2		23.2	3	12.1		17.5
5	214	56.1	297	38.8	-21	08.3	252	18.5	-15	52.9	211	09.2	+0	23.4	18	14.6	-4	17.5
6	229	58.6	312	38.2	-21	08.3	267	19.0	-15	52.3	226	11.2	+0	23.6	33	17.2	-4	17.4
7	245	01.0	327	37.6		08.3	282	19.5		51.7	241	13.2		23.8	48	19.7		17.4
8	260	03.5	342	37.0		08.3	297	20.0		51.1	256	15.2		24.0	63	22.2		17.3
9	275	05.9	357	36.3		08.3	312	20.6		50.5	271	17.2		24.2	78	24.7		17.3
10	290	08.4	12	35.7		08.3	327	21.1		49.8	286	19.1		24.4	93	27.2		17.3
11	305	10.9	27	35.1	-21	08.3	342	21.6	-15	49.2	301	21.1	+0	24.7	108	29.8	-4	17.2
12	320	13.3	42	34.5	-21	08.3	357	22.1	-15	48.6	316	23.1	+0	24.9	123	32.3	-4	17.2
13	335	15.8	57	33.9		08.3	12	22.6		47.9	331	25.1		25.1	138	34.8		17.2
14	350	18.3	72	33.3		08.3	27	23.2		47.3	346	27.1		25.3	153	37.3		17.1
15	5	20.7	87	32.6		08.3	42	23.7		46.7	1	29.1		25.5	168	39.8		17.1
16	20	23.2	102	32.0		08.3	57	24.2		46.1	16	31.1		25.7	183	42.4		17.1
17	35	25.7	117	31.4	-21	08.3	72	24.7	-15	45.4	31	33.0	+0	25.9	198	44.9	-4	17.0
18	50	28.1	132	30.8	-21	08.3	87	25.2	-15	44.8	46	35.0	+0	26.1	213	47.4	-4	17.0
19	65	30.6	147	30.2		08.3	102	25.8		44.2	61	37.0		26.4	228	49.9		17.0
20	80	33.1	162	29.6		08.3	117	26.3		43.6	76	39.0		26.6	243	52.5		16.9
21	95	35.5	177	28.9		08.3	132	26.8		42.9	91	41.0		26.8	258	55.0		16.9
22	110	38.0	192	28.3		08.3	147	27.3		42.3	106	43.0		27.0	273	57.5		16.8
23	125	40.4	207	27.7		08.3	162	27.8		41.7	121	44.9		27.2	289	00.0		16.8
24	140	42.9	222	27.1	-21	08.3	177	28.4	-15	41.0	136	46.9	+0	27.4	304	02.6	-4	16.8
Dif	—		-6		0		+5		+6		+20		+2		+25			

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna			Puesta de Luna		
	SD: 16:2 PMG: 12 ^h 14 ^m 2			Edad: 7 ^d 9 PHE { 4 ^h : 55:3 12 ^h : 55:6 20 ^h : 55:8 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	h m m	h m m		
0	176	26.7	-14	12.4	95	44.4	+20 40.7	60 N	16 40	17 24	18 14	9 03	29	2 27	76		
1	191	26.7		11.6	110	14.8 ¹¹⁴	47.3 ⁶⁶	58	47		16	19	33	2 11	73		
2	206	26.7		10.8	124	45.2 ¹¹⁴	+20 53.9 ⁶⁶	56	16 54	34	18	33	35	1 58	70		
3	221	26.7		09.9	139	15.5 ¹¹³	+21 00.3 ⁶⁴	54	17 00	38	19	45	37	46	68		
4	236	26.7		09.1	153	45.7 ¹¹²	06.7 ⁶⁴	52	06	41	21	9	55	36	67		
5	251	26.7	-14	08.3	168	15.8 ¹¹¹	+21 13.0 ⁶³	50	17 11	17 45	18 23	10 05	39	1 27	65		
6	266	26.7	-14	07.5	182	45.9 ¹¹¹	+21 19.2 ⁶²	45	17 22	17 52	18 27	10 24	43	1 08	62		
7	281	26.7		06.7	197	15.9 ¹¹⁰	25.2 ⁶⁰	40	31	17 59	31	41	44	0 52	60		
8	296	26.7		05.9	211	45.8 ¹⁰⁹	31.2 ⁶⁰	35	38	18 04	34	10	54	46	39	59	
9	311	26.7		05.0	226	15.6 ¹⁰⁸	37.1 ⁵⁹	30	45	10	38	11	06	47	28	57	
10	326	26.7		04.2	240	45.3 ¹⁰⁷	42.9 ⁵⁸	20	17 57	20	46	27	49	0 08	55		
11	341	26.7	-14	03.4	255	15.0 ¹⁰⁷	+21 48.6 ⁵⁷	10 N	18 08	18 29	18 54	11 45	50	**	**	**	
12	356	26.7	-14	02.6	269	44.6 ¹⁰⁶	+21 54.1 ⁵⁵	0	18 18	18 39	19 04	12 02	52	**	**	**	
13	11	26.7		01.7	284	14.1 ¹⁰⁵	+21 59.6 ⁵⁵	10 S	28	18 49	15	18	54	**	**	**	
14	26	26.7		00.9	298	43.6 ¹⁰⁵	+22 05.0 ⁵⁴	20	39	19 02	28	37	55	23	50	51	
15	41	26.7	-14	00.1	313	12.9 ¹⁰³	10.2 ⁵²	30	51	16	46	12	57	58	28	50	
16	56	26.7	-13	59.3	327	42.2 ¹⁰³	15.4 ⁵²	35	18 59	25	19 57	13	10	58	15	49	
17	71	26.7	-13	58.5	342	11.4 ¹⁰²	+22 20.4 ⁵⁰	40	19 07	19 36	20 11	13	24	59	23	00	48
18	86	26.7	-13	57.6	356	40.5 ¹⁰¹	+22 25.4 ⁵⁰	45	19 17	19 49	20 28	13	41	61	22	43	47
19	101	26.7		56.8	11	09.6 ¹⁰¹	30.2 ⁴⁸	50	29	20 05	20 50	14	02	63	21	45	
20	116	26.7		56.0	25	38.6 ¹⁰⁰	34.9 ⁴⁷	52	34	12	21 01	12	64		11	44	
21	131	26.7		55.2	40	07.5 ⁹⁹	39.6 ⁴⁷	54	40	21	14	23	66	22	00	43	
22	146	26.7		54.3	54	36.3 ⁹⁸	44.1 ⁴⁵	56	47	30	29	36	67	21	47	41	
23	161	26.7		53.5	69	05.0 ⁹⁷	48.5 ⁴⁴	58	19 55	42	21 47	14	51	69	31	40	
24	176	26.7	-13	52.7	83	33.7 ⁹⁷	+22 52.7 ⁴²	60 S	20 04	20 55	22 10	15	08	73	21	13	37

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 14 ^h 34 ^m 7		Mag: -4.2 PMG: 9 ^h 11 ^m		Mag: +1.1 PMG: 12 ^h 10 ^m		Mag: -2.2 PMG: 14 ^h 51 ^m		Mag: +0.6 PMG: 3 ^h 43 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	140	42.9	222	27.1	177	28.4	136	46.9	304	02.6
1	155	45.4	237	26.5		08.3	192	28.9		40.4
2	170	47.8	252	25.8		08.3	207	29.4		39.8
3	185	50.3	267	25.2		08.3	222	29.9		39.2
4	200	52.8	282	24.6		08.3	237	30.4		38.5
5	215	55.2	297	24.0	-21	08.2	252	31.0	-15	37.9
6	230	57.7	312	23.4	-21	08.2	267	31.5	-15	37.3
7	246	00.2	327	22.7		08.2	282	32.0		36.6
8	261	02.6	342	22.1		08.2	297	32.5		36.0
9	276	05.1	357	21.5		08.2	312	33.1		35.4
10	291	07.5	12	20.9		08.2	327	33.6		34.7
11	306	10.0	27	20.3	-21	08.1	342	34.1	-15	34.1
12	321	12.5	42	19.6	-21	08.1	357	34.6	-15	33.5
13	336	14.9	57	19.0		08.1	12	35.2		32.8
14	351	17.4	72	18.4		08.1	27	35.7		32.2
15	6	19.9	87	17.8		08.1	42	36.2		31.6
16	21	22.3	102	17.1		08.0	57	36.7		30.9
17	36	24.8	117	16.5	-21	08.0	72	37.3	-15	30.3
18	51	27.3	132	15.9	-21	08.0	87	37.8	-15	29.7
19	66	29.7	147	15.3		08.0	102	38.3		29.0
20	81	32.2	162	14.7		07.9	117	38.8		28.4
21	96	34.7	177	14.0		07.9	132	39.4		27.8
22	111	37.1	192	13.4		07.9	147	39.9		27.1
23	126	39.6	207	12.8		07.8	162	40.4		26.5
24	141	42.0	222	12.2	-21	07.8	177	40.9	-15	25.9
Dif	—		-6		0		+5		+6	
							+20		+2	
									+25	

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16/2 PMG: 12 ^h 14 ^m 2			Edad: 8 ^d 9 PHE { SD: 15/2 PMG: 19 ^h 07 ^m 4 ^h : 56/1 12 ^h : 56/3 20 ^h : 56/6 R°: 55 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Náutico	Civil		Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m
0	176	26.7	-13	52.7	83	33.7	+22	52.7	60 N	6	14	7	03	9	32	47
1	191	26.7		51.9	98	02.3	96	+22	56.9	12	6	58	40	9	52	48
2	206	26.7		51.0	112	30.8	95	+23	00.9	10	54	33	10	08	49	3
3	221	26.7		50.2	126	59.3	95		04.9	08	50	27	22	50	2	54
4	236	26.7		49.4	141	27.7	94		08.7	07	46	22	34	50	4	43
5	251	26.7	-13	48.5	155	56.0	93	+23	12.4	6	05	6	43	10	44	51
6	266	26.7	-13	47.7	170	24.2	92	+23	16.0	6	01	6	36	11	07	52
7	281	26.7		46.9	184	52.3	91		19.4	5	57	29	6	57	25	52
8	296	26.7		46.1	199	20.4	91		22.8	54	23	50	40	53	38	57
9	311	26.7		45.2	213	48.4	90		26.0	50	18	43	11	53	54	25
10	326	26.7		44.4	228	16.4	90		29.1	42	6	08	31	12	16	54
11	341	26.7	-13	43.6	242	44.3	89	+23	32.1	5	34	5	59	12	35	55
12	356	26.7	-13	42.7	257	12.1	88	+23	34.9	5	25	5	50	12	54	55
13	11	26.7		41.9	271	39.8	87		37.6	14	39	6	01	13	12	55
14	26	26.8		41.1	286	07.5	87		40.2	5	00	27	5	50	32	55
15	41	26.8		40.2	300	35.1	86		42.7	4	43	12	38	13	55	56
16	56	26.8		39.4	315	02.6	85		45.0	31	5	04	30	14	08	56
17	71	26.8	-13	38.6	329	30.1	85	+23	47.3	4	18	4	53	14	23	57
18	86	26.8	-13	37.7	343	57.5	84	+23	49.3	4	01	4	40	14	42	57
19	101	26.8		36.9	358	24.8	83		51.3	3	39	25	5	00	15	05
20	116	26.8		36.1	12	52.1	83		53.1	28	17	4	55	16	58	22
21	131	26.8		35.2	27	19.3	82		54.8	15	4	08	49	29	57	43
22	146	26.8		34.4	41	46.4	81		56.4	3	01	3	59	15	43	58
23	161	26.8		33.6	56	13.5	81		57.8	2	42	48	34	16	00	58
24	176	26.8	-13	32.7	70	40.5	80	+23	59.1	2	19	3	35	16	21	59

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 14 ^h 30 ^m 8		Mag: -4.2 PMG: 9 ^h 12 ^m		Mag: +1.1 PMG: 12 ^h 09 ^m		Mag: -2.2 PMG: 14 ^h 48 ^m		Mag: +0.6 PMG: 3 ^h 39 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	141	42.0	222	12.2	-21	07.8	177	40.9	-15	25.9
1	156	44.5	237	11.5		07.8	192	41.5		25.2
2	171	47.0	252	10.9		07.7	207	42.0		24.6
3	186	49.4	267	10.3		07.7	222	42.5		24.0
4	201	51.9	282	09.7		07.7	237	43.0		23.3
5	216	54.4	297	09.0	-21	07.6	252	43.6	-15	22.7
6	231	56.8	312	08.4	-21	07.6	267	44.1	-15	22.0
7	246	59.3	327	07.8		07.6	282	44.6		21.4
8	262	01.8	342	07.2		07.5	297	45.1		20.8
9	277	04.2	357	06.5		07.5	312	45.7		20.1
10	292	06.7	12	05.9		07.4	327	46.2		19.5
11	307	09.2	27	05.3	-21	07.4	342	46.7	-15	18.9
12	322	11.6	42	04.7	-21	07.4	357	47.3	-15	18.2
13	337	14.1	57	04.0		07.3	12	47.8		17.6
14	352	16.5	72	03.4		07.3	27	48.3		16.9
15	7	19.0	87	02.8		07.2	42	48.8		16.3
16	22	21.5	102	02.1		07.2	57	49.4		15.7
17	37	23.9	117	01.5	-21	07.1	72	49.9	-15	15.0
18	52	26.4	132	00.9	-21	07.1	87	50.4	-15	14.4
19	67	28.9	147	00.3		07.0	102	51.0		13.7
20	82	31.3	161	59.6		07.0	117	51.5		13.1
21	97	33.8	176	59.0		06.9	132	52.0		12.5
22	112	36.3	191	58.4		06.9	147	52.5		11.8
23	127	38.7	206	57.7		06.8	162	53.1		11.2
24	142	41.2	221	57.1	-21	06.8	177	53.6	-15	10.5
Dif	—		-6	0			+5	+6		
									+20	+2
										+25

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: 9 ^d 9 PHE { 4 ^h : 56/9 12 ^h : 57/2 20 ^h : 57/5 R°: 57 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m		
0	176	26.8	-13	32.7	70	40.5	+23 59.1	60 N	16 45	17 29	18 18	10 19 68	4 49 49		
1	191	26.9		31.9	85	07.5	80 +24 00.3	58	52	34	20	40 66	28 51		
2	206	26.9		31.1	99	34.4	79 01.3	56	16 59	38	21	10 57 65	4 11 52		
3	221	26.9		30.2	114	01.2	78 02.2	54	17 04	41	23	11 12 64	3 56 53		
4	236	26.9		29.4	128	28.0	78 03.0	52	10	45	24	24 64	44 53		
5	251	26.9	-13	28.5	142	54.8	78 +24 03.6	50	17 14	17 48	18 26	11 35 64	3 33 53		
6	266	26.9	-13	27.7	157	21.4	76 +24 04.1	45	17 24	17 55	18 29	11 59 62	3 09 54		
7	281	26.9		26.9	171	48.1	77 04.4	40	33	18 01	33	12 17 61	2 51 54		
8	296	26.9		26.0	186	14.6	75 04.6	35	40	06	36	33 60	35 55		
9	311	26.9		25.2	200	41.2	76 04.7	30	47	11	40	12 47 59	2 22 55		
10	326	27.0		24.4	215	07.6	74 04.6	20	17 58	21	47	13 10 58	1 58 56		
11	341	27.0	-13	23.5	229	34.0	74 +24 04.4	10 N	18 08	18 30	18 55	13 30 58	1 38 56		
12	356	27.0	-13	22.7	244	00.4	74 +24 04.1	0	18 18	18 39	19 04	13 49 57	1 20 56		
13	11	27.0		21.8	258	26.7	73 03.6	10 S	27	18 49	14	14 07 56	1 01 56		
14	26	27.0		21.0	272	53.0	73 02.9	20	38	19 00	27	27 55	0 41 56		
15	41	27.0		20.2	287	19.2	72 02.1	30	50	15	44	14 51 53	18 56		
16	56	27.0		19.3	301	45.4	72 01.2	35	18 56	23	19 55	15 04 53	0 04 57		
17	71	27.1	-13	18.5	316	11.6	72 +24 00.1	40	19 04	19 33	20 08	15 20 52	** ** *		
18	86	27.1	-13	17.6	330	37.7	71 +23 58.9	45	19 14	19 45	20 24	15 39 51	** ** *		
19	101	27.1		16.8	345	03.7	70 57.6	50	25	20 01	45	16 02 49	** ** *		
20	116	27.1		15.9	359	29.7	70 56.1	52	30	08	20 56	14 48	23 52 70		
21	131	27.1		15.1	13	55.7	70 54.4	54	36	16	21 08	26 47	39 71		
22	146	27.1		14.3	28	21.7	70 52.6	56	43	25	22	41 46	25 73		
23	161	27.2		13.4	42	47.6	69 50.7	58	50	36	21 39	16 58 44	23 08 74		
24	176	27.2	-13	12.6	57	13.5	69 +23 48.6	60 S	19 58	20 48	22 00	17 20 41	22 47 77		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 14 ^h 26 ^m 9		Mag: -4.2 PMG: 9 ^h 13 ^m		Mag: +1.1 PMG: 12 ^h 08 ^m		Mag: -2.2 PMG: 14 ^h 45 ^m		Mag: +0.6 PMG: 3 ^h 35 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	142	41.2	221	57.1	-21	06.8	177	53.6	-15	10.5
1	157	43.7	236	56.5		06.7	192	54.1		09.9
2	172	46.1	251	55.9		06.6	207	54.7		09.2
3	187	48.6	266	55.2		06.6	222	55.2		08.6
4	202	51.0	281	54.6		06.5	237	55.7		08.0
5	217	53.5	296	54.0	-21	06.5	252	56.3	-15	07.3
6	232	56.0	311	53.3	-21	06.4	267	56.8	-15	06.7
7	247	58.4	326	52.7		06.3	282	57.3		06.0
8	263	00.9	341	52.1		06.3	297	57.9		05.4
9	278	03.4	356	51.4		06.2	312	58.4		04.7
10	293	05.8	11	50.8		06.1	327	58.9		04.1
11	308	08.3	26	50.2	-21	06.1	342	59.5	-15	03.4
12	323	10.8	41	49.5	-21	06.0	358	00.0	-15	02.8
13	338	13.2	56	48.9		05.9	13	00.5		02.2
14	353	15.7	71	48.3		05.9	28	01.1		01.5
15	8	18.1	86	47.7		05.8	43	01.6		00.9
16	23	20.6	101	47.0		05.7	58	02.1	-15	00.2
17	38	23.1	116	46.4	-21	05.7	73	02.7	-14	59.6
18	53	25.5	131	45.8	-21	05.6	88	03.2	-14	58.9
19	68	28.0	146	45.1		05.5	103	03.7		58.3
20	83	30.5	161	44.5		05.4	118	04.3		57.6
21	98	32.9	176	43.9		05.4	133	04.8		57.0
22	113	35.4	191	43.2		05.3	148	05.3		56.3
23	128	37.9	206	42.6		05.2	163	05.9		55.7
24	143	40.3	221	42.0	-21	05.1	178	06.4	-14	55.0
Dif	—		-6 +1		+5 +6		+20 +2		+25 0	

UT	SOL			O LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16:2 PMG: 12 ^h 14 ^m 2			Edad: 10 ^d 9 PHE { 4 ^h : 57/9 12 ^h : 58/2 20 ^h : 58/5 PMG: 20 ^h 59 ^m R°: 58 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico		Civil	Hora		R°	Hora	R°			
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	
0	176	27.2	-13	12.6	57	13.5	+23	48.6	22	60 N	6 09	6 58	7 42	11 27	86	5 38	34	
1	191	27.2		11.7	71	39.3		46.4	22	58	07	53	35	11 46	83	19	37	
2	206	27.2		10.9	86	05.1		44.0	24	56	06	49	28	12 02	80	5 03	39	
3	221	27.2		10.0	100	30.9		41.5	25	54	04	46	23	16 77		4 49	4	
4	236	27.3		09.2	114	56.6		38.8	27	52	03	43	18	28 75		37	43	
5	251	27.3	-13	08.3	129	22.4	+23	36.0	28	50	6 02	6 40	7 13	12 39	73	4 26	44	
6	266	27.3	-13	07.5	143	48.1	+23	33.0	30	45	5 58	6 33	7 03	13 01	70	4 03	47	
7	281	27.3		06.6	158	13.7		29.9	31	40	55	27	6 55	18 69		3 45	49	
8	296	27.3		05.8	172	39.4		26.6	33	35	52	22	48	33 67		30	50	
9	311	27.4		04.9	187	05.0		23.2	34	30	48	17	41	13 46	65	3 17	51	
10	326	27.4		04.1	201	30.6		19.6	36	20	41	6 07	30	14 08	63	2 54	54	
11	341	27.4	-13	03.3	215	56.2	+23	15.9	37	10 N	5 34	5 59	6 20	14 28	59	2 34	56	
12	356	27.4	-13	02.4	230	21.7	+23	12.0	39	0	5 25	5 50	6 11	14 46	57	2 16	57	
13	11	27.5		01.6	244	47.3		08.0	40	10 S	14	40	6 01	15 03	56	1 57	59	
14	26	27.5	-13	00.7	259	12.8	+23	03.9	41	20	5 01	28	5 51	22 53		37	61	
15	41	27.5	-12	59.9	273	38.3	+22	59.5	44	30	4 45	14	39	44 50		14	63	
16	56	27.5		59.0	288	03.8		55.1	44	35	34	5 06	32	15 57	49	1 01	63	
17	71	27.5	-12	58.2	302	29.3	+22	50.5	46	40	4 21	4 56	5 24	16 12	46	0 45	65	
18	86	27.6	-12	57.3	316	54.8	+22	45.7	48	45	4 05	4 44	5 15	16 30	43	0 27	66	
19	101	27.6		56.4	331	20.2		40.8	49	50	3 44	28	5 04	16 51	41	0 03	69	
20	116	27.6		55.6	345	45.7		35.7	51	52	33	21	4 59	17 02	38	** ** *	**	
21	131	27.6		54.7	0	11.1		30.5	52	54	21	13	53	13 37		** ** *	**	
22	146	27.7		53.9	14	36.6		25.2	53	56	3 07	4 04	47	27 34		** ** *	**	
23	161	27.7		53.0	29	02.0		19.7	55	58	2 50	3 53	39	17 42	31	** ** *	**	
24	176	27.7	-12	52.2	43	27.4	+22	14.0	57	60 S	2 29	3 41	4 31	18 01	26	** ** *	**	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG 14 ^h 22 ^m 9		Mag: -4.2 PMG: 9 ^h 14 ^m			Mag: +1.1 PMG: 12 ^h 07 ^m			Mag: -2.2 PMG: 14 ^h 41 ^m			Mag: +0.6 PMG: 3 ^h 31 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	143	40.3	221	42.0	-21	05.1	178	06.4	-14	55.0	139	09.4	+0	42.9	307	04.7	-4	14.0
1	158	42.8	236	41.3		05.1	193	06.9		54.4	154	11.4		43.2	322	07.2		14.0
2	173	45.3	251	40.7		05.0	208	07.5		53.7	169	13.4		43.4	337	09.8		13.9
3	188	47.7	266	40.1		04.9	223	08.0		53.1	184	15.4		43.6	352	12.3		13.9
4	203	50.2	281	39.4		04.8	238	08.5		52.4	199	17.3		43.8	7	14.8		13.8
5	218	52.6	296	38.8	-21	04.7	253	09.1	-14	51.8	214	19.3	+0	44.0	22	17.4	-4	13.8
6	233	55.1	311	38.2	-21	04.6	268	09.6	-14	51.1	229	21.3	+0	44.2	37	19.9	-4	13.8
7	248	57.6	326	37.5		04.6	283	10.1		50.5	244	23.3		44.5	52	22.4		13.7
8	264	00.0	341	36.9		04.5	298	10.7		49.8	259	25.2		44.7	67	25.0		13.7
9	279	02.5	356	36.2		04.4	313	11.2		49.2	274	27.2		44.9	82	27.5		13.6
10	294	05.0	11	35.6		04.3	328	11.8		48.5	289	29.2		45.1	97	30.1		13.6
11	309	07.4	26	35.0	-21	04.2	343	12.3	-14	47.9	304	31.1	+0	45.3	112	32.6	-4	13.5
12	324	09.9	41	34.3	-21	04.1	358	12.8	-14	47.2	319	33.1	+0	45.5	127	35.1	-4	13.5
13	339	12.4	56	33.7		04.0	13	13.4		46.6	334	35.1		45.8	142	37.7		13.5
14	354	14.8	71	33.1		03.9	28	13.9		45.9	349	37.1		46.0	157	40.2		13.4
15	9	17.3	86	32.4		03.8	43	14.4		45.3	4	39.0		46.2	172	42.7		13.4
16	24	19.8	101	31.8		03.7	58	15.0		44.6	19	41.0		46.4	187	45.3		13.3
17	39	22.2	116	31.2	-21	03.6	73	15.5	-14	44.0	34	43.0	+0	46.6	202	47.8	-4	13.3
18	54	24.7	131	30.5	-21	03.6	88	16.1	-14	43.3	49	45.0	+0	46.8	217	50.4	-4	13.3
19	69	27.1	146	29.9		03.5	103	16.6		42.7	64	46.9		47.1	232	52.9		13.2
20	84	29.6	161	29.3		03.4	118	17.1		42.0	79	48.9		47.3	247	55.4		13.2
21	99	32.1	176	28.6		03.3	133	17.7		41.4	94	50.9		47.5	262	58.0		13.1
22	114	34.5	191	28.0		03.2	148	18.2		40.7	109	52.9		47.7	278	00.5		13.1
23	129	37.0	206	27.3		03.1	163	18.8		40.1	124	54.8		47.9	293	03.1		13.0
24	144	39.5	221	26.7	-21	03.0	178	19.3	-14	39.4	139	56.8	+0	48.2	308	05.6	-4	13.0
Dif	—		-6			+1	+5			+7	+20		+2	+25				

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 9 PHE { SD: 16/0 PMG: 21 ^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	176	27.7	-12 52.2	43	27.4	+22 14.0	58	60 N	16 50	17 34	18 23	12 53	97	6 12	22
1	191	27.7	51.3	57	52.8	08.2	58	58	16 57	38	24	13 09	92	5 56	26
2	206	27.8	50.5	72	18.3	+22 02.3	59	56	17 03	42	25	22 88		42	29
3	221	27.8	49.6	86	43.7	+21 56.2	61	54	08	45	27	33 86		30	32
4	236	27.8	48.8	101	09.1	50.0	62	52	13	48	28	43 84		20	34
5	251	27.9	-12 47.9	115	34.5	+21 43.6	64	50	17 18	17 51	18 29	13 52	81	5 10	36
6	266	27.9	-12 47.1	130	00.0	+21 37.0	66	45	17 27	17 58	18 32	14 11	77	4 50	41
7	281	27.9	46.2	144	25.4	30.4	66	40	35	18 03	35	27 73		34	43
8	296	27.9	45.3	158	50.8	23.5	69	35	42	08	38	40 70		20	46
9	311	28.0	44.5	173	16.3	16.6	69	30	48	13	41	14 51	68	4 08	48
10	326	28.0	43.6	187	41.7	09.5	71	20	17 59	22	48	15 11	63	3 48	51
11	341	28.0	-12 42.8	202	07.2	+21 02.2	73	10 N	18 09	18 30	18 55	15 27	61	3 30	54
12	356	28.1	-12 41.9	216	32.6	+20 54.8	74	0	18 18	18 39	19 03	15 43	57	3 13	57
13	11	28.1	41.1	230	58.1	47.3	75	10 S	27	48	13	15 59	53	2 56	60
14	26	28.1	40.2	245	23.6	39.6	77	20	36	18 59	26	16 15	50	38	63
15	41	28.2	39.3	259	49.1	31.8	78	30	48	19 13	42	34 46		17	66
16	56	28.2	38.5	274	14.6	23.8	80	35	18 54	21	19 53	46 43		2 04	69
17	71	28.2	-12 37.6	288	40.1	+20 15.7	81	40	19 02	19 31	20 05	16 58	41	1 50	71
18	86	28.2	-12 36.8	303	05.7	+20 07.4	83	45	19 11	19 42	20 21	17 13	37	1 33	74
19	101	28.3	35.9	317	31.2	+19 59.1	83	50	21	19 57	41	32 32		12	78
20	116	28.3	35.0	331	56.8	50.5	86	52	26	20 04	20 51	40 31		1 02	80
21	131	28.3	34.2	346	22.4	41.9	86	54	32	11	21 02	17 50	28	0 50	83
22	146	28.4	33.3	0	48.0	33.1	88	56	38	20	16	18 01	25	38	84
23	161	28.4	32.5	15	13.7	24.1	90	58	45	30	31	13 22		22	89
24	176	28.4	-12 31.6	29	39.3	+19 15.1	90	60 S	19 53	20 42	21 51	18 27	18	0 04	93

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 14 ^h 19 ^m 0		Mag: -4.2 PMG: 9 ^h 15 ^m		Mag: +1.1 PMG: 12 ^h 06 ^m		Mag: -2.2 PMG: 14 ^h 38 ^m		Mag: +0.6 PMG: 3 ^h 27 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	144	39.5	221 26.7	-21 03.0	178 19.3	-14 39.4	139 56.8	+0 48.2	308 05.6	-4 13.0
1	159	41.9	236 26.1	02.9	193 19.8	38.7	154 58.8	48.4	323 08.1	13.0
2	174	44.4	251 25.4	02.7	208 20.4	38.1	170 00.7	48.6	338 10.7	12.9
3	189	46.9	266 24.8	02.6	223 20.9	37.4	185 02.7	48.8	353 13.2	12.9
4	204	49.3	281 24.2	02.5	238 21.4	36.8	200 04.7	49.0	8 15.7	12.8
5	219	51.8	296 23.5	-21 02.4	253 22.0	-14 36.1	215 06.7	+0 49.2	23 18.3	-4 12.8
6	234	54.3	311 22.9	-21 02.3	268 22.5	-14 35.5	230 08.6	+0 49.5	38 20.8	-4 12.8
7	249	56.7	326 22.2	02.2	283 23.1	34.8	245 10.6	49.7	53 23.4	12.7
8	264	59.2	341 21.6	02.1	298 23.6	34.1	260 12.6	49.9	68 25.9	12.7
9	280	01.6	356 21.0	02.0	313 24.2	33.5	275 14.5	50.1	83 28.4	12.6
10	295	04.1	11 20.3	01.9	328 24.7	32.8	290 16.5	50.3	98 31.0	12.6
11	310	06.6	26 19.7	-21 01.8	343 25.2	-14 32.2	305 18.5	+0 50.6	113 33.5	-4 12.5
12	325	09.0	41 19.0	-21 01.6	358 25.8	-14 31.5	320 20.5	+0 50.8	128 36.1	-4 12.5
13	340	11.5	56 18.4	01.5	13 26.3	30.9	335 22.4	51.0	143 38.6	12.5
14	355	14.0	71 17.8	01.4	28 26.9	30.2	350 24.4	51.2	158 41.2	12.4
15	10	16.4	86 17.1	01.3	43 27.4	29.5	5 26.4	51.4	173 43.7	12.4
16	25	18.9	101 16.5	01.2	58 27.9	28.9	20 28.3	51.6	188 46.2	12.3
17	40	21.4	116 15.9	-21 01.1	73 28.5	-14 28.2	35 30.3	+0 51.9	203 48.8	-4 12.3
18	55	23.8	131 15.2	-21 00.9	88 29.0	-14 27.6	50 32.3	+0 52.1	218 51.3	-4 12.2
19	70	26.3	146 14.6	00.8	103 29.6	26.9	65 34.3	52.3	233 53.9	12.2
20	85	28.8	161 13.9	00.7	118 30.1	26.2	80 36.2	52.5	248 56.4	12.2
21	100	31.2	176 13.3	00.6	133 30.7	25.6	95 38.2	52.7	263 58.9	12.1
22	115	33.7	191 12.7	00.5	148 31.2	24.9	110 40.2	53.0	279 01.5	12.1
23	130	36.1	206 12.0	00.3	163 31.7	24.3	125 42.1	53.2	294 04.0	12.0
24	145	38.6	221 11.4	-21 00.2	178 32.3	-14 23.6	140 44.1	+0 53.4	309 06.6	-4 12.0
Dif	—		-6	+1	+5	+7	+20	+2	+25	0

UT	SOL				LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna			Puesta de Luna					
	SD: 16'2 PMG: 12 ^h 14 ^m 1				Edad: 12 ^d 9 PHE { 4 ^h : 59'7 12 ^h : 60'0 20 ^h : 60'3 PMG: 22 ^h 53 ^m R°: 56 ^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	28.4	-12	31.6	29	39.3	+19	15.1	92	60 N	6	04	6	53	7	36	14	30	101	6	34	15	
1	191	28.5		30.7	44	05.0	67	+19	05.9	92	58	03		49	30		41	96		22	19		
2	206	28.5		29.9	58	30.7	67	+18	56.5	94	56	02		45	24		50	94		11	23		
3	221	28.5		29.0	72	56.4	67		47.1	94	54	01		42	19		14	59	90	6	02	25	
4	236	28.6		28.1	87	22.1	67		37.5	96	52	6	00	39	14		15	07	87	5	54	27	
5	251	28.6	-12	27.3	101	47.9	68	+18	27.7	98	50	5	58	6	36	7	09	15	13	85	5	46	30
6	266	28.7	-12	26.4	116	13.7	68	+18	17.9	98	45	5	56	6	30	7	00	15	28	80	5	31	34
7	281	28.7		25.6	130	39.5	68	+18	07.9	100	40	53		24	6	52	40	76		17	39		
8	296	28.7		24.7	145	05.4	69	+17	57.8	101	35	50		20	45		50	72		5	06	42	
9	311	28.8		23.8	159	31.2	68		47.6	102	30	47		15	39		15	59	69	4	56	44	
10	326	28.8		23.0	173	57.1	69		37.2	104	20	40		6	06	29	16	14	64	39	49		
11	341	28.8	-12	22.1	188	23.0	69	+17	26.7	105	10 N	5	33	5	58	6	20	16	28	59	4	24	53
12	356	28.9	-12	21.2	202	49.0	70	+17	16.1	106	0	5	25	5	50	6	11	16	40	56	4	10	57
13	11	28.9		20.4	217	15.0	70	+17	05.4	107	10 S	15		40	6	02	16	52	52	3	56	60	
14	26	28.9		19.5	231	41.0	70	+16	54.5	109	20	5	03	29	5	52	17	05	48	41	64		
15	41	29.0		18.6	246	07.0	70		43.5	110	30	4	46	16	41		20	43		23	69		
16	56	29.0		17.8	260	33.1	71		32.4	111	35	36		5	08	34	29	40		13	71		
17	71	29.1	-12	16.9	274	59.2	71	+16	21.2	112	40	4	24	4	58	5	27	17	39	36	3	01	75
18	86	29.1	-12	16.0	289	25.3	71	+16	09.9	113	45	4	08	4	47	5	18	17	50	33	2	47	79
19	101	29.1		15.2	303	51.5	72	+15	58.5	114	50	3	48	32	08		18	04	28	30	83		
20	116	29.2		14.3	318	17.6	71		46.9	116	52	38		25	5	03	11	25		22	85		
21	131	29.2		13.4	332	43.9	73		35.2	117	54	27		18	4	57	18	22		13	88		
22	146	29.3		12.6	347	10.1	72		23.5	117	56	3	13	4	09	51	26	19		2	02	92	
23	161	29.3		11.7	1	36.4	73	+15	11.6	119	58	2	58	3	59	44	35	16		1	51	95	
24	176	29.3	-12	10.8	16	02.7	73	+14	59.6	120	60 S	2	38	3	47	4	37	18	45	12	1	37	100

UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG 14 ^h 15 ^m 1		Mag: -4.2 PMG: 9 ^h 16 ^m				Mag: +1.1 PMG: 12 ^h 05 ^m				Mag: -2.1 PMG: 14 ^h 35 ^m				Mag: +0.6 PMG: 3 ^h 23 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	145	38.6	221	11.4	-21	00.2	178	32.3	-14	23.6	140	44.1	+0	53.4	309	06.6	-4	12.0
1	160	41.1	236	10.7	-21	00.1	193	32.8		22.9	155	46.1		53.6	324	09.1		11.9
2	175	43.5	251	10.1	-20	59.9	208	33.4		22.3	170	48.0		53.8	339	11.7		11.9
3	190	46.0	266	09.4		59.8	223	33.9		21.6	185	50.0		54.1	354	14.2		11.8
4	205	48.5	281	08.8		59.7	238	34.5		21.0	200	52.0		54.3	9	16.7		11.8
5	220	50.9	296	08.2	-20	59.6	253	35.0	-14	20.3	215	54.0	+0	54.5	24	19.3	-4	11.8
6	235	53.4	311	07.5	-20	59.4	268	35.6	-14	19.6	230	55.9	+0	54.7	39	21.8	-4	11.7
7	250	55.9	326	06.9		59.3	283	36.1		19.0	245	57.9		54.9	54	24.4		11.7
8	265	58.3	341	06.2		59.2	298	36.6		18.3	260	59.9		55.2	69	26.9		11.6
9	281	00.8	356	05.6		59.0	313	37.2		17.6	276	01.8		55.4	84	29.5		11.6
10	296	03.2	11	05.0		58.9	328	37.7		17.0	291	03.8		55.6	99	32.0		11.5
11	311	05.7	26	04.3	-20	58.7	343	38.3	-14	16.3	306	05.8	+0	55.8	114	34.6	-4	11.5
12	326	08.2	41	03.7	-20	58.6	358	38.8	-14	15.7	321	07.7	+0	56.0	129	37.1	-4	11.5
13	341	10.6	56	03.0		58.5	13	39.4		15.0	336	09.7		56.2	144	39.6		11.4
14	356	13.1	71	02.4		58.3	28	39.9		14.3	351	11.7		56.5	159	42.2		11.4
15	11	15.6	86	01.8		58.2	43	40.5		13.7	6	13.6		56.7	174	44.7		11.3
16	26	18.0	101	01.1		58.0	58	41.0		13.0	21	15.6		56.9	189	47.3		11.3
17	41	20.5	116	00.5	-20	57.9	73	41.6	-14	12.3	36	17.6	+0	57.1	204	49.8	-4	11.2
18	56	23.0	130	59.8	-20	57.8	88	42.1	-14	11.7	51	19.5	+0	57.3	219	52.4	-4	11.2
19	71	25.4	145	59.2		57.6	103	42.7		11.0	66	21.5		57.6	234	54.9		11.1
20	86	27.9	160	58.5		57.5	118	43.2		10.3	81	23.5		57.8	249	57.5		11.1
21	101	30.4	175	57.9		57.3	133	43.7		09.7	96	25.4		58.0	265	00.0		11.1
22	116	32.8	190	57.3		57.2	148	44.3		09.0	111	27.4		58.2	280	02.6		11.0
23	131	35.3	205	56.6		57.0	163	44.8		08.3	126	29.4		58.4	295	05.1		11.0
24	146	37.7	220	56.0	-20	56.9	178	45.4	-14	07.7	141	31.3	+0	58.7	310	07.7	-4	10.9
Dif	—		-6		+1		+5		+7		+20		+2		+25		0	

UT	SOL			☉ LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna			
	SD: 16'2 PMG: 12 ^h 14 ^m 0			Edad: 13 ^d 9 PHE { 4 ^h : 60'5 12 ^h : 60'7 20 ^h : 60'9 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	176	29.3	-12	10.8	16	02.7	+14	59.6	60 N	16 55	17 39	18 28	16 11 101	6 49 11				
1	191	29.4		09.9	30	29.1		47.5 ¹²¹	58	17 02		43 29	17 98	41 14				
2	206	29.4		09.1	44	55.4		35.3 ¹²²	56		07	46 29	24 94	34 17				
3	221	29.5		08.2	59	21.8		23.0 ¹²³	54		12	49 30	29 91	27 21				
4	236	29.5		07.3	73	48.3	+14	10.6 ¹²⁴	52		17	52 31	34 88	21 24				
5	251	29.6	-12	06.5	88	14.8	+13	58.1 ¹²⁵	50	17 21	17 54	18 32	16 38 86	6 16 26				
6	266	29.6	-12	05.6	102	41.3	+13	45.5 ¹²⁶	45	17 30	18 00	18 35	16 48 80	6 05 30				
7	281	29.6		04.7	117	07.8		32.8 ¹²⁷	40		38	05 37	16 56 76	5 56 34				
8	296	29.7		03.8	131	34.4		20.0 ¹²⁸	35		44	10 40	17 02 73	48 37				
9	311	29.7		03.0	146	01.0	+13	07.1 ¹²⁹	30	17 50		14 42	08 70	40 41				
10	326	29.8		02.1	160	27.6	+12	54.1 ¹³⁰	20	18 00		22 48	18 64	28 46				
11	341	29.8	-12	01.2	174	54.3	+12	41.0 ¹³¹	10 N	18 09	18 30	18 55	17 27 59	5 17 51				
12	356	29.9	-12	00.3	189	21.0	+12	27.8 ¹³²	0	18 17	18 39	19 03	17 36 54	5 07 55				
13	11	29.9	-11	59.5	203	47.7		14.6 ¹³²	10 S		26	47 13	44 50	4 56 59				
14	26	30.0		58.6	218	14.5	+12	01.2 ¹³⁴	20		35	18 58 24	17 53 45	45 64				
15	41	30.0		57.7	232	41.3	+11	47.8 ¹³⁴	30		46	19 11 40	18 03 40	32 69				
16	56	30.0		56.8	247	08.1		34.3 ¹³⁵	35		52	19 19 50	09 36	24 73				
17	71	30.1	-11	56.0	261	35.0	+11	20.7 ¹³⁶	40	18 59	19 28	20 02	18 15 33	4 16 76				
18	86	30.1	-11	55.1	276	01.9	+11	07.0 ¹³⁷	45	19 08	19 39	20 17	18 23 29	4 06 80				
19	101	30.2		54.2	290	28.8	+10	53.2 ¹³⁸	50		18	53 36	32 24	3 53 86				
20	116	30.2		53.3	304	55.8		39.4 ¹³⁸	52		22	19 59 46	36 22	47 88				
21	131	30.3		52.5	319	22.8		25.5 ¹³⁹	54		27	20 06 20 56	40 20	41 91				
22	146	30.3		51.6	333	49.8	+10	11.5 ¹⁴⁰	56		33	15 21 09	45 17	34 94				
23	161	30.4		50.7	348	16.8	+9	57.5 ¹⁴⁰	58		40	24 24	51 13	26 97				
24	176	30.4	-11	49.8	2	43.9	+9	43.3 ¹⁴²	60 S	19 47	20 35	21 42	18 57 10	3 17 101				
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO					
	PMG: 14 ^h 11 ^m 2			Mag: -4.2 PMG: 9 ^h 17 ^m			Mag: +1.1 PMG: 12 ^h 05 ^m			Mag: -2.1 PMG: 14 ^h 32 ^m			Mag: +0.6 PMG: 3 ^h 19 ^m					
	hG ♈	hG ♀		Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	146	37.7	220	56.0	-20	56.9	178	45.4	-14	07.7	141	31.3	+0	58.7	310	07.7	-4	10.9
1	161	40.2	235	55.3		56.7	193	45.9		07.0	156	33.3		58.9	325	10.2		10.9
2	176	42.7	250	54.7		56.6	208	46.5		06.3	171	35.3		59.1	340	12.7		10.8
3	191	45.1	265	54.0		56.4	223	47.0		05.7	186	37.3		59.3	355	15.3		10.8
4	206	47.6	280	53.4		56.3	238	47.6		05.0	201	39.2		59.5	10	17.8		10.7
5	221	50.1	295	52.8	-20	56.1	253	48.1	-14	04.3	216	41.2	+0	59.8	25	20.4	-4	10.7
6	236	52.5	310	52.1	-20	56.0	268	48.7	-14	03.7	231	43.2	+1	00.0	40	22.9	-4	10.6
7	251	55.0	325	51.5		55.8	283	49.2		03.0	246	45.1	+1	00.2	55	25.5		10.6
8	266	57.5	340	50.8		55.6	298	49.8		02.3	261	47.1		00.4	70	28.0		10.6
9	281	59.9	355	50.2		55.5	313	50.3		01.7	276	49.1		00.6	85	30.6		10.5
10	297	02.4	10	49.5		55.3	328	50.9		01.0	291	51.0		00.9	100	33.1		10.5
11	312	04.9	25	48.9	-20	55.2	343	51.4	-14	00.3	306	53.0	+1	01.1	115	35.7	-4	10.4
12	327	07.3	40	48.2	-20	55.0	358	52.0	-13	59.7	321	54.9	+1	01.3	130	38.2	-4	10.4
13	342	09.8	55	47.6		54.8	13	52.5		59.0	336	56.9		01.5	145	40.8		10.3
14	357	12.2	70	47.0		54.7	28	53.1		58.3	351	58.9		01.7	160	43.3		10.3
15	12	14.7	85	46.3		54.5	43	53.6		57.6	7	00.8		02.0	175	45.9		10.2
16	27	17.2	100	45.7		54.3	58	54.2		57.0	22	02.8		02.2	190	48.4		10.2
17	42	19.6	115	45.0	-20	54.2	73	54.7	-13	56.3	37	04.8	+1	02.4	205	51.0	-4	10.1
18	57	22.1	130	44.4	-20	54.0	88	55.3	-13	55.6	52	06.7	+1	02.6	220	53.5	-4	10.1
19	72	24.6	145	43.7		53.8	103	55.8		55.0	67	08.7		02.8	235	56.1		10.1
20	87	27.0	160	43.1		53.7	118	56.4		54.3	82	10.7		03.1	250	58.6		10.0
21	102	29.5	175	42.4		53.5	133	56.9		53.6	97	12.6		03.3	266	01.2		10.0
22	117	32.0	190	41.8		53.3	148	57.5		52.9	112	14.6		03.5	281	03.7		09.9
23	132	34.4	205	41.2		53.1	163	58.0		52.3	127	16.6		03.7	296	06.3		09.9
24	147	36.9	220	40.5	-20	53.0	178	58.6	-13	51.6	142	18.5	+1	03.9	311	08.8	-4	09.8
Dif	—			-6	+2		+6	+7		+20	+2		+25		0			

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16/2 PMG: 12 ^h 13 ^m 9			Edad: 14 ^d 9 PHE { 4 ^h : 61/0 12 ^h : 61/1 20 ^h : 61/2 PMG: **h **m R°: **m									Hora R°		Hora R°			
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Náutico	Civil							
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m		
0	176	30.4	-11 49.8	2	43.9	+9	43.3	142	60 N	5	59	6	48	7	31	17 52 101		
1	191	30.5	49.0	17	11.0	81	29.1	142	58	58	44	25	55	97	6	55 13		
2	206	30.5	48.1	31	38.1	81	14.9	142	56	58	41	19	17	58 94	51	16		
3	221	30.6	47.2	46	05.3	82	+9	00.6	54	57	38	14	18	00 91	48	18		
4	236	30.6	46.3	60	32.5	82	+8	46.2	52	56	35	10	02	88	45	21		
5	251	30.7	-11 45.4	74	59.7	82	+8	31.7	50	5	55	6	33	7	06	18 04 86		
6	266	30.7	-11 44.6	89	27.0	83	+8	17.2	45	5	53	6	27	6	57	18 08 81		
7	281	30.8	43.7	103	54.2	82	+8	02.6	40	50	22	50	12	76	30	32		
8	296	30.8	42.8	118	21.5	83	+7	48.0	35	48	17	43	15	72	25	36		
9	311	30.9	41.9	132	48.9	84	33.3	147	30	45	13	38	18	69	21	39		
10	326	30.9	41.0	147	16.2	83	18.6	147	20	39	6	05	22	63	14	44		
11	341	31.0	-11 40.2	161	43.6	84	+7	03.8	10 N	5	33	5	57	6	19	18 26 58		
12	356	31.0	-11 39.3	176	11.0	84	+6	49.0	0	5	25	5	49	6	11	18 30 54		
13	11	31.1	38.4	190	38.4	84	34.1	149	10 S	15	41	6	02	34	49	5	55 59	
14	26	31.1	37.5	205	05.9	85	19.2	149	20	5	04	30	5	53	38	44	49	63
15	41	31.2	36.6	219	33.3	84	+6	04.3	30	4	48	18	42	43	38	41	69	
16	56	31.2	35.7	234	00.8	85	+5	49.2	35	38	10	36	45	35	37	72		
17	71	31.3	-11 34.9	248	28.3	85	+5	34.2	40	4	26	5	01	5	29	18 48 32		
18	86	31.4	-11 34.0	262	55.9	86	+5	19.1	45	4	12	4	50	5	21	18 52 27		
19	101	31.4	33.1	277	23.4	85	+5	04.0	50	3	52	36	11	56	22	19	86	
20	116	31.5	32.2	291	51.0	86	+4	48.9	52	43	30	06	18	58	20	15	89	
21	131	31.5	31.3	306	18.6	86	33.7	152	54	32	22	5	01	19	00 18	12	91	
22	146	31.6	30.4	320	46.2	86	18.5	152	56	20	14	4	56	02	15	08	94	
23	161	31.6	29.5	335	13.8	86	+4	03.2	58	3	05	4	05	04	13	5	03 98	
24	176	31.7	-11 28.7	349	41.5	87	+3	47.9	60 S	2	47	3	54	4	42	19 07 9		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG 14 ^h 07 ^m 2		Mag: -4.2 PMG: 9 ^h 18 ^m		Mag: +1.1 PMG: 12 ^h 04 ^m		Mag: -2.1 PMG: 14 ^h 29 ^m		Mag: +0.6 PMG: 3 ^h 15 ^m						
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'					
0	147	36.9	220	40.5	-20 53.0	178	58.6	-13 51.6	142	18.5	+1 03.9	311	08.8	-4 09.8	
1	162	39.3	235	39.9	52.8	193	59.2	50.9	157	20.5	04.2	326	11.4	09.8	
2	177	41.8	250	39.2	52.6	208	59.7	50.2	172	22.5	04.4	341	13.9	09.7	
3	192	44.3	265	38.6	52.4	224	00.3	49.6	187	24.4	04.6	356	16.5	09.7	
4	207	46.7	280	37.9	52.3	239	00.8	48.9	202	26.4	04.8	11	19.0	09.6	
5	222	49.2	295	37.3	-20 52.1	254	01.4	-13 48.2	217	28.4	+1 05.1	26	21.6	-4 09.6	
6	237	51.7	310	36.6	-20 51.9	269	01.9	-13 47.6	232	30.3	+1 05.3	41	24.1	-4 09.5	
7	252	54.1	325	36.0	51.7	284	02.5	46.9	247	32.3	05.5	56	26.7	09.5	
8	267	56.6	340	35.3	51.5	299	03.0	46.2	262	34.2	05.7	71	29.2	09.4	
9	282	59.1	355	34.7	51.4	314	03.6	45.5	277	36.2	05.9	86	31.8	09.4	
10	298	01.5	10	34.1	51.2	329	04.1	44.9	292	38.2	06.2	101	34.3	09.4	
11	313	04.0	25	33.4	-20 51.0	344	04.7	-13 44.2	307	40.1	+1 06.4	116	36.9	-4 09.3	
12	328	06.5	40	32.8	-20 50.8	359	05.2	-13 43.5	322	42.1	+1 06.6	131	39.4	-4 09.3	
13	343	08.9	55	32.1	50.6	14	05.8	42.8	337	44.1	06.8	146	42.0	09.2	
14	358	11.4	70	31.5	50.4	29	06.4	42.2	352	46.0	07.0	161	44.5	09.2	
15	13	13.8	85	30.8	50.2	44	06.9	41.5	7	48.0	07.3	176	47.1	09.1	
16	28	16.3	100	30.2	50.1	59	07.5	40.8	22	50.0	07.5	191	49.6	09.1	
17	43	18.8	115	29.5	-20 49.9	74	08.0	-13 40.1	37	51.9	+1 07.7	206	52.2	-4 09.0	
18	58	21.2	130	28.9	-20 49.7	89	08.6	-13 39.4	52	53.9	+1 07.9	221	54.7	-4 09.0	
19	73	23.7	145	28.2	49.5	104	09.1	38.8	67	55.8	08.1	236	57.3	08.9	
20	88	26.2	160	27.6	49.3	119	09.7	38.1	82	57.8	08.4	251	59.8	08.9	
21	103	28.6	175	26.9	49.1	134	10.2	37.4	97	59.8	08.6	267	02.4	08.8	
22	118	31.1	190	26.3	48.9	149	10.8	36.7	113	01.7	08.8	282	05.0	08.8	
23	133	33.6	205	25.6	48.7	164	11.4	36.1	128	03.7	09.0	297	07.5	08.7	
24	148	36.0	220	25.0	-20 48.5	179	11.9	-13 35.4	143	05.7	+1 09.3	312	10.1	-4 08.7	
Dif	—		-6	+2		+6	+7		+20		+2		+26		0

UT	SOL			LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16:2 PMG: 12 ^h 13 ^m 8			Edad: 15 ^d 9 PHE { 4 ^h : 61/2 12 ^h : 61/2 20 ^h : 61/2 PMG: 0 ^h 43 ^m R°: 53 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m m	h m m	h m m	
0	176	31.7	-11	28.7	349	41.5	+3	47.9	60 N	17 01	17 44	18 32	19 33 101	7 09 9	
1	191	31.7		27.8	4	09.2	87	32.6	58	06	47	33	32 97	08 12	
2	206	31.8		26.9	18	36.8	86	17.3	56	12	50	33	32 93	07 15	
3	221	31.9		26.0	33	04.5	87	+3 02.0	54	16	53	34	31 91	06 18	
4	236	31.9		25.1	47	32.2	87	+2 46.6	52	21	55	35	30 88	06 20	
5	251	32.0	-11	24.2	62	00.0	88	+2 31.3	50	17 25	17 58	18 35	19 30 85	7 05 22	
6	266	32.0	-11	23.3	76	27.7	87	+2 15.9	45	17 33	18 03	18 37	19 29 80	7 03 28	
7	281	32.1		22.5	90	55.4	87	+2 00.5	40	40	08	39	28 76	02 32	
8	296	32.1		21.6	105	23.2	88	+1 45.1	35	46	12	41	27 72	01 35	
9	311	32.2		20.7	119	51.0	88	29.6	30	17 51	16	44	27 68	7 00 38	
10	326	32.3		19.8	134	18.8	88	+1 14.2	20	18 01	23	49	25 63	6 58 44	
11	341	32.3	-11	18.9	148	46.5	87	+0 58.8	10 N	18 09	18 31	18 55	19 24 59	6 57 49	
12	356	32.4	-11	18.0	163	14.3	88	+0 43.3	0	18 17	18 38	19 03	19 24 53	6 55 54	
13	11	32.4		17.1	177	42.1	88	27.9	10 S	25	47	12	23 49	54 58	
14	26	32.5		16.2	192	10.0	89	+0 12.4	20	34	18 57	23	22 44	52 63	
15	41	32.6		15.3	206	37.8	88	-0 03.0	30	44	19 09	38	21 38	50 69	
16	56	32.6		14.4	221	05.6	88	18.4	35	50	16	47	20 36	49 72	
17	71	32.7	-11	13.6	235	33.4	88	-0 33.9	40	18 57	19 25	19 59	19 20 32	6 48 76	
18	86	32.7	-11	12.7	250	01.3	89	-0 49.3	45	19 04	19 35	20 13	19 19 28	6 47 80	
19	101	32.8		11.8	264	29.1	88	-1 04.7	50	14	48	31	18 23	45 85	
20	116	32.9		10.9	278	57.0	89	20.1	52	18	19 55	40	18 20	44 88	
21	131	32.9		10.0	293	24.8	88	35.5	54	23	20 02	20 51	18 18	43 91	
22	146	33.0		09.1	307	52.6	88	-1 50.9	56	28	09	21 03	17 15	42 94	
23	161	33.0		08.2	322	20.5	89	-2 06.3	58	34	18	17	17 12	41 97	
24	176	33.1	-11	07.3	336	48.3	88	-2 21.6	60 S	19 41	20 29	21 34	19 16 9	6 40 100	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 14 ^h 03 ^m 3		Mag: -4.2 PMG: 9 ^h 19 ^m		Mag: +1.1 PMG: 12 ^h 03 ^m		Mag: -2.1 PMG: 14 ^h 26 ^m		Mag: +0.6 PMG: 3 ^h 11 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	148	36.0	220	25.0	-20	48.5	179	11.9	-13	35.4
1	163	38.5	235	24.4		48.3	194	12.5		34.7
2	178	41.0	250	23.7		48.1	209	13.0		34.0
3	193	43.4	265	23.1		47.9	224	13.6		33.3
4	208	45.9	280	22.4		47.7	239	14.1		32.7
5	223	48.3	295	21.8	-20	47.5	254	14.7	-13	32.0
6	238	50.8	310	21.1	-20	47.3	269	15.3	-13	31.3
7	253	53.3	325	20.5		47.1	284	15.8		30.6
8	268	55.7	340	19.8		46.9	299	16.4		29.9
9	283	58.2	355	19.2		46.7	314	16.9		29.3
10	299	00.7	10	18.5		46.5	329	17.5		28.6
11	314	03.1	25	17.9	-20	46.3	344	18.0	-13	27.9
12	329	05.6	40	17.2	-20	46.0	359	18.6	-13	27.2
13	344	08.1	55	16.6		45.8	14	19.2		26.5
14	359	10.5	70	15.9		45.6	29	19.7		25.9
15	14	13.0	85	15.3		45.4	44	20.3		25.2
16	29	15.4	100	14.6		45.2	59	20.8		24.5
17	44	17.9	115	14.0	-20	45.0	74	21.4	-13	23.8
18	59	20.4	130	13.4	-20	44.8	89	22.0	-13	23.1
19	74	22.8	145	12.7		44.5	104	22.5		22.4
20	89	25.3	160	12.1		44.3	119	23.1		21.8
21	104	27.8	175	11.4		44.1	134	23.6		21.1
22	119	30.2	190	10.8		43.9	149	24.2		20.4
23	134	32.7	205	10.1		43.7	164	24.8		19.7
24	149	35.2	220	09.5	-20	43.4	179	25.3	-13	19.0
Dif	—		-6	+2		+6	+7	+20		+2

0	176	31.7	-11	28.7	349	41.5	+3	47.9	60 N	17 01	17 44	18 32	19 33 101	7 09 9
1	191	31.7		27.8	4	09.2	87	32.6	58	06	47	33	32 97	08 12
2	206	31.8		26.9	18	36.8	86	17.3	56	12	50	33	32 93	07 15
3	221	31.9		26.0	33	04.5	87	+3 02.0	54	16	53	34	31 91	06 18
4	236	31.9		25.1	47	32.2	87	+2 46.6	52	21	55	35	30 88	06 20
5	251	32.0	-11	24.2	62	00.0	88	+2 31.3	50	17 25	17 58	18 35	19 30 85	7 05 22
6	266	32.0	-11	23.3	76	27.7	87	+2 15.9	45	17 33	18 03	18 37	19 29 80	7 03 28
7	281	32.1		22.5	90	55.4	87	+2 00.5	40	40	08	39	28 76	02 32
8	296	32.1		21.6	105	23.2	88	+1 45.1	35	46	12	41	27 72	01 35
9	311	32.2		20.7	119	51.0	88	29.6	30	17 51	16	44	27 68	7 00 38
10	326	32.3		19.8	134	18.8	88	+1 14.2	20	18 01	23	49	25 63	6 58 44
11	341	32.3	-11	18.9	148	46.5	87	+0 58.8	10 N	18 09	18 31	18 55	19 24 59	6 57 49
12	356	32.4	-11	18.0	163	14.3	88	+0 43.3	0	18 17	18 38	19 03	19 24 53	6 55 54
13	11	32.4		17.1	177	42.1	88	27.9	10 S	25	47	12	23 49	54 58
14	26	32.5		16.2	192	10.0	89	+0 12.4	20	34	18 57	23	22 44	52 63
15	41	32.6		15.3	206	37.8	88	-0 03.0	30	44	19 09	38	21 38	50 69
16	56	32.6		14.4	221	05.6	88	18.4	35	50	16	47	20 36	49 72
17	71	32.7	-11	13.6	235	33.4	88	-0 33.9	40	18 57	19 25	19 59	19 20 32	6 48 76
18	86	32.7	-11	12.7	250	01.3	89	-0 49.3	45	19 04	19 35	20 13	19 19 28	6 47 80
19	101	32.8		11.8	264	29.1	88	-1 04.7	50	14	48	31	18 23	45 85
20	116	32.9		10.9	278	57.0	89	20.1	52	18	19 55	40	18 20	44 88
21	131	32.9		10.0	293	24.8	88	35.5	54	23	20 02	20 51	18 18	43 91
22	146	33.0		09.1	307	52.6	88	-1 50.9	56	28	09	21 03	17 15	42 94
23	161	33.0		08.2	322	20.5	89	-2 06.3	58	34	18	17	17 12	41 97
24	176	33.1	-11	07.3	336	48.3	88	-2 21.6	60 S	19 41	20 29	21 34	19 16 9	6 40 100

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: 16 ^d 9 PHE { 4 ^h : 61/1 12 ^h : 61/0 20 ^h : 60/9 PMG: 1 ^h 36 ^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	176	33.1	-11	07.3	336	48.3	-2	21.6	60 N	5 54	6 42	7 25	21 14	100		7 18	9
1	191	33.2		06.4	351	16.2	89	36.9 ¹⁵³	58	54	39	20	09	96		20	13
2	206	33.2		05.5	5	44.0	88	-2 52.2 ¹⁵³	56	53	36	15	05	93		22	16
3	221	33.3		04.6	20	11.9	89	-3 07.5 ¹⁵³	54	53	34	10	21	02	89	24	19
4	236	33.4		03.7	34	39.7	88	22.8 ¹⁵³	52	52	31	06	20	58	87	26	21
5	251	33.4	-11	02.8	49	07.5	88	-3 38.0 ¹⁵²	50	5 51	6 29	7 02	20 55	85		7 27	24
6	266	33.5	-11	01.9	63	35.4	89	-3 53.2 ¹⁵²	45	5 50	6 24	6 54	20 49	79		7 31	28
7	281	33.6		01.1	78	03.2	88	-4 08.4 ¹⁵²	40	48	19	47	44	75		34	32
8	296	33.6	-11	00.2	92	31.0	88	23.5 ¹⁵¹	35	46	15	41	39	72		36	36
9	311	33.7	-10	59.3	106	58.8	88	38.6 ¹⁵¹	30	43	11	36	35	69		38	39
10	326	33.8		58.4	121	26.6	88	-4 53.7 ¹⁵¹	20	38	6 04	26	28	63		42	45
11	341	33.8	-10	57.5	135	54.4	88	-5 08.7 ¹⁵⁰	10 N	5 32	5 57	6 18	20 23	58		7 46	49
12	356	33.9	-10	56.6	150	22.2	88	-5 23.7 ¹⁵⁰	0	5 25	5 49	6 10	20 17	54		7 49	54
13	11	33.9		55.7	164	50.0	88	38.6 ¹⁴⁹	10 S	16	41	6 02	12	49		52	58
14	26	34.0		54.8	179	17.8	88	-5 53.5 ¹⁴⁹	20	5 05	31	5 54	20 06	45		55	63
15	41	34.1		53.9	193	45.5	87	-6 08.4 ¹⁴⁹	30	4 50	19	44	19 59	40		7 59	69
16	56	34.1		53.0	208	13.3	88	23.2 ¹⁴⁸	35	41	12	38	56	37		8 01	72
17	71	34.2	-10	52.1	222	41.0	87	-6 37.9 ¹⁴⁷	40	4 29	5 03	5 32	19 52	33		8 04	75
18	86	34.3	-10	51.2	237	08.7	87	-6 52.7 ¹⁴⁸	45	4 15	4 53	5 24	19 47	29		8 07	80
19	101	34.4		50.3	251	36.4	87	-7 07.3 ¹⁴⁶	50	3 57	40	15	41	25		10	85
20	116	34.4		49.4	266	04.1	87	21.9 ¹⁴⁶	52	48	34	10	38	23		12	87
21	131	34.5		48.5	280	31.8	87	36.5 ¹⁴⁶	54	38	27	05	36	20		14	90
22	146	34.6		47.6	294	59.5	87	-7 51.0 ¹⁴⁵	56	26	19	5 00	32	18		16	93
23	161	34.6		46.7	309	27.1	86	-8 05.4 ¹⁴⁴	58	3 12	10	4 54	29	14		18	96
24	176	34.7	-10	45.8	323	54.8	87	-8 19.8 ¹⁴⁴	60 S	2 55	4 00	4 47	19 25	11		8 20	101

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 13 ^h 59 ^m 4		Mag: -4.2 PMG: 9 ^h 20 ^m		Mag: +1.1 PMG: 12 ^h 02 ^m		Mag: -2.1 PMG: 14 ^h 23 ^m		Mag: +0.5 PMG: 3 ^h 07 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	149	35.2	220	09.5	-20	43.4	179	25.3	-13	19.0
1	164	37.6	235	08.8		43.2	194	25.9		18.3
2	179	40.1	250	08.2		43.0	209	26.4		17.7
3	194	42.6	265	07.5		42.8	224	27.0		17.0
4	209	45.0	280	06.9		42.5	239	27.6		16.3
5	224	47.5	295	06.2	-20	42.3	254	28.1	-13	15.6
6	239	49.9	310	05.6	-20	42.1	269	28.7	-13	14.9
7	254	52.4	325	04.9		41.9	284	29.3		14.2
8	269	54.9	340	04.3		41.6	299	29.8		13.6
9	284	57.3	355	03.6		41.4	314	30.4		12.9
10	299	59.8	10	03.0		41.2	329	30.9		12.2
11	315	02.3	25	02.3	-20	40.9	344	31.5	-13	11.5
12	330	04.7	40	01.7	-20	40.7	359	32.1	-13	10.8
13	345	07.2	55	01.0		40.5	14	32.6		10.1
14	0	09.7	70	00.4		40.2	29	33.2		09.4
15	15	12.1	84	59.7		40.0	44	33.8		08.7
16	30	14.6	99	59.1		39.8	59	34.3		08.1
17	45	17.0	114	58.4	-20	39.5	74	34.9	-13	07.4
18	60	19.5	129	57.8	-20	39.3	89	35.5	-13	06.7
19	75	22.0	144	57.1		39.0	104	36.0		06.0
20	90	24.4	159	56.5		38.8	119	36.6		05.3
21	105	26.9	174	55.9		38.6	134	37.1		04.6
22	120	29.4	189	55.2		38.3	149	37.7		03.9
23	135	31.8	204	54.6		38.1	164	38.3		03.2
24	150	34.3	219	53.9	-20	37.8	179	38.8	-13	02.6
Dif	—		-6 +2		+6 +7		+20 +2		+26 0	

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna					
	SD: 16'2 PMG: 12 ^h 13 ^m 6			Edad: 17 ^d 9 PHE { SD: 16'6 PMG: 2 ^h 30 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m		
0	176	34.7	-10	45.8	323	54.8	-8	19.8	60 N	17 06	17 49	18 37	22 54	98	7 27	12		
1	191	34.8		44.9	338	22.4	86	34.1	58	11	52	37	45	94	33	16		
2	206	34.8		44.0	352	50.0	86	-8 48.3	56	16	54	37	38	90	38	19		
3	221	34.9		43.1	7	17.6	86	-9 02.5	54	20	57	38	31	87	43	2		
4	236	35.0		42.2	21	45.1	85	16.6	52	24	17 59	38	25	85	47	24		
5	251	35.0	-10	41.3	36	12.7	86	-9 30.7	50	17 28	18 01	18 38	22 20	82	7 51	26		
6	266	35.1	-10	40.4	50	40.2	85	-9 44.7	45	17 36	18 06	18 40	22 08	78	7 59	31		
7	281	35.2		39.5	65	07.7	85	-9 58.6	40	42	10	41	21 59	73	8 06	35		
8	296	35.3		38.6	79	35.2	85	-10 12.4	35	48	14	43	51	70	12	38		
9	311	35.3		37.7	94	02.6	84	26.2	30	17 53	17	45	44	67	17	42		
10	326	35.4		36.8	108	30.1	85	39.9	20	18 02	24	50	31	63	27	46		
11	341	35.5	-10	35.9	122	57.5	84	-10 53.5	10 N	18 10	18 31	18 56	21 21	59	8 35	50		
12	356	35.6	-10	35.0	137	24.9	84	-11 07.0	0	18 17	18 38	19 02	21 11	55	8 43	54		
13	11	35.6		34.1	151	52.3	84	20.5	10 S	25	46	11	21 01	52	50	59		
14	26	35.7		33.2	166	19.6	83	33.9	20	33	18 55	22	20 51	47	8 58	63		
15	41	35.8		32.2	180	47.0	84	-11 47.1	30	42	19 07	36	39	43	9 08	68		
16	56	35.8		31.3	195	14.3	83	-12 00.4	35	48	14	45	33	40	13	71		
17	71	35.9	-10	30.4	209	41.6	83	-12 13.5	40	18 54	19 22	19 56	20 25	37	9 19	75		
18	86	36.0	-10	29.5	224	08.8	82	-12 26.5	45	19 01	19 32	20 09	20 16	33	9 27	78		
19	101	36.1		28.6	238	36.0	82	39.4	50	10	44	27	06	28	35	84		
20	116	36.1		27.7	253	03.3	83	-12 52.3	52	14	50	35	20 01	26	39	86		
21	131	36.2		26.8	267	30.4	81	-13 05.1	54	19	19 57	45	19 56	23	44	89		
22	146	36.3		25.9	281	57.6	82	17.7	56	24	20 04	20 56	50	21	49	92		
23	161	36.4		25.0	296	24.7	81	30.3	58	29	13	21 09	43	18	9 54	96		
24	176	36.4	-10	24.1	310	51.8	81	-13 42.8	60 S	19 35	20 22	21 25	19 36	14	10 01	99		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 13 ^h 55 ^m 4		Mag: -4.2 PMG: 9 ^h 21 ^m			Mag: +1.1 PMG: 12 ^h 01 ^m			Mag: -2.1 PMG: 14 ^h 19 ^m			Mag: +0.5 PMG: 3 ^h 03 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	150	34.3	219	53.9	-20	37.8	179	38.8	-13	02.6	144	39.7	+1	19.9	314	12.8	-4	06.3
1	165	36.8	234	53.3		37.6	194	39.4		01.9	159	41.7		20.1	329	15.4		06.3
2	180	39.2	249	52.6		37.3	209	40.0		01.2	174	43.6		20.4	344	17.9		06.2
3	195	41.7	264	52.0		37.1	224	40.5	-13	00.5	189	45.6		20.6	359	20.5		06.2
4	210	44.2	279	51.3		36.8	239	41.1	-12	59.8	204	47.6		20.8	14	23.1		06.1
5	225	46.6	294	50.7	-20	36.6	254	41.7	-12	59.1	219	49.5	+1	21.0	29	25.6	-4	06.1
6	240	49.1	309	50.0	-20	36.3	269	42.2	-12	58.4	234	51.5	+1	21.3	44	28.2	-4	06.0
7	255	51.5	324	49.4		36.1	284	42.8		57.7	249	53.4		21.5	59	30.7		06.0
8	270	54.0	339	48.7		35.8	299	43.4		57.0	264	55.4		21.7	74	33.3		05.9
9	285	56.5	354	48.1		35.6	314	43.9		56.3	279	57.3		21.9	89	35.9		05.9
10	300	58.9	9	47.4		35.3	329	44.5		55.6	294	59.3		22.2	104	38.4		05.8
11	316	01.4	24	46.8	-20	35.0	344	45.1	-12	55.0	310	01.3	+1	22.4	119	41.0	-4	05.8
12	331	03.9	39	46.1	-20	34.8	359	45.6	-12	54.3	325	03.2	+1	22.6	134	43.6	-4	05.7
13	346	06.3	54	45.5		34.5	14	46.2		53.6	340	05.2		22.8	149	46.1		05.7
14	1	08.8	69	44.8		34.3	29	46.8		52.9	355	07.1		23.1	164	48.7		05.6
15	16	11.3	84	44.2		34.0	44	47.3		52.2	10	09.1		23.3	179	51.2		05.6
16	31	13.7	99	43.5		33.7	59	47.9		51.5	25	11.0		23.5	194	53.8		05.5
17	46	16.2	114	42.9	-20	33.5	74	48.5	-12	50.8	40	13.0	+1	23.7	209	56.4	-4	05.5
18	61	18.6	129	42.2	-20	33.2	89	49.0	-12	50.1	55	14.9	+1	23.9	224	58.9	-4	05.4
19	76	21.1	144	41.6		32.9	104	49.6		49.4	70	16.9		24.2	240	01.5		05.4
20	91	23.6	159	40.9		32.7	119	50.2		48.7	85	18.9		24.4	255	04.1		05.3
21	106	26.0	174	40.3		32.4	134	50.7		48.0	100	20.8		24.6	270	06.6		05.3
22	121	28.5	189	39.6		32.1	149	51.3		47.3	115	22.8		24.8	285	09.2		05.2
23	136	31.0	204	39.0		31.9	164	51.9		46.6	130	24.7		25.1	300	11.8		05.2
24	151	33.4	219	38.3	-20	31.6	179	52.5	-12	45.9	145	26.7	+1	25.3	315	14.3	-4	05.1
Dif	—		-6		+3		+6		+7		+20		+2		+26		+1	

ALMANAQUE NÁUTICO PERSEIS

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16:2 PMG: 12 ^h 13 ^m 4			Edad: 19 ^d 9 PHE { 4 ^h : 59:3 12 ^h : 59:0 20 ^h : 58:7 PMG: 4 ^h 19 ^m R°: 57 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	m
0	176	38.3	-10 02.2	297	34.4	-18 10.4	74	60 N	17 11	17 54	18 42	0 32	92	7 56	24
1	191	38.4	01.3	312	00.8	20.1	97	58	16	56	42	19 88		8 09	29
2	206	38.5	-10 00.4	326	27.3	29.7	96	56	20	17 58	41	0 08	85	21 31	3
3	221	38.6	-9 59.5	340	53.7	39.1	94	54	24	18 00	41	** ** *	**	31 34	
4	236	38.7	58.6	355	20.0	48.5	94	52	28	02	42	** ** *	**	40 36	
5	251	38.8	-9 57.7	9	46.4	-18 57.7	92	50	17 31	18 04	18 42	** ** *	**	8 48	38
6	266	38.8	-9 56.7	24	12.7	-19 06.7	90	45	17 39	18 08	18 42	** ** *	**	9 06	42
7	281	38.9	55.8	38	39.0	15.7	90	40	45	12	43	** ** *	**	20 45	
8	296	39.0	54.9	53	05.3	24.5	88	35	50	15	45	** ** *	**	32 47	
9	311	39.1	54.0	67	31.6	33.2	87	30	17 54	19	47	23 57	62	9 43	49
10	326	39.2	53.1	81	57.8	41.7	85	20	18 03	25	51	36 60		10 02	51
11	341	39.3	-9 52.2	96	24.1	-19 50.2	85	10 N	18 10	18 31	18 56	23 19	58	10 18	54
12	356	39.4	-9 51.2	110	50.3	-19 58.4	82	0	18 17	18 38	19 02	23 02	57	10 33	56
13	11	39.4	50.3	125	16.5	-20 06.6	82	10 S	24	45	10	22 46	55	10 48	59
14	26	39.5	49.4	139	42.6	14.6	80	20	31	18 54	20	28 53		11 04	61
15	41	39.6	48.5	154	08.8	22.5	79	30	40	19 05	33	22 08	51	23 64	
16	56	39.7	47.6	168	34.9	30.3	78	35	45	11	42	21 57	49	34 66	
17	71	39.8	-9 46.7	183	01.1	-20 37.9	76	40	18 51	19 19	19 52	21 43	48	11 46	68
18	86	39.9	-9 45.7	197	27.2	-20 45.4	75	45	18 58	19 28	20 05	21 28	45	12 01	71
19	101	40.0	44.8	211	53.3	52.7	73	50	19 06	40	22	09 42		19 74	
20	116	40.0	43.9	226	19.3	-20 59.9	72	52	10	46	30	21 00	40	28 76	
21	131	40.1	43.0	240	45.4	-21 07.0	71	54	14	52	39	20 50	39	37 78	
22	146	40.2	42.1	255	11.4	13.9	69	56	19	19 59	20 50	38 37		12 48	80
23	161	40.3	41.1	269	37.5	20.7	68	58	24	20 07	21 02	25 34		13 01	83
24	176	40.4	-9 40.2	284	03.5	-21 27.4	67	60 S	19 30	20 16	21 17	20 10	30	13 16	86
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 13 ^h 47 ^m 6		Mag: -4.2 PMG: 9 ^h 23 ^m			Mag: +1.1 PMG: 11 ^h 59 ^m			Mag: -2.1 PMG: 14 ^h 13 ^m			Mag: +0.5 PMG: 2 ^h 54 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°
0	152	32.6	219 22.8	-20 24.8	180 06.2	-12 29.2	146 13.6	+1 30.7	316 15.9	-4 03.9					
1	167	35.0	234 22.1	24.5	195 06.7	28.5	161 15.5	30.9	331 18.5	03.8					
2	182	37.5	249 21.5	24.2	210 07.3	27.8	176 17.5	31.1	346 21.0	03.8					
3	197	40.0	264 20.8	23.9	225 07.9	27.1	191 19.4	31.4	1 23.6	03.7					
4	212	42.4	279 20.2	23.6	240 08.5	26.4	206 21.4	31.6	16 26.2	03.6					
5	227	44.9	294 19.5	-20 23.3	255 09.0	-12 25.7	221 23.3	+1 31.8	31 28.7	-4 03.6					
6	242	47.4	309 18.9	-20 23.0	270 09.6	-12 25.0	236 25.3	+1 32.0	46 31.3	-4 03.5					
7	257	49.8	324 18.2	22.7	285 10.2	24.3	251 27.2	32.3	61 33.9	03.5					
8	272	52.3	339 17.6	22.4	300 10.8	23.6	266 29.2	32.5	76 36.4	03.4					
9	287	54.7	354 17.0	22.1	315 11.3	22.9	281 31.1	32.7	91 39.0	03.4					
10	302	57.2	9 16.3	21.8	330 11.9	22.2	296 33.1	32.9	106 41.6	03.3					
11	317	59.7	24 15.7	-20 21.5	345 12.5	-12 21.5	311 35.1	+1 33.2	121 44.2	-4 03.3					
12	333	02.1	39 15.0	-20 21.2	0 13.1	-12 20.8	326 37.0	+1 33.4	136 46.7	-4 03.2					
13	348	04.6	54 14.4	20.9	15 13.6	20.1	341 39.0	33.6	151 49.3	03.2					
14	3	07.1	69 13.7	20.6	30 14.2	19.4	356 40.9	33.8	166 51.9	03.1					
15	18	09.5	84 13.1	20.3	45 14.8	18.7	11 42.9	34.1	181 54.4	03.1					
16	33	12.0	99 12.4	20.0	60 15.4	18.0	26 44.8	34.3	196 57.0	03.0					
17	48	14.5	114 11.8	-20 19.7	75 15.9	-12 17.3	41 46.8	+1 34.5	211 59.6	-4 03.0					
18	63	16.9	129 11.1	-20 19.4	90 16.5	-12 16.6	56 48.7	+1 34.7	227 02.1	-4 02.9					
19	78	19.4	144 10.5	19.0	105 17.1	15.9	71 50.7	35.0	242 04.7	02.8					
20	93	21.9	159 09.8	18.7	120 17.7	15.2	86 52.6	35.2	257 07.3	02.8					
21	108	24.3	174 09.2	18.4	135 18.2	14.5	101 54.6	35.4	272 09.9	02.7					
22	123	26.8	189 08.5	18.1	150 18.8	13.8	116 56.5	35.6	287 12.4	02.7					
23	138	29.2	204 07.9	17.8	165 19.4	13.1	131 58.5	35.9	302 15.0	02.6					
24	153	31.7	219 07.2	-20 17.5	180 20.0	-12 12.3	147 00.4	+1 36.1	317 17.6	-4 02.6					
Dif	—		-6 +3		+6 +7		+20 +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: 20 ^d 9 PHE { 4 ^h : 58'5 12 ^h : 58'2 20 ^h : 57'9 PMG: 5 ^h 16 ^m R°: 56 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico		Civil	Hora		R°	Hora	R°	
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	m
0	176	40.4	-9	40.2	284	03.5	-21	27.4	60 N	5	44	6	32	7	14	
1	191	40.5		39.3	298	29.5	70	33.9	65	58	44	29	09	1	47	77
2	206	40.6		38.4	312	55.5	70	40.3	64	56	44	27	05	33	74	8
3	221	40.7		37.5	327	21.5	70	46.5	62	54	44	25	7	01	20	72
4	236	40.8		36.5	341	47.5	70	52.6	61	52	44	23	6	57	1	09
5	251	40.8	-9	35.6	356	13.5	70	-21	58.5	59	50	5	44	6	22	6
6	266	40.9	-9	34.7	10	39.5	70	-22	04.4	59	45	5	44	6	18	6
7	281	41.0		33.8	25	05.5	70	10.0	56	40	43	14	41	23	65	
8	296	41.1		32.9	39	31.5	70	15.6	56	35	41	11	36	0	09	63
9	311	41.2		31.9	53	57.4	69	20.9	53	30	40	08	32	**	**	**
10	326	41.3		31.0	68	23.4	70	26.2	53	20	36	6	01	24	**	**
11	341	41.4	-9	30.1	82	49.4	70	-22	31.3	51	10 N	5	31	5	55	6
12	356	41.5	-9	29.2	97	15.3	69	-22	36.2	49	0	5	25	5	49	6
13	11	41.6		28.2	111	41.3	70	41.0	48	10 S	17	42	6	03	41	55
14	26	41.7		27.3	126	07.3	70	45.7	47	20	5	07	33	5	56	23
15	41	41.8		26.4	140	33.2	69	50.2	45	30	4	54	22	47	22	59
16	56	41.9		25.5	154	59.2	70	54.6	44	35	45	16	42	46	53	40
17	71	41.9	-9	24.5	169	25.2	70	-22	58.8	42	40	4	35	5	08	5
18	86	42.0	-9	23.6	183	51.2	70	-23	02.9	41	45	4	22	4	59	5
19	101	42.1		22.7	198	17.2	70	06.9	40	50	4	05	47	21	21	51
20	116	42.2		21.8	212	43.2	70	10.7	38	52	3	57	42	18	40	51
21	131	42.3		20.8	227	09.2	70	14.3	36	54	48	36	14	29	49	13
22	146	42.4		19.9	241	35.2	70	17.9	36	56	38	29	09	21	15	49
23	161	42.5		19.0	256	01.3	71	21.2	33	58	25	21	5	04	20	59
24	176	42.6	-9	18.1	270	27.3	70	-23	24.5	33	60 S	3	11	4	12	4

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG 13 ^h 43 ^m 6		Mag: -4.1 PMG: 9 ^h 24 ^m			Mag: +1.1 PMG: 11 ^h 58 ^m			Mag: -2.1 PMG: 14 ^h 10 ^m			Mag: +0.5 PMG: 2 ^h 50 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	153	31.7	219	07.2	-20	17.5	180	20.0	-12	12.3	147	00.4	+1	36.1
1	168	34.2	234	06.6		17.1	195	20.5		11.6	162	02.4		36.3
2	183	36.6	249	05.9		16.8	210	21.1		10.9	177	04.3		36.5
3	198	39.1	264	05.3		16.5	225	21.7		10.2	192	06.3		36.8
4	213	41.6	279	04.7		16.2	240	22.3		09.5	207	08.2		37.0
5	228	44.0	294	04.0	-20	15.9	255	22.9	-12	08.8	222	10.2	+1	37.2
6	243	46.5	309	03.4	-20	15.5	270	23.4	-12	08.1	237	12.1	+1	37.4
7	258	49.0	324	02.7		15.2	285	24.0		07.4	252	14.1		37.7
8	273	51.4	339	02.1		14.9	300	24.6		06.7	267	16.0		37.9
9	288	53.9	354	01.4		14.6	315	25.2		06.0	282	18.0		38.1
10	303	56.4	9	00.8		14.2	330	25.7		05.3	297	19.9		38.3
11	318	58.8	24	00.1	-20	13.9	345	26.3	-12	04.6	312	21.9	+1	38.6
12	334	01.3	38	59.5	-20	13.6	0	26.9	-12	03.9	327	23.8	+1	38.8
13	349	03.7	53	58.8		13.2	15	27.5		03.2	342	25.8		39.0
14	4	06.2	68	58.2		12.9	30	28.1		02.5	357	27.7		39.2
15	19	08.7	83	57.5		12.6	45	28.6		01.8	12	29.7		39.5
16	34	11.1	98	56.9		12.2	60	29.2		01.0	27	31.6		39.7
17	49	13.6	113	56.3	-20	11.9	75	29.8	-12	00.3	42	33.6	+1	39.9
18	64	16.1	128	55.6	-20	11.6	90	30.4	-11	59.6	57	35.5	+1	40.1
19	79	18.5	143	55.0		11.2	105	31.0		58.9	72	37.5		40.4
20	94	21.0	158	54.3		10.9	120	31.5		58.2	87	39.4		40.6
21	109	23.5	173	53.7		10.6	135	32.1		57.5	102	41.4		40.8
22	124	25.9	188	53.0		10.2	150	32.7		56.8	117	43.3		41.1
23	139	28.4	203	52.4		09.9	165	33.3		56.1	132	45.3		41.3
24	154	30.9	218	51.7	-20	09.5	180	33.9	-11	55.4	147	47.2	+1	41.5
Dif	—		-6 +3			+6 +7			+19 +2			+26 +1		

UT	SOL		 LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16:2		Edad: 21 ^d 9	PHE {	4 ^h : 57/6 12 ^h : 57/4 20 ^h : 57/1	Final del crepúsculo			Salida de Luna		Puesta de Luna			
	PMG: 12 ^h 13 ^m 1													
	hG ☉	Dec	hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	m	h m m	m
0	176	42.6	-9 18.1		270 27.3	-23 24.5	30	60 N	17 16	17 59	18 47	3 24 61	8 58 55	
1	191	42.7	17.1		284 53.4	27.5	30	58	21	18 01	46	3 04 60	9 18 55	
2	206	42.8	16.2		299 19.5	30.5	28	56	25	02	46	2 47 59	35 56	
3	221	42.9	15.3		313 45.6	33.3	30	54	28	04	45	32 60	9 50 55	
4	236	43.0	14.4		328 11.7	35.9	26	52	32	06	45	20 59	10 02 56	
5	251	43.1	-9 13.4		342 37.8	-23 38.4	25	50	17 35	18 07	18 45	2 09 59	10 13 56	
6	266	43.2	-9 12.5		357 04.0	-23 40.8	24	45	17 41	18 11	18 45	1 46 59	10 36 56	
7	281	43.3	11.6		11 30.1	43.0	22	40	47	14	46	28 58	10 55 56	
8	296	43.4	10.6		25 56.3	45.1	21	35	52	17	47	1 12 58	11 11 55	
9	311	43.5	09.7		40 22.5	47.0	19	30	17 56	20	48	0 59 57	24 56	
10	326	43.6	08.8		54 48.8	48.8	18	20	18 03	26	51	36 57	11 47 56	
11	341	43.7	-9 07.9		69 15.0	-23 50.4	16	10 N	18 10	18 31	18 56	0 17 56	12 07 55	
12	356	43.8	-9 06.9		83 41.3	-23 51.9	15	0	18 16	18 37	19 02	** ** *	12 26 55	
13	11	43.9	06.0		98 07.6	53.3	14	10 S	23	44	09	** ** *	12 44 55	
14	26	44.0	05.1		112 34.0	54.5	12	20	30	18 52	18	** ** *	13 04 55	
15	41	44.0	04.1		127 00.4	55.6	11	30	38	19 02	31	23 53 56	27 55	
16	56	44.1	03.2		141 26.8	56.5	9	35	43	09	39	39 57	41 54	
17	71	44.2	-9 02.3		155 53.2	-23 57.3	8	40	18 48	19 16	19 49	23 24 57	13 56 54	
18	86	44.3	-9 01.3		170 19.7	-23 58.0	7	45	18 54	19 25	20 02	23 05 59	14 15 53	
19	101	44.4	-9 00.4		184 46.2	58.5	5	50	19 02	36	17	22 42 59	38 53	
20	116	44.5	-8 59.5		199 12.7	58.9	4	52	05	41	25	31 60	14 49 53	
21	131	44.6	58.6		213 39.3	59.1	2	54	09	47	34	18 61	15 01 53	
22	146	44.7	57.6		228 05.9	59.2	1	56	14	19 53	44	22 04 61	16 52	
23	161	44.8	56.7		242 32.6	59.1	1	58	18	20 01	20 55	21 47 62	33 51	
24	176	44.9	-8 55.8		256 59.3	-23 59.0	1	60 S	19 24	20 09	21 09	21 26 63	15 53 51	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 13 ^h 39 ^m 7		Mag: -4.1 PMG: 9 ^h 25 ^m		Mag: +1.1 PMG: 11 ^h 57 ^m		Mag: -2.1 PMG: 14 ^h 07 ^m		Mag: +0.5 PMG: 2 ^h 46 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	154	30.9	218 51.7	-20 09.5	180 33.9	-11 55.4	147 47.2	+1 41.5	318 19.3	-4 01.3
1	169	33.3	233 51.1	09.2	195 34.4	54.7	162 49.2	41.7	333 21.9	01.2
2	184	35.8	248 50.4	08.8	210 35.0	54.0	177 51.1	42.0	348 24.5	01.1
3	199	38.2	263 49.8	08.5	225 35.6	53.2	192 53.1	42.2	3 27.0	01.1
4	214	40.7	278 49.2	08.2	240 36.2	52.5	207 55.0	42.4	18 29.6	01.0
5	229	43.2	293 48.5	-20 07.8	255 36.8	-11 51.8	222 56.9	+1 42.6	33 32.2	-4 01.0
6	244	45.6	308 47.9	-20 07.5	270 37.4	-11 51.1	237 58.9	+1 42.9	48 34.8	-4 00.9
7	259	48.1	323 47.2	07.1	285 37.9	50.4	253 00.8	43.1	63 37.3	00.9
8	274	50.6	338 46.6	06.8	300 38.5	49.7	268 02.8	43.3	78 39.9	00.8
9	289	53.0	353 45.9	06.4	315 39.1	49.0	283 04.7	43.5	93 42.5	00.8
10	304	55.5	8 45.3	06.1	330 39.7	48.3	298 06.7	43.8	108 45.1	00.7
11	319	58.0	23 44.6	-20 05.7	345 40.3	-11 47.6	313 08.6	+1 44.0	123 47.6	-4 00.6
12	335	00.4	38 44.0	-20 05.4	0 40.9	-11 46.8	328 10.6	+1 44.2	138 50.2	-4 00.6
13	350	02.9	53 43.3	05.0	15 41.4	46.1	343 12.5	44.4	153 52.8	00.5
14	5	05.3	68 42.7	04.6	30 42.0	45.4	358 14.5	44.7	168 55.4	00.5
15	20	07.8	83 42.1	04.3	45 42.6	44.7	13 16.4	44.9	183 57.9	00.4
16	35	10.3	98 41.4	03.9	60 43.2	44.0	28 18.4	45.1	199 00.5	00.4
17	50	12.7	113 40.8	-20 03.6	75 43.8	-11 43.3	43 20.3	+1 45.4	214 03.1	-4 00.3
18	65	15.2	128 40.1	-20 03.2	90 44.4	-11 42.6	58 22.3	+1 45.6	229 05.7	-4 00.3
19	80	17.7	143 39.5	02.9	105 44.9	41.9	73 24.2	45.8	244 08.3	00.2
20	95	20.1	158 38.8	02.5	120 45.5	41.1	88 26.2	46.0	259 10.8	00.1
21	110	22.6	173 38.2	02.1	135 46.1	40.4	103 28.1	46.3	274 13.4	-4 00.1
22	125	25.1	188 37.6	01.8	150 46.7	39.7	118 30.1	46.5	289 16.0	-4 00.0
23	140	27.5	203 36.9	01.4	165 47.3	39.0	133 32.0	46.7	304 18.6	-4 00.0
24	155	30.0	218 36.3	-20 01.0	180 47.9	-11 38.3	148 33.9	+1 46.9	319 21.1	-3 59.9
Dif	—		-6	+4	+6	+7	+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: 22 ^d 9 PHE { 4 ^h : 56'8 12 ^h : 56'6 20 ^h : 56'4 PMG: 7 ^h 08 ^m R°: 53 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m	
0	176	44.9	-8	55.8	256	59.3	-23	59.0	60 N	5 38	6 26	7 08	4 25	40	9 53	70	
1	191	45.0		54.8	271	26.0	77	58.6	4	58	39	24	04	42	10 13	68	
2	206	45.1		53.9	285	52.8	78	58.2	6	56	39	22	7 00	3 46	45	31 66	
3	221	45.2		53.0	300	19.6	78	57.6	6	54	40	21	6 56	32	45	45 65	
4	236	45.3		52.0	314	46.4	78	56.9	7	52	40	19	53	19	47	10 58 63	
5	251	45.4	-8	51.1	329	13.3	79	-23	56.0	9	50	5 40	6 18	6 50	3 08	47 11 09 63	
6	266	45.6	-8	50.2	343	40.3	80	-23	55.0	10	45	5 40	6 14	6 44	2 45	48 11 32 61	
7	281	45.7		49.2	358	07.3	80	53.9	11	40	40	11	38	26	50	11 51 59	
8	296	45.8		48.3	12	34.3	80	52.6	13	35	39	08	34	2	10	51 12 06 58	
9	311	45.9		47.4	27	01.4	81	51.2	14	30	38	06	30	1	56	52 20 57	
10	326	46.0		46.4	41	28.6	82	49.7	15	20	34	6 00	22	33	53	12 43 55	
11	341	46.1	-8	45.5	55	55.7	81	-23	48.0	17	10 N	5 30	5 55	6 16	1 13	54 13 02 55	
12	356	46.2	-8	44.6	70	23.0	83	-23	46.2	18	0	5 24	5 49	6 10	0 55	54 13 21 53	
13	11	46.3		43.6	84	50.3	83	44.3	19	10 S	17	42	6 03	36	55	39 52	
14	26	46.4		42.7	99	17.6	83	42.2	21	20	5 08	34	5 56	0 16	56	13 59 50	
15	41	46.5		41.8	113	45.0	84	40.0	22	30	4 55	24	48	**	**	14 22 48	
16	56	46.6		40.8	128	12.5	85	37.7	23	35	47	18	44	**	**	35 47	
17	71	46.7	-8	39.9	142	40.0	85	-23	35.2	25	40	4 37	5 11	5 39	**	**	14 50 46
18	86	46.8	-8	38.9	157	07.5	85	-23	32.7	25	45	4 25	5 02	5 32	**	**	15 08 45
19	101	46.9		38.0	171	35.1	86	30.0	27	50	09	4 51	25	23	41	65 31 42	
20	116	47.0		37.1	186	02.8	87	27.1	29	52	4 02	46	21	31	66	42 41	
21	131	47.1		36.1	200	30.6	88	24.2	29	54	3 53	40	18	19	68	15 54 40	
22	146	47.2		35.2	214	58.3	87	21.1	31	56	43	34	13	23	05	70 16 08 38	
23	161	47.3		34.3	229	26.2	89	17.9	32	58	32	26	09	22	49	72 24 36	
24	176	47.4	-8	33.3	243	54.1	89	-23	14.6	33	60 S	3 18	4 18	5 03	22	29 76 16 44 33	

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 13 ^h 35 ^m 8		Mag: -4.1 PMG: 9 ^h 26 ^m			Mag: +1.1 PMG: 11 ^h 56 ^m			Mag: -2.1 PMG: 14 ^h 04 ^m			Mag: +0.5 PMG: 2 ^h 42 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'				
0	155	30.0	218	36.3	-20	01.0	180	47.9	-11	38.3	148	33.9	+1	46.9	319	21.1	-3	59.9
1	170	32.5	233	35.6		00.7	195	48.4		37.6	163	35.9		47.2	334	23.7		59.9
2	185	34.9	248	35.0	-20	00.3	210	49.0		36.9	178	37.8		47.4	349	26.3		59.8
3	200	37.4	263	34.3	-19	59.9	225	49.6		36.1	193	39.8		47.6	4	28.9		59.7
4	215	39.8	278	33.7		59.6	240	50.2		35.4	208	41.7		47.8	19	31.5		59.7
5	230	42.3	293	33.1	-19	59.2	255	50.8	-11	34.7	223	43.7	+1	48.1	34	34.0	-3	59.6
6	245	44.8	308	32.4	-19	58.8	270	51.4	-11	34.0	238	45.6	+1	48.3	49	36.6	-3	59.6
7	260	47.2	323	31.8		58.4	285	52.0		33.3	253	47.6		48.5	64	39.2		59.5
8	275	49.7	338	31.1		58.1	300	52.5		32.6	268	49.5		48.8	79	41.8		59.5
9	290	52.2	353	30.5		57.7	315	53.1		31.8	283	51.5		49.0	94	44.3		59.4
10	305	54.6	8	29.8		57.3	330	53.7		31.1	298	53.4		49.2	109	46.9		59.3
11	320	57.1	23	29.2	-19	56.9	345	54.3	-11	30.4	313	55.3	+1	49.4	124	49.5	-3	59.3
12	335	59.6	38	28.6	-19	56.6	0	54.9	-11	29.7	328	57.3	+1	49.7	139	52.1	-3	59.2
13	351	02.0	53	27.9		56.2	15	55.5		29.0	343	59.2		49.9	154	54.7		59.2
14	6	04.5	68	27.3		55.8	30	56.1		28.3	359	01.2		50.1	169	57.2		59.1
15	21	07.0	83	26.6		55.4	45	56.7		27.5	14	03.1		50.3	184	59.8		59.1
16	36	09.4	98	26.0		55.1	60	57.2		26.8	29	05.1		50.6	200	02.4		59.0
17	51	11.9	113	25.3	-19	54.7	75	57.8	-11	26.1	44	07.0	+1	50.8	215	05.0	-3	58.9
18	66	14.3	128	24.7	-19	54.3	90	58.4	-11	25.4	59	09.0	+1	51.0	230	07.6	-3	58.9
19	81	16.8	143	24.1		53.9	105	59.0		24.7	74	10.9		51.3	245	10.1		58.8
20	96	19.3	158	23.4		53.5	120	59.6		24.0	89	12.9		51.5	260	12.7		58.8
21	111	21.7	173	22.8		53.1	136	00.2		23.2	104	14.8		51.7	275	15.3		58.7
22	126	24.2	188	22.1		52.7	151	00.8		22.5	119	16.7		51.9	290	17.9		58.7
23	141	26.7	203	21.5		52.4	166	01.4		21.8	134	18.7		52.2	305	20.5		58.6
24	156	29.1	218	20.9	-19	52.0	181	01.9	-11	21.1	149	20.6	+1	52.4	320	23.0	-3	58.5
Dif	—		-6			+4	+6			+7	+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 12 ^m 8		Edad: 23 ^d 9 PHE { 4 ^h : 56:2 12 ^h : 55:9 20 ^h : 55:8 PMG: 8 ^h 01 ^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	h m m
0	176	47.4	-8 33.3	243	54.1	-23 14.6	60 N	17 21	18 03	18 52	5 05 26	11 03 79		
1	191	47.5		258	22.1	11.1	58	25	05	50	4 46 30	21 76		
2	206	47.6	31.4	272	50.1	07.6	56	29	07	50	31 32	37 72		
3	221	47.7	30.5	287	18.2	03.9	54	32	08	49	17 34	11 50 70		
4	236	47.8	29.6	301	46.4	-23 00.1	52	35	09	48	4 06 35	12 01 69		
5	251	48.0	-8 28.6	316	14.6	-22 56.1	50	17 38	18 11	18 48	3 55 37	12 12 66		
6	266	48.1	-8 27.7	330	42.9	-22 52.1	45	17 44	18 14	18 48	3 33 40	12 33 64		
7	281	48.2	26.8	345	11.2	47.9	40	49	16	48	16 42	12 50 61		
8	296	48.3	25.8	359	39.6	43.6	35	53	19	48	3 01 44	13 04 60		
9	311	48.4	24.9	14	08.1	39.2	30	17 57	21	49	2 48 45	17 58		
10	326	48.5	23.9	28	36.6	34.7	20	18 04	26	52	26 48	38 55		
11	341	48.6	-8 23.0	43	05.3	-22 30.1	10 N	18 10	18 31	18 56	2 07 49	13 57 52		
12	356	48.7	-8 22.1	57	33.9	-22 25.3	0	18 16	18 37	19 01	1 49 51	14 14 50		
13	11	48.8	21.1	72	02.7	20.5	10 S	22	43	08	31 53	31 48		
14	26	48.9	20.2	86	31.5	15.5	20	28	18 51	17	1 12 55	14 49 46		
15	41	49.0	19.2	101	00.4	10.4	30	36	19 00	29	0 49 58	15 10 43		
16	56	49.2	18.3	115	29.3	-22 05.3	35	40	06	37	36 59	22 41		
17	71	49.3	-8 17.4	129	58.3	-22 00.0	40	18 45	19 13	19 46	0 21 61	15 36 39		
18	86	49.4	-8 16.4	144	27.4	-21 54.5	45	18 51	19 21	19 58	0 04 62	15 53 36		
19	101	49.5	15.5	158	56.6	49.0	50	18 58	31	20 13	** ** *	16 13 33		
20	116	49.6	14.5	173	25.8	43.4	52	19 01	36	20	** ** *	23 31		
21	131	49.7	13.6	187	55.1	37.7	54	05	42	28	** ** *	34 29		
22	146	49.8	12.6	202	24.4	31.9	56	09	48	37	** ** *	16 46 27		
23	161	49.9	11.7	216	53.9	25.9	58	13	19 55	20 48	** ** *	17 00 25		
24	176	50.0	-8 10.8	231	23.4	-21 19.9	60 S	19 18	20 03	21 01	23 45 80	17 17 21		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 13 ^h 31 ^m 8		Mag: -4.1 PMG: 9 ^h 27 ^m		Mag: +1.1 PMG: 11 ^h 55 ^m		Mag: -2.1 PMG: 14 ^h 01 ^m		Mag: +0.5 PMG: 2 ^h 38 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	156	29.1	218 20.9	-19 52.0	181 01.9	-11 21.1	149 20.6	+1 52.4	320 23.0	-3 58.5
1	171	31.6	233 20.2	51.6	196 02.5	20.4	164 22.6	52.6	335 25.6	58.5
2	186	34.1	248 19.6	51.2	211 03.1	19.6	179 24.5	52.9	350 28.2	58.4
3	201	36.5	263 18.9	50.8	226 03.7	18.9	194 26.5	53.1	5 30.8	58.4
4	216	39.0	278 18.3	50.4	241 04.3	18.2	209 28.4	53.3	20 33.4	58.3
5	231	41.5	293 17.7	-19 50.0	256 04.9	-11 17.5	224 30.4	+1 53.5	35 35.9	-3 58.3
6	246	43.9	308 17.0	-19 49.6	271 05.5	-11 16.8	239 32.3	+1 53.8	50 38.5	-3 58.2
7	261	46.4	323 16.4	49.2	286 06.1	16.0	254 34.2	54.0	65 41.1	58.1
8	276	48.8	338 15.7	48.8	301 06.7	15.3	269 36.2	54.2	80 43.7	58.1
9	291	51.3	353 15.1	48.4	316 07.3	14.6	284 38.1	54.4	95 46.3	58.0
10	306	53.8	8 14.5	48.0	331 07.8	13.9	299 40.1	54.7	110 48.9	58.0
11	321	56.2	23 13.8	-19 47.6	346 08.4	-11 13.2	314 42.0	+1 54.9	125 51.4	-3 57.9
12	336	58.7	38 13.2	-19 47.2	1 09.0	-11 12.4	329 44.0	+1 55.1	140 54.0	-3 57.9
13	352	01.2	53 12.5	46.8	16 09.6	11.7	344 45.9	55.4	155 56.6	57.8
14	7 03.6	68 11.9	46.4	31 10.2	31 10.2	11.0	359 47.8	55.6	170 59.2	57.7
15	22 06.1	83 11.3	46.0	46 10.8	46 10.8	10.3	14 49.8	55.8	186 01.8	57.7
16	37 08.6	98 10.6	45.6	61 11.4	61 11.4	09.5	29 51.7	56.0	201 04.4	57.6
17	52 11.0	113 10.0	-19 45.2	76 12.0	-11 08.8	44 53.7	+1 56.3	216 06.9	-3 57.6	
18	67 13.5	128 09.3	-19 44.8	91 12.6	-11 08.1	59 55.6	+1 56.5	231 09.5	-3 57.5	
19	82 15.9	143 08.7	44.4	106 13.2	07.4	74 57.6	56.7	246 12.1	57.4	
20	97 18.4	158 08.1	44.0	121 13.8	06.7	89 59.5	57.0	261 14.7	57.4	
21	112 20.9	173 07.4	43.6	136 14.3	05.9	105 01.4	57.2	276 17.3	57.3	
22	127 23.3	188 06.8	43.2	151 14.9	05.2	120 03.4	57.4	291 19.9	57.3	
23	142 25.8	203 06.2	42.7	166 15.5	04.5	135 05.3	57.6	306 22.4	57.2	
24	157 28.3	218 05.5	-19 42.3	181 16.1	-11 03.8	150 07.3	+1 57.9	321 25.0	-3 57.1	
Dif	—	-6 +4		+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: 24 ^d 9	PHE {	4 ^h : 55 ^h /6	12 ^h : 55 ^h /4	20 ^h : 55 ^h /2		SD: 15 ^h 2	PMG: 8 ^h 52 ^m		R°: 48 ^m	R°		R°		
	hG ☉	Dec												hG ☾	Dif	Dec	Dif	Náutico
h	°	'	°	°	'	°	'	°	°	h	m	h	m	h	m	h	m	m
0	176	50.0	-8	10.8	231	23.4	-21	19.9	60 N	5	33	6	21	7	03	5	31	16
1	191	50.1		09.8	245	52.9		13.8	58		34	19		6	59		16	20
2	206	50.3		08.9	260	22.6		07.5	63	56	35	18		55		5	03	23
3	221	50.4		07.9	274	52.3		-21	01.2	63	35	16		52		4	51	26
4	236	50.5		07.0	289	22.1		-20	54.7	65	36	15		49		41	28	10
5	251	50.6	-8	06.0	303	51.9		-20	48.2	65	5	36	6	14	6	46	4	32
6	266	50.7	-8	05.1	318	21.9		-20	41.6	66	5	37	6	11	6	40	4	13
7	281	50.8		04.2	332	51.8			34.8	68	37	08		36		3	58	36
8	296	50.9		03.2	347	21.9			28.0	68	37	06		31		45	38	
9	311	51.1		02.3	1	52.1			21.1	69	36	6	03	28		33	40	
10	326	51.2		01.3	16	22.3			14.1	70	33	5	59	21		3	14	43
11	341	51.3	-8	00.4	30	52.5		-20	07.0	71	5	29	5	54	6	15	2	56
12	356	51.4	-7	59.4	45	22.9		-19	59.8	72	5	24	5	48	6	09	2	40
13	11	51.5		58.5	59	53.3			52.5	73	17	42		6	03		24	51
14	26	51.6		57.5	74	23.8			45.1	74	5	09	35	5	57		2	07
15	41	51.7		56.6	88	54.4			37.6	75	4	57	26	50		1	47	57
16	56	51.9		55.6	103	25.0			30.1	75	49	20	46		35	59	16	03
17	71	52.0	-7	54.7	117	55.7		-19	22.4	77	4	40	5	13	5	41	1	22
18	86	52.1	-7	53.8	132	26.5		-19	14.7	77	4	28	5	05	5	35	1	06
19	101	52.2		52.8	146	57.3		-19	06.9	78	14	4	55	28		0	46	68
20	116	52.3		51.9	161	28.3		-18	59.0	79	4	06	50	25		37	69	16
21	131	52.4		50.9	175	59.2			51.0	80	3	58	44	22		27	71	17
22	146	52.5		50.0	190	30.3			42.9	81	49	38	18		15	74		13
23	161	52.7		49.0	205	01.4			34.8	81	38	31	13		0	01	77	25
24	176	52.8	-7	48.1	219	32.6		-18	26.5	83	3	25	4	24	5	09	**	**

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 13 ^h 27 ^m 9		Mag: -4.1 PMG: 9 ^h 28 ^m		Mag: +1.1 PMG: 11 ^h 54 ^m		Mag: -2.1 PMG: 13 ^h 58 ^m		Mag: +0.5 PMG: 2 ^h 34 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	157	28.3	218	05.5	-19	42.3	181	16.1	-11	03.8
1	172	30.7	233	04.9		41.9	196	16.7		03.0
2	187	33.2	248	04.2		41.5	211	17.3		02.3
3	202	35.7	263	03.6		41.1	226	17.9		01.6
4	217	38.1	278	03.0		40.7	241	18.5		00.9
5	232	40.6	293	02.3	-19	40.3	256	19.1	-11	00.1
6	247	43.1	308	01.7	-19	39.8	271	19.7	-10	59.4
7	262	45.5	323	01.1		39.4	286	20.3		58.7
8	277	48.0	338	00.4		39.0	301	20.9		58.0
9	292	50.4	352	59.8		38.6	316	21.5		57.2
10	307	52.9	7	59.1		38.2	331	22.1		56.5
11	322	55.4	22	58.5	-19	37.7	346	22.7	-10	55.8
12	337	57.8	37	57.9	-19	37.3	1	23.2	-10	55.1
13	353	00.3	52	57.2		36.9	16	23.8		54.3
14	8	02.8	67	56.6		36.5	31	24.4		53.6
15	23	05.2	82	56.0		36.0	46	25.0		52.9
16	38	07.7	97	55.3		35.6	61	25.6		52.2
17	53	10.2	112	54.7	-19	35.2	76	26.2	-10	51.4
18	68	12.6	127	54.1	-19	34.7	91	26.8	-10	50.7
19	83	15.1	142	53.4		34.3	106	27.4		50.0
20	98	17.6	157	52.8		33.9	121	28.0		49.3
21	113	20.0	172	52.2		33.4	136	28.6		48.5
22	128	22.5	187	51.5		33.0	151	29.2		47.8
23	143	24.9	202	50.9		32.6	166	29.8		47.1
24	158	27.4	217	50.3	-19	32.1	181	30.4	-10	46.4
Dif	—		-6		+4		+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: 25 ^d 9 PHE { 4 ^h : 55 ^h 1 12 ^h : 54 ^h 9 20 ^h : 54 ^h 8											
	PMG: 12 ^h 12 ^m 4			SD: 15 ^h 0											
	PMG: 9 ^h 40 ^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	176	52.8	-7 48.1	219	32.6	-18 26.5	83	60 N	17 26	18 08	18 56	5 47	12	13 44	81
1	191	52.9	47.1	234	03.9 ¹²³	18.2	83	58	30	10	55	36	15	13 55	77
2	206	53.0	46.2	248	35.2 ¹²³	09.8	84	56	33	11	54	26	17	14 04	75
3	221	53.1	45.2	263	06.6 ¹²⁴	-18 01.4	84	54	36	12	53	17	20	13	72
4	236	53.2	44.3	277	38.1 ¹²⁵	-17 52.8	86	52	39	13	52	09	22	20	70
5	251	53.4	-7 43.3	292	09.6 ¹²⁵	-17 44.2	86	50	17 41	18 14	18 51	5 02	23	14 27	68
6	266	53.5	-7 42.4	306	41.2 ¹²⁶	-17 35.5	87	45	17 47	18 16	18 50	4 46	28	14 41	64
7	281	53.6	41.4	321	12.9 ¹²⁷	26.7	88	40	51	19	50	34	30	14 53	60
8	296	53.7	40.5	335	44.6 ¹²⁷	17.9	88	35	55	21	50	23	33	15 03	57
9	311	53.8	39.5	350	16.4 ¹²⁸	-17 09.0	89	30	17 59	23	51	4 13	36	11	56
10	326	54.0	38.6	4	48.3 ¹²⁹	-17 00.0	90	20	18 05	27	53	3 57	39	26	52
11	341	54.1	-7 37.6	19	20.3 ¹³⁰	-16 50.9	91	10 N	18 10	18 32	18 56	3 42	43	15 39	48
12	356	54.2	-7 36.7	33	52.3 ¹³⁰	-16 41.8	92	0	18 16	18 37	19 01	3 29	46	15 51	45
13	11	54.3	35.7	48	24.3 ¹³⁰	32.6	92	10 S	21	42	07	15	49	16 03	42
14	26	54.4	34.8	62	56.5 ¹³²	23.4	92	20	27	49	15	3 01	52	16	38
15	41	54.6	33.8	77	28.7 ¹³²	14.0	94	30	34	18 58	27	2 44	56	31	33
16	56	54.7	32.9	92	00.9 ¹³²	-16 04.6	94	35	38	19 03	34	34	59	39	31
17	71	54.8	-7 31.9	106	33.2 ¹³³	-15 55.2	94	40	18 42	19 10	19 43	2 23	61	16 48	29
18	86	54.9	-7 31.0	121	05.6 ¹³⁴	-15 45.6	96	45	18 47	19 18	19 54	2 10	64	16 59	26
19	101	55.0	30.0	135	38.1 ¹³⁵	36.1	95	50	54	27	20 08	1 54	68	17 13	22
20	116	55.2	29.1	150	10.6 ¹³⁵	26.4	97	52	18 57	32	15	46	70	19	20
21	131	55.3	28.1	164	43.2 ¹³⁶	16.7	97	54	19 00	37	22	38	72	26	18
22	146	55.4	27.2	179	15.8 ¹³⁶	-15 06.9	98	56	03	43	31	29	74	33	16
23	161	55.5	26.2	193	48.5 ¹³⁷	-14 57.1	98	58	07	49	41	18	77	42	13
24	176	55.7	-7 25.3	208	21.2 ¹³⁷	-14 47.2	99	60 S	19 12	19 56	20 53	1 05	81	17 52	10
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 13 ^h 24 ^m 0		Mag: -4.1 PMG: 9 ^h 29 ^m			Mag: +1.1 PMG: 11 ^h 54 ^m			Mag: -2.1 PMG: 13 ^h 55 ^m			Mag: +0.5 PMG: 2 ^h 30 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	
0	158	27.4	217 50.3	-19 32.1	181 30.4	-10 46.4	150 53.9	+2 03.4	322 27.1	-3 55.7					
1	173	29.9	232 49.6	31.7	196 31.0	45.6	165 55.8	03.6	337 29.7	55.7					
2	188	32.3	247 49.0	31.3	211 31.6	44.9	180 57.7	03.8	352 32.3	55.6					
3	203	34.8	262 48.3	30.8	226 32.2	44.2	195 59.7	04.0	7 34.8	55.5					
4	218	37.3	277 47.7	30.4	241 32.8	43.4	211 01.6	04.3	22 37.4	55.5					
5	233	39.7	292 47.1	-19 30.0	256 33.4	-10 42.7	226 03.6	+2 04.5	37 40.0	-3 55.4					
6	248	42.2	307 46.4	-19 29.5	271 34.0	-10 42.0	241 05.5	+2 04.7	52 42.6	-3 55.4					
7	263	44.7	322 45.8	29.1	286 34.6	41.3	256 07.4	05.0	67 45.2	55.3					
8	278	47.1	337 45.2	28.6	301 35.2	40.5	271 09.4	05.2	82 47.8	55.2					
9	293	49.6	352 44.5	28.2	316 35.8	39.8	286 11.3	05.4	97 50.4	55.2					
10	308	52.1	7 43.9	27.7	331 36.4	39.1	301 13.3	05.6	112 53.0	55.1					
11	323	54.5	22 43.3	-19 27.3	346 37.0	-10 38.3	316 15.2	+2 05.9	127 55.5	-3 55.1					
12	338	57.0	37 42.7	-19 26.8	1 37.6	-10 37.6	331 17.1	+2 06.1	142 58.1	-3 55.0					
13	353	59.4	52 42.0	26.4	16 38.2	36.9	346 19.1	06.3	158 00.7	54.9					
14	9	01.9	67 41.4	25.9	31 38.8	36.1	1 21.0	06.6	173 03.3	54.9					
15	24	04.4	82 40.8	25.5	46 39.4	35.4	16 23.0	06.8	188 05.9	54.8					
16	39	06.8	97 40.1	25.0	61 40.0	34.7	31 24.9	07.0	203 08.5	54.8					
17	54	09.3	112 39.5	-19 24.6	76 40.6	-10 34.0	46 26.8	+2 07.2	218 11.1	-3 54.7					
18	69	11.8	127 38.9	-19 24.1	91 41.2	-10 33.2	61 28.8	+2 07.5	233 13.7	-3 54.6					
19	84	14.2	142 38.2	23.7	106 41.8	32.5	76 30.7	07.7	248 16.3	54.6					
20	99	16.7	157 37.6	23.2	121 42.4	31.8	91 32.6	07.9	263 18.8	54.5					
21	114	19.2	172 37.0	22.8	136 43.0	31.0	106 34.6	08.2	278 21.4	54.5					
22	129	21.6	187 36.3	22.3	151 43.6	30.3	121 36.5	08.4	293 24.0	54.4					
23	144	24.1	202 35.7	21.9	166 44.2	29.6	136 38.5	08.6	308 26.6	54.3					
24	159	26.5	217 35.1	-19 21.4	181 44.8	-10 28.8	151 40.4	+2 08.9	323 29.2	-3 54.3					
Dif	—		-6	+4	+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: 26 ^d 9	PHE { 4 ^h : 54 ^m 7 12 ^h : 54 ^m 6 20 ^h : 54 ^m 5										
	PMG: 12 ^h 12 ^m 2					SD: 14 ^h 9		PMG: 10 ^h 25 ^m			R ^o : 43 ^m				
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R ^o	Hora	R ^o
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	m
0	176	55.7	-7 25.3	208	21.2	-14 47.2	100	60 N	5 27	6 15	6 57	5 59	8	15 05	79
1	191	55.8	24.3	222	54.1 ¹³⁹	37.2	100	58	29	14	53	51	11	12 76	
2	206	55.9	23.4	237	26.9 ¹³⁸	27.2	100	56	30	13	50	43	14	19 73	
3	221	56.0	22.4	251	59.9 ¹⁴⁰	17.2	100	54	31	12	47	37	16	25 70	
4	236	56.1	21.5	266	32.8 ¹³⁹	-14 07.0	102	52	32	11	45	31	18	30 68	
5	251	56.3	-7 20.5	281	05.9 ¹⁴¹	-13 56.9	101	50	5 32	6 10	6 42	5 25	21	15 35	66
6	266	56.4	-7 19.6	295	39.0 ¹⁴¹	-13 46.6	103	45	5 34	6 08	6 37	5 14	24	15 45	62
7	281	56.5	18.6	310	12.2 ¹⁴²	36.4	102	40	34	05	33	5 04	28	15 53	59
8	296	56.6	17.6	324	45.4 ¹⁴²	26.0	104	35	34	03	29	4 56	30	16 00	57
9	311	56.8	16.7	339	18.6 ¹⁴²	15.6	104	30	34	6 01	25	49	32	07 54	
10	326	56.9	15.7	353	52.0 ¹⁴⁴	-13 05.2	104	20	32	5 57	19	36	37	18 49	
11	341	57.0	-7 14.8	8	25.3 ¹⁴³	-12 54.7	105	10 N	5 28	5 53	6 14	4 25	40	16 27	46
12	356	57.1	-7 13.8	22	58.8 ¹⁴⁵	-12 44.2	105	0	5 24	5 48	6 09	4 15	43	16 36	42
13	11	57.3	12.9	37	32.2 ¹⁴⁴	33.6	106	10 S	18	42	6 04	4 04	47	45 39	
14	26	57.4	11.9	52	05.8 ¹⁴⁶	23.0	106	20	5 10	36	5 58	3 53	50	16 54	35
15	41	57.5	11.0	66	39.4 ¹⁴⁶	12.3	107	30	4 58	27	51	40	55	17 04	32
16	56	57.6	10.0	81	13.0 ¹⁴⁶	-12 01.6	107	35	51	22	47	33	57	10 29	
17	71	57.8	-7 09.1	95	46.7 ¹⁴⁷	-11 50.8	108	40	4 42	5 15	5 43	3 24	60	17 17	26
18	86	57.9	-7 08.1	110	20.4 ¹⁴⁷	-11 40.0	108	45	4 32	5 08	5 38	3 14	63	17 25	23
19	101	58.0	07.1	124	54.2 ¹⁴⁸	29.2	108	50	18	4 58	32	3 02	67	35 19	
20	116	58.1	06.2	139	28.0 ¹⁴⁸	18.3	109	52	11	54	29	2 56	70	39 17	
21	131	58.3	05.2	154	01.9 ¹⁴⁹	-11 07.3	110	54	4 03	49	26	50	72	44 15	
22	146	58.4	04.3	168	35.8 ¹⁴⁹	-10 56.4	109	56	3 54	43	22	43	74	49 13	
23	161	58.5	03.3	183	09.8 ¹⁵⁰	45.4	110	58	44	37	18	35	77	17 55	11
24	176	58.6	-7 02.4	197	43.8 ¹⁵⁰	-10 34.3	111	60 S	3 32	4 29	5 14	2 26	80	18 02	7

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 13 ^h 20 ^m 0		Mag: -4.1 PMG: 9 ^h 30 ^m		Mag: +1.1 PMG: 11 ^h 53 ^m		Mag: -2.1 PMG: 13 ^h 52 ^m		Mag: +0.5 PMG: 2 ^h 26 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	159	26.5	217	35.1	-19	21.4	181	44.8	-10	28.8
1	174	29.0	232	34.4		20.9	196	45.4		28.1
2	189	31.5	247	33.8		20.5	211	46.0		27.4
3	204	33.9	262	33.2		20.0	226	46.6		26.6
4	219	36.4	277	32.6		19.6	241	47.2		25.9
5	234	38.9	292	31.9	-19	19.1	256	47.8	-10	25.2
6	249	41.3	307	31.3	-19	18.6	271	48.4	-10	24.4
7	264	43.8	322	30.7		18.2	286	49.0		23.7
8	279	46.3	337	30.0		17.7	301	49.6		23.0
9	294	48.7	352	29.4		17.2	316	50.2		22.2
10	309	51.2	7	28.8		16.8	331	50.8		21.5
11	324	53.7	22	28.2	-19	16.3	346	51.4	-10	20.8
12	339	56.1	37	27.5	-19	15.8	1	52.0	-10	20.0
13	354	58.6	52	26.9		15.3	16	52.6		19.3
14	10	01.0	67	26.3		14.9	31	53.2		18.6
15	25	03.5	82	25.6		14.4	46	53.8		17.8
16	40	06.0	97	25.0		13.9	61	54.4		17.1
17	55	08.4	112	24.4	-19	13.5	76	55.0	-10	16.4
18	70	10.9	127	23.8	-19	13.0	91	55.6	-10	15.6
19	85	13.4	142	23.1		12.5	106	56.2		14.9
20	100	15.8	157	22.5		12.0	121	56.8		14.2
21	115	18.3	172	21.9		11.5	136	57.4		13.4
22	130	20.8	187	21.3		11.1	151	58.0		12.7
23	145	23.2	202	20.6		10.6	166	58.6		12.0
24	160	25.7	217	20.0	-19	10.1	181	59.2	-10	11.2
Dif	—		-6	+5		+6	+7	+19		+2

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16:1 PMG: 12 ^h 12 ^m 0			Edad: 27 ^d 9 PHE { 4 ^h : 54 ^h 4 12 ^h : 54 ^h 3 20 ^h : 54 ^h 2 R°: 42 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m
0	176	58.6	-7 02.4	197	43.8	-10 34.3		60 N	17 31	18 13	19 01	6 07 7	16 24 77	
1	191	58.8	01.4	212	17.9 ¹⁵¹	23.2 ¹¹¹		58	35	14	18 59	6 02 10	28 75	
2	206	58.9	-7 00.5	226	52.0 ¹⁵¹	12.1 ¹¹¹		56	38	15	58	5 57 12	32 72	
3	221	59.0	-6 59.5	241	26.1 ¹⁵¹	-10 00.9 ¹¹²		54	40	16	57	53 14	35 70	
4	236	59.2	58.5	256	00.3 ¹⁵²	-9 49.7 ¹¹²		52	43	16	55	49 16	38 68	
5	251	59.3	-6 57.6	270	34.6 ¹⁵³	-9 38.5 ¹¹²		50	17 45	18 17	18 55	5 46 18	16 41 66	
6	266	59.4	-6 56.6	285	08.8 ¹⁵²	-9 27.2 ¹¹³		45	17 50	18 19	18 53	5 38 22	16 47 62	
7	281	59.5	55.7	299	43.2 ¹⁵⁴	15.9 ¹¹³		40	54	21	52	32 24	52 59	
8	296	59.7	54.7	314	17.5 ¹⁵³	-9 04.6 ¹¹³		35	17 57	22	52	26 28	16 57 55	
9	311	59.8	53.7	328	51.9 ¹⁵⁴	-8 53.2 ¹¹⁴		30	18 00	24	52	21 30	17 01 52	
10	326	59.9	52.8	343	26.3 ¹⁵⁴	41.8 ¹¹⁴		20	06	28	53	13 34	07 49	
11	342	00.1	-6 51.8	358	00.8 ¹⁵⁵	-8 30.4 ¹¹⁴		10 N	18 11	18 32	18 56	5 05 38	17 13 45	
12	357	00.2	-6 50.9	12	35.3 ¹⁵⁵	-8 19.0 ¹¹⁴		0	18 15	18 36	19 00	4 58 42	17 18 41	
13	12	00.3	49.9	27	09.9 ¹⁵⁶	-8 07.5 ¹¹⁵		10 S	20	41	06	51 45	24 37	
14	27	00.4	49.0	41	44.4 ¹⁵⁵	-7 56.0 ¹¹⁵		20	25	48	14	43 49	29 34	
15	42	00.6	48.0	56	19.0 ¹⁵⁶	44.4 ¹¹⁶		30	31	18 56	24	35 53	36 29	
16	57	00.7	47.0	70	53.7 ¹⁵⁷	32.9 ¹¹⁵		35	35	19 01	31	30 56	39 27	
17	72	00.8	-6 46.1	85	28.4 ¹⁵⁷	-7 21.3 ¹¹⁶		40	18 39	19 07	19 39	4 24 59	17 43 25	
18	87	01.0	-6 45.1	100	03.1 ¹⁵⁷	-7 09.7 ¹¹⁶		45	18 44	19 14	19 50	4 17 62	17 48 21	
19	102	01.1	44.2	114	37.8 ¹⁵⁷	-6 58.0 ¹¹⁷		50	50	23	20 03	09 66	54 17	
20	117	01.2	43.2	129	12.6 ¹⁵⁸	46.4 ¹¹⁶		52	52	27	09	06 68	56 16	
21	132	01.4	42.2	143	47.4 ¹⁵⁸	34.7 ¹¹⁷		54	55	32	17	4 02 70	17 59 14	
22	147	01.5	41.3	158	22.2 ¹⁵⁸	23.0 ¹¹⁷		56	18 58	37	25	3 57 72	18 02 12	
23	162	01.6	40.3	172	57.1 ¹⁵⁹	-6 11.3 ¹¹⁷		58	19 02	43	35	52 75	06 9	
24	177	01.8	-6 39.4	187	32.0 ¹⁵⁹	-5 59.5 ¹¹⁸		60 S	19 06	19 50	20 46	3 46 78	18 09 7	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 13 ^h 16 ^m 1		Mag: -4.1 PMG: 9 ^h 31 ^m			Mag: +1.1 PMG: 11 ^h 52 ^m			Mag: -2.1 PMG: 13 ^h 48 ^m			Mag: +0.5 PMG: 2 ^h 21 ^m		
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♎	Dec	hG ♊	Dec	hG ♏	Dec	hG ♏	Dec	
h	°	'	°	°	'	°	'	°	'	°	'	°	'	
0	160	25.7	217 20.0	-19 10.1	181 59.2	-10 11.2		152 26.9	+2 14.4	324 31.4	-3 52.8			
1	175	28.1	232 19.4	09.6	196 59.8	10.5		167 28.8	14.6	339 34.0	52.7			
2	190	30.6	247 18.8	09.1	212 00.4	09.8		182 30.8	14.8	354 36.6	52.7			
3	205	33.1	262 18.1	08.7	227 01.0	09.0		197 32.7	15.1	9 39.2	52.6			
4	220	35.5	277 17.5	08.2	242 01.6	08.3		212 34.6	15.3	24 41.8	52.5			
5	235	38.0	292 16.9	-19 07.7	257 02.2	-10 07.5		227 36.6	+2 15.5	39 44.4	-3 52.5			
6	250	40.5	307 16.3	-19 07.2	272 02.8	-10 06.8		242 38.5	+2 15.7	54 47.0	-3 52.4			
7	265	42.9	322 15.6	06.7	287 03.4	06.1		257 40.5	16.0	69 49.6	52.4			
8	280	45.4	337 15.0	06.2	302 04.0	05.3		272 42.4	16.2	84 52.2	52.3			
9	295	47.9	352 14.4	05.7	317 04.6	04.6		287 44.3	16.4	99 54.7	52.2			
10	310	50.3	7 13.8	05.2	332 05.2	03.9		302 46.3	16.7	114 57.3	52.2			
11	325	52.8	22 13.1	-19 04.7	347 05.9	-10 03.1		317 48.2	+2 16.9	129 59.9	-3 52.1			
12	340	55.3	37 12.5	-19 04.3	2 06.5	-10 02.4		332 50.1	+2 17.1	145 02.5	-3 52.0			
13	355	57.7	52 11.9	03.8	17 07.1	01.7		347 52.1	17.4	160 05.1	52.0			
14	11	00.2	67 11.3	03.3	32 07.7	00.9		2 54.0	17.6	175 07.7	51.9			
15	26	02.6	82 10.6	02.8	47 08.3	-10 00.2		17 55.9	17.8	190 10.3	51.9			
16	41	05.1	97 10.0	02.3	62 08.9	-9 59.4		32 57.9	18.0	205 12.9	51.8			
17	56	07.6	112 09.4	-19 01.8	77 09.5	-9 58.7		47 59.8	+2 18.3	220 15.5	-3 51.7			
18	71	10.0	127 08.8	-19 01.3	92 10.1	-9 58.0		63 01.7	+2 18.5	235 18.1	-3 51.7			
19	86	12.5	142 08.2	00.8	107 10.7	57.2		78 03.7	18.7	250 20.7	51.6			
20	101	15.0	157 07.5	-19 00.3	122 11.3	56.5		93 05.6	19.0	265 23.3	51.5			
21	116	17.4	172 06.9	-18 59.8	137 11.9	55.7		108 07.5	19.2	280 25.9	51.5			
22	131	19.9	187 06.3	59.3	152 12.5	55.0		123 09.5	19.4	295 28.5	51.4			
23	146	22.4	202 05.7	58.8	167 13.1	54.3		138 11.4	19.7	310 31.1	51.4			
24	161	24.8	217 05.0	-18 58.3	182 13.7	-9 53.5		153 13.4	+2 19.9	325 33.7	-3 51.3			
Dif	—	—	-6	+5	+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: 28 ^d 9	PHE { 4 ^h : 54 ^m 1 12 ^h : 54 ^m 1 20 ^h : 54 ^m 0	SD: 14 ^h 8		R°: 40 ^m							
	PMG: 12 ^h 11 ^m 8					PMG: 11 ^h 50 ^m									
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	m
0	177	01.8	-6 39.4	187	32.0	-5 59.5		60 N	5 21	6 09	6 51	6 14	6	17 41	77
1	192	01.9		202	06.9 ¹⁵⁹	47.8 ¹¹⁷		58	23	08	48	12	8	43	73
2	207	02.0		216	41.8 ¹⁵⁹	36.0 ¹¹⁸		56	25	08	45	09	11	44	71
3	222	02.2		231	16.8 ¹⁶⁰	24.2 ¹¹⁸		54	26	07	42	07	13	45	69
4	237	02.3		245	51.8 ¹⁶⁰	12.4 ¹¹⁸		52	27	06	40	05	15	46	67
5	252	02.4	-6 34.6	260	26.8 ¹⁶⁰	-5 00.5 ¹¹⁹		50	5 28	6 06	6 38	6 04	16	17 47	65
6	267	02.6	-6 33.6	275	01.9 ¹⁶¹	-4 48.7 ¹¹⁸		45	5 30	6 04	6 33	6 00	20	17 49	61
7	282	02.7		289	36.9 ¹⁶⁰	36.8 ¹¹⁹		40	31	02	30	5 56	24	51	58
8	297	02.8		304	12.0 ¹⁶¹	25.0 ¹¹⁸		35	32	6 01	26	54	26	52	55
9	312	03.0		318	47.1 ¹⁶¹	13.1 ¹¹⁹		30	31	5 59	23	51	29	53	53
10	327	03.1		333	22.3 ¹⁶²	-4 01.2 ¹¹⁹		20	30	56	18	47	33	56	48
11	342	03.2	-6 28.8	347	57.4 ¹⁶¹	-3 49.2 ¹²⁰		10 N	5 28	5 52	6 13	5 43	37	17 58	44
12	357	03.4	-6 27.8	2	32.6 ¹⁶²	-3 37.3 ¹¹⁹		0	5 24	5 48	6 08	5 40	40	17 59	41
13	12	03.5		17	07.8 ¹⁶²	25.4 ¹¹⁹		10 S	18	43	6 04	36	44	18 01	37
14	27	03.6		31	43.0 ¹⁶²	13.4 ¹²⁰		20	10	36	5 59	32	48	03	33
15	42	03.8		46	18.2 ¹⁶²	-3 01.5 ¹¹⁹		30	5 00	28	53	28	53	05	29
16	57	03.9		60	53.4 ¹⁶²	-2 49.5 ¹²⁰		35	4 53	24	49	26	55	06	27
17	72	04.0	-6 23.0	75	28.7 ¹⁶³	-2 37.5 ¹²⁰		40	4 45	5 18	5 45	5 23	58	18 08	23
18	87	04.2	-6 22.0	90	03.9 ¹⁶²	-2 25.6 ¹¹⁹		45	4 35	5 11	5 41	5 19	62	18 09	21
19	102	04.3		104	39.2 ¹⁶³	13.6 ¹²⁰		50	21	5 02	35	15	66	11	17
20	117	04.4		119	14.5 ¹⁶³	-2 01.6 ¹²⁰		52	15	4 58	32	14	67	12	15
21	132	04.6		133	49.8 ¹⁶³	-1 49.6 ¹²⁰		54	08	53	30	12	69	13	13
22	147	04.7		148	25.1 ¹⁶³	37.6 ¹²⁰		56	4 00	48	26	09	72	14	11
23	162	04.8		163	00.5 ¹⁶⁴	25.6 ¹²⁰		58	3 50	42	23	07	74	15	8
24	177	05.0	-6 16.3	177	35.8 ¹⁶³	-1 13.6 ¹²⁰		60 S	3 39	4 35	5 19	5 04	77	18 16	6

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 13 ^h 12 ^m 2		Mag: -4.1 PMG: 9 ^h 32 ^m		Mag: +1.1 PMG: 11 ^h 51 ^m		Mag: -2.1 PMG: 13 ^h 45 ^m		Mag: +0.5 PMG: 2 ^h 17 ^m									
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	161	24.8	217	05.0	-18 58.3	182	13.7	-9 53.5	153	13.4	+2 19.9	325	33.7	-3 51.3				
1	176	27.3	232	04.4		57.8	197	14.3		52.8	168	15.3		20.1	340	36.3		51.2
2	191	29.8	247	03.8		57.3	212	15.0		52.0	183	17.2		20.3	355	38.9		51.2
3	206	32.2	262	03.2		56.7	227	15.6		51.3	198	19.2		20.6	10	41.5		51.1
4	221	34.7	277	02.6		56.2	242	16.2		50.6	213	21.1		20.8	25	44.1		51.0
5	236	37.1	292	01.9	-18 55.7	257	16.8	-9 49.8	228	23.0	+2 21.0	40	46.7	-3 51.0				
6	251	39.6	307	01.3	-18 55.2	272	17.4	-9 49.1	243	25.0	+2 21.3	55	49.3	-3 50.9				
7	266	42.1	322	00.7		54.7	287	18.0		48.3	258	26.9		21.5	70	51.8		50.8
8	281	44.5	337	00.1		54.2	302	18.6		47.6	273	28.8		21.7	85	54.4		50.8
9	296	47.0	351	59.5		53.7	317	19.2		46.9	288	30.8		22.0	100	57.0		50.7
10	311	49.5	6	58.8		53.2	332	19.8		46.1	303	32.7		22.2	115	59.6		50.7
11	326	51.9	21	58.2	-18 52.7	347	20.4	-9 45.4	318	34.6	+2 22.4	131	02.2	-3 50.6				
12	341	54.4	36	57.6	-18 52.1	2	21.0	-9 44.6	333	36.6	+2 22.7	146	04.8	-3 50.5				
13	356	56.9	51	57.0		51.6	17	21.6		43.9	348	38.5		22.9	161	07.4		50.5
14	11	59.3	66	56.4		51.1	32	22.3		43.2	3	40.4		23.1	176	10.0		50.4
15	27	01.8	81	55.8		50.6	47	22.9		42.4	18	42.4		23.3	191	12.6		50.3
16	42	04.2	96	55.1		50.1	62	23.5		41.7	33	44.3		23.6	206	15.2		50.3
17	57	06.7	111	54.5	-18 49.5	77	24.1	-9 40.9	48	46.2	+2 23.8	221	17.8	-3 50.2				
18	72	09.2	126	53.9	-18 49.0	92	24.7	-9 40.2	63	48.2	+2 24.0	236	20.4	-3 50.1				
19	87	11.6	141	53.3		48.5	107	25.3		39.4	78	50.1		24.3	251	23.0		50.1
20	102	14.1	156	52.7		48.0	122	25.9		38.7	93	52.0		24.5	266	25.6		50.0
21	117	16.6	171	52.1		47.5	137	26.5		38.0	108	54.0		24.7	281	28.2		50.0
22	132	19.0	186	51.4		46.9	152	27.1		37.2	123	55.9		25.0	296	30.8		49.9
23	147	21.5	201	50.8		46.4	167	27.8		36.5	138	57.8		25.2	311	33.4		49.8
24	162	24.0	216	50.2	-18 45.9	182	28.4	-9 35.7	153	59.8	+2 25.4	326	36.0	-3 49.8				
Dif	—		-6		+5	+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: 29 ^d 9 PHE { 4 ^h : 54 ^m 0 12 ^h : 54 ^m 0 20 ^h : 53 ^m 9 R°: 41 ^m											
	PMG: 12 ^h 11 ^m 6		SD: 14 ^h 7 PMG: 12 ^h 30 ^m											
	hG ☉	Dec	hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	h m	h m	h m	h m m		h m m	
0	177	05.0	-6	16.3	177	35.8	-1 13.6	60 N	17 36	18 18	19 06	6 20 7	18 58 76	
1	192	05.1		15.3	192	11.1 ¹⁶³	-1 01.6 ¹²⁰	58	39	19 04		20 9	56 74	
2	207	05.3		14.3	206	46.5 ¹⁶⁴	-0 49.6 ¹²⁰	56	42	19 02		20 12	55 71	
3	222	05.4		13.4	221	21.8 ¹⁶³	37.6 ¹²⁰	54	44	19 00		20 14	54 67	
4	237	05.5		12.4	235	57.2 ¹⁶⁴	25.6 ¹²⁰	52	46	20 18 59		20 15	53 67	
5	252	05.7	-6	11.4	250	32.6 ¹⁶⁴	-0 13.6 ¹²⁰	50	17 48	18 20	18 58	6 20 17	18 52 65	
6	267	05.8	-6	10.5	265	08.0 ¹⁶⁴	-0 01.6 ¹²⁰	45	17 52	18 22	18 56	6 20 21	18 50 61	
7	282	05.9		09.5	279	43.3 ¹⁶³	+0 10.5 ¹²¹	40	56	23 54		20 24	49 57	
8	297	06.1		08.5	294	18.7 ¹⁶⁴	22.5 ¹²⁰	35	17 59	24 53		20 27	47 55	
9	312	06.2		07.6	308	54.1 ¹⁶⁴	34.5 ¹²⁰	30	18 02	25 53		20 29	46 52	
10	327	06.4		06.6	323	29.5 ¹⁶⁴	46.4 ¹¹⁹	20	06	28 54		20 34	44 48	
11	342	06.5	-6	05.6	338	04.9 ¹⁶⁴	+0 58.4 ¹²⁰	10 N	18 11	18 32	18 56	6 20 37	18 42 44	
12	357	06.6	-6	04.7	352	40.3 ¹⁶⁴	+1 10.4 ¹²⁰	0	18 15	18 36	19 00	6 20 41	18 40 41	
13	12	06.8		03.7	7	15.7 ¹⁶⁴	22.4 ¹²⁰	10 S	19	40 05		20 45	38 37	
14	27	06.9		02.7	21	51.1 ¹⁶⁴	34.4 ¹²⁰	20	24	46 12		20 48	36 34	
15	42	07.1		01.8	36	26.4 ¹⁶³	46.3 ¹¹⁹	30	29	53 22		21 52	34 29	
16	57	07.2	-6	00.8	51	01.8 ¹⁶⁴	+1 58.3 ¹²⁰	35	32	18 58 28		21 54	33 27	
17	72	07.3	-5	59.8	65	37.2 ¹⁶⁴	+2 10.2 ¹¹⁹	40	18 36	19 03	19 36	6 21 57	18 31 24	
18	87	07.5	-5	58.9	80	12.6 ¹⁶⁴	+2 22.1 ¹¹⁹	45	18 40	19 10	19 46	6 21 61	18 30 21	
19	102	07.6		57.9	94	48.0 ¹⁶⁴	34.1 ¹²⁰	50	45	18 19 58		21 65	28 17	
20	117	07.8		56.9	109	23.3 ¹⁶³	46.0 ¹¹⁹	52	48	22 20 04		21 67	27 15	
21	132	07.9		56.0	123	58.7 ¹⁶⁴	+2 57.9 ¹¹⁹	54	50	27 11		21 69	26 13	
22	147	08.0		55.0	138	34.0 ¹⁶³	+3 09.8 ¹¹⁹	56	53	32 19		21 71	25 11	
23	162	08.2		54.0	153	09.4 ¹⁶⁴	21.6 ¹¹⁸	58	18 56	37 28		21 74	23 10	
24	177	08.3	-5	53.1	167	44.7 ¹⁶³	+3 33.5 ¹¹⁹	60 S	19 00	19 44	20 38	6 21 77	18 22 7	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 13 ^h 08 ^m 2		Mag: -4.1 PMG: 9 ^h 33 ^m			Mag: +1.1 PMG: 11 ^h 50 ^m			Mag: -2.1 PMG: 13 ^h 42 ^m			Mag: +0.5 PMG: 2 ^h 13 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	162	24.0	216	50.2	-18 45.9	182	28.4	-9 35.7	153	59.8	+2 25.4	326	36.0	-3 49.8
1	177	26.4	231	49.6	45.4	197	29.0	35.0	169	01.7	25.7	341	38.6	49.7
2	192	28.9	246	49.0	44.8	212	29.6	34.2	184	03.6	25.9	356	41.2	49.6
3	207	31.4	261	48.4	44.3	227	30.2	33.5	199	05.6	26.1	11	43.8	49.6
4	222	33.8	276	47.7	43.8	242	30.8	32.8	214	07.5	26.3	26	46.4	49.5
5	237	36.3	291	47.1	-18 43.2	257	31.4	-9 32.0	229	09.4	+2 26.6	41	49.0	-3 49.4
6	252	38.7	306	46.5	-18 42.7	272	32.0	-9 31.3	244	11.4	+2 26.8	56	51.6	-3 49.4
7	267	41.2	321	45.9	42.2	287	32.6	30.5	259	13.3	27.0	71	54.2	49.3
8	282	43.7	336	45.3	41.6	302	33.3	29.8	274	15.2	27.3	86	56.8	49.2
9	297	46.1	351	44.7	41.1	317	33.9	29.0	289	17.2	27.5	101	59.4	49.2
10	312	48.6	6	44.1	40.6	332	34.5	28.3	304	19.1	27.7	117	02.0	49.1
11	327	51.1	21	43.4	-18 40.0	347	35.1	-9 27.5	319	21.0	+2 28.0	132	04.6	-3 49.1
12	342	53.5	36	42.8	-18 39.5	2	35.7	-9 26.8	334	23.0	+2 28.2	147	07.2	-3 49.0
13	357	56.0	51	42.2	39.0	17	36.3	26.1	349	24.9	28.4	162	09.8	48.9
14	12	58.5	66	41.6	38.4	32	36.9	25.3	4	26.8	28.7	177	12.4	48.9
15	28	00.9	81	41.0	37.9	47	37.5	24.6	19	28.8	28.9	192	15.0	48.8
16	43	03.4	96	40.4	37.3	62	38.2	23.8	34	30.7	29.1	207	17.6	48.7
17	58	05.8	111	39.8	-18 36.8	77	38.8	-9 23.1	49	32.6	+2 29.4	222	20.2	-3 48.7
18	73	08.3	126	39.2	-18 36.2	92	39.4	-9 22.3	64	34.5	+2 29.6	237	22.8	-3 48.6
19	88	10.8	141	38.5	35.7	107	40.0	21.6	79	36.5	29.8	252	25.4	48.5
20	103	13.2	156	37.9	35.2	122	40.6	20.8	94	38.4	30.0	267	28.0	48.5
21	118	15.7	171	37.3	34.6	137	41.2	20.1	109	40.3	30.3	282	30.6	48.4
22	133	18.2	186	36.7	34.1	152	41.8	19.3	124	42.3	30.5	297	33.2	48.3
23	148	20.6	201	36.1	33.5	167	42.5	18.6	139	44.2	30.7	312	35.8	48.3
24	163	23.1	216	35.5	-18 33.0	182	43.1	-9 17.9	154	46.1	+2 31.0	327	38.4	-3 48.2
Dif	—		-6	+5		+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: 1 ^d 1	PHE { 4 ^h : 53 ^m /9 12 ^h : 53 ^m /9 20 ^h : 53 ^m /9 R°: 41 ^m										
	PMG: 12 ^h 11 ^m 3					PMG: 13 ^h 11 ^m									
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m		h m m	
0	177	08.3	-5 53.1	167	44.7	+3 33.5		60 N	5 15	6 03	6 45	6 27 7		20 14 78	
1	192	08.5		182	20.0 ¹⁶³	45.3 ¹¹⁸		58	18	03	42	29 10		10 75	
2	207	08.6		196	55.4 ¹⁶⁴	+3 57.2 ¹¹⁹		56	20	03	40	32 12		06 72	
3	222	08.7		211	30.7 ¹⁶³	+4 09.0 ¹¹⁸		54	22	02	38	34 14		03 70	
4	237	08.9		226	05.9 ¹⁶²	20.8 ¹¹⁸		52	23	02	36	35 17		20 00 67	
5	252	09.0	-5 48.2	240	41.2 ¹⁶³	+4 32.6 ¹¹⁸		50	5 24	6 02	6 34	6 37 18		19 57 66	
6	267	09.2	-5 47.3	255	16.5 ¹⁶³	+4 44.3 ¹¹⁷		45	5 27	6 01	6 30	6 41 22		19 51 62	
7	282	09.3		269	51.7 ¹⁶²	+4 56.1 ¹¹⁸		40	28	5 59	26	44 25		46 59	
8	297	09.5		284	27.0 ¹⁶³	+5 07.8 ¹¹⁷		35	29	58	24	47 27		42 55	
9	312	09.6		299	02.2 ¹⁶²	19.5 ¹¹⁷		30	29	57	21	49 30		38 53	
10	327	09.7		313	37.4 ¹⁶²	31.2 ¹¹⁷		20	29	54	16	54 34		32 49	
11	342	09.9	-5 42.4	328	12.6 ¹⁶²	+5 42.8 ¹¹⁶		10 N	5 27	5 51	6 12	6 57 38		19 26 45	
12	357	10.0	-5 41.4	342	47.8 ¹⁶²	+5 54.5 ¹¹⁷		0	5 23	5 47	6 08	7 01 41		19 21 41	
13	12	10.2		357	22.9 ¹⁶¹	+6 06.1 ¹¹⁶		10 S	18	43	6 04	05 44		15 39	
14	27	10.3		11	58.1 ¹⁶²	17.7 ¹¹⁶		20	11	37	5 59	08 49		10 34	
15	42	10.5		26	33.2 ¹⁶¹	29.2 ¹¹⁵		30	5 02	30	54	13 52		03 31	
16	57	10.6		41	08.3 ¹⁶¹	40.8 ¹¹⁶		35	4 55	25	51	15 56		19 00 28	
17	72	10.7	-5 36.6	55	43.3 ¹⁶⁰	+6 52.3 ¹¹⁵		40	4 47	5 20	5 47	7 18 58		18 55 26	
18	87	10.9	-5 35.6	70	18.4 ¹⁶¹	+7 03.8 ¹¹⁵		45	4 38	5 13	5 43	7 22 61		18 51 22	
19	102	11.0		84	53.4 ¹⁶⁰	15.2 ¹¹⁴		50	25	05	38	26 65		45 18	
20	117	11.2		99	28.4 ¹⁶⁰	26.7 ¹¹⁵		52	19	5 01	36	28 67		42 17	
21	132	11.3		114	03.4 ¹⁶⁰	38.1 ¹¹⁴		54	13	4 57	34	30 69		39 15	
22	147	11.5		128	38.4 ¹⁶⁰	+7 49.5 ¹¹⁴		56	4 05	52	31	32 72		36 13	
23	162	11.6		143	13.3 ¹⁵⁹	+8 00.8 ¹¹³		58	3 56	47	28	35 74		33 10	
24	177	11.8	-5 29.8	157	48.2 ¹⁵⁹	+8 12.1 ¹¹³		60 S	3 45	4 40	5 24	7 38 77		18 29 7	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 13 ^h 04 ^m 3		Mag: -4.1 PMG: 9 ^h 34 ^m			Mag: +1.1 PMG: 11 ^h 49 ^m			Mag: -2.1 PMG: 13 ^h 39 ^m			Mag: +0.5 PMG: 2 ^h 09 ^m			
	hG ♈		hG ♀			hG ♂			hG ♃			hG ♄			
h	°	'	°	°	'	°	'	°	°	'	°	°	'	°	'
0	163	23.1	216	35.5	-18 33.0	182	43.1	-9 17.9	154	46.1	+2 31.0	327	38.4	-3 48.2	
1	178	25.6	231	34.9	32.4	197	43.7	17.1	169	48.1	31.2	342	41.0	48.1	
2	193	28.0	246	34.3	31.9	212	44.3	16.4	184	50.0	31.4	357	43.6	48.1	
3	208	30.5	261	33.7	31.3	227	44.9	15.6	199	51.9	31.7	12	46.2	48.0	
4	223	33.0	276	33.1	30.8	242	45.5	14.9	214	53.9	31.9	27	48.8	48.0	
5	238	35.4	291	32.4	-18 30.2	257	46.1	-9 14.1	229	55.8	+2 32.1	42	51.4	-3 47.9	
6	253	37.9	306	31.8	-18 29.7	272	46.8	-9 13.4	244	57.7	+2 32.4	57	54.0	-3 47.8	
7	268	40.3	321	31.2	29.1	287	47.4	12.6	259	59.7	32.6	72	56.6	47.8	
8	283	42.8	336	30.6	28.5	302	48.0	11.9	275	01.6	32.8	87	59.2	47.7	
9	298	45.3	351	30.0	28.0	317	48.6	11.1	290	03.5	33.1	103	01.8	47.6	
10	313	47.7	6	29.4	27.4	332	49.2	10.4	305	05.4	33.3	118	04.4	47.6	
11	328	50.2	21	28.8	-18 26.9	347	49.8	-9 09.6	320	07.4	+2 33.5	133	07.0	-3 47.5	
12	343	52.7	36	28.2	-18 26.3	2	50.5	-9 08.9	335	09.3	+2 33.7	148	09.6	-3 47.4	
13	358	55.1	51	27.6	25.7	17	51.1	08.1	350	11.2	34.0	163	12.2	47.4	
14	13	57.6	66	27.0	25.2	32	51.7	07.4	5	13.2	34.2	178	14.8	47.3	
15	29	00.1	81	26.4	24.6	47	52.3	06.6	20	15.1	34.4	193	17.5	47.2	
16	44	02.5	96	25.8	24.1	62	52.9	05.9	35	17.0	34.7	208	20.1	47.2	
17	59	05.0	111	25.2	-18 23.5	77	53.5	-9 05.1	50	19.0	+2 34.9	223	22.7	-3 47.1	
18	74	07.4	126	24.6	-18 22.9	92	54.2	-9 04.4	65	20.9	+2 35.1	238	25.3	-3 47.0	
19	89	09.9	141	23.9	22.4	107	54.8	03.6	80	22.8	35.4	253	27.9	47.0	
20	104	12.4	156	23.3	21.8	122	55.4	02.9	95	24.7	35.6	268	30.5	46.9	
21	119	14.8	171	22.7	21.2	137	56.0	02.1	110	26.7	35.8	283	33.1	46.8	
22	134	17.3	186	22.1	20.7	152	56.6	01.4	125	28.6	36.1	298	35.7	46.8	
23	149	19.8	201	21.5	20.1	167	57.2	-9 00.6	140	30.5	36.3	313	38.3	46.7	
24	164	22.2	216	20.9	-18 19.5	182	57.9	-8 59.9	155	32.5	+2 36.5	328	40.9	-3 46.6	
Dif	—		-6 +6			+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: 2 ^d 1	PHE { 4 ^h : 54 ⁰ 12 ^h : 54 ⁰ 20 ^h : 54 ⁰ R°: 43 ^m										
	PMG: 12 ^h 11 ^m 1				SD: 14 ^h 7				PMG: 13 ^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	
0	177	11.8	-5	29.8	157	48.2	+8 12.1	60 N	17 41	18 23	19 11	6 34 8	21 32 78	
1	192	11.9		28.8	172	23.1 ¹⁵⁹	23.4 ¹¹³	58	44	23	09	39 11	25 75	
2	207	12.1		27.9	186	57.9 ¹⁵⁸	34.7 ¹¹³	56	46	23	06	44 13	18 73	
3	222	12.2		26.9	201	32.7 ¹⁵⁸	45.9 ¹¹²	54	48	23	04	48 16	13 70	
4	237	12.3		25.9	216	07.5 ¹⁵⁸	+8 57.1 ¹¹²	52	50	23	03	52 18	07 68	
5	252	12.5	-5	25.0	230	42.3 ¹⁵⁸	+9 08.2 ¹¹¹	50	17 51	18 24	19 01	6 55 20	21 03 66	
6	267	12.6	-5	24.0	245	17.0 ¹⁵⁷	+9 19.3 ¹¹¹	45	17 55	18 24	18 58	7 03 23	20 53 62	
7	282	12.8		23.0	259	51.7 ¹⁵⁷	30.4 ¹¹¹	40	17 58	25	56	09 27	45 58	
8	297	12.9		22.0	274	26.3 ¹⁵⁶	41.5 ¹¹¹	35	18 01	26	55	14 30	37 57	
9	312	13.1		21.1	289	01.0 ¹⁵⁷	+9 52.5 ¹¹⁰	30	03	27	55	19 32	31 54	
10	327	13.2		20.1	303	35.6 ¹⁵⁶	+10 03.5 ¹¹⁰	20	07	29	55	28 35	21 50	
11	342	13.4	-5	19.1	318	10.1 ¹⁵⁵	+10 14.4 ¹⁰⁹	10 N	18 11	18 32	18 56	7 35 39	20 11 47	
12	357	13.5	-5	18.1	332	44.7 ¹⁵⁶	+10 25.3 ¹⁰⁹	0	18 14	18 35	18 59	7 42 43	20 02 44	
13	12	13.7		17.2	347	19.2 ¹⁵⁵	36.2 ¹⁰⁹	10 S	18	39	19 04	49 46	19 54 40	
14	27	13.8		16.2	1	53.6 ¹⁵⁴	47.0 ¹⁰⁸	20	22	44	10	7 57 49	44 37	
15	42	14.0		15.2	16	28.0 ¹⁵⁴	+10 57.7 ¹⁰⁷	30	27	51	19	8 05 54	34 33	
16	57	14.1		14.3	31	02.4 ¹⁵⁴	+11 08.5 ¹⁰⁸	35	30	18 55	25	11 55	28 31	
17	72	14.3	-5	13.3	45	36.8 ¹⁵⁴	+11 19.2 ¹⁰⁷	40	18 33	19 00	19 33	8 16 59	19 21 28	
18	87	14.4	-5	12.3	60	11.1 ¹⁵³	+11 29.8 ¹⁰⁶	45	18 37	19 06	19 42	8 23 62	19 13 25	
19	102	14.6		11.3	74	45.3 ¹⁵²	40.4 ¹⁰⁶	50	41	14	54	31 66	19 03 22	
20	117	14.7		10.4	89	19.5 ¹⁵²	+11 51.0 ¹⁰⁶	52	43	18	19 59	35 68	18 59 20	
21	132	14.9		09.4	103	53.7 ¹⁵²	+12 01.5 ¹⁰⁵	54	46	22	20 06	39 70	54 18	
22	147	15.0		08.4	118	27.9 ¹⁵²	12.0 ¹⁰⁵	56	48	26	13	44 72	49 15	
23	162	15.2		07.4	133	02.0 ¹⁵¹	22.4 ¹⁰⁴	58	51	31	21	49 75	43 13	
24	177	15.3	-5	06.5	147	36.0 ¹⁵⁰	+12 32.7 ¹⁰³	60 S	18 54	19 37	20 31	8 55 78	18 36 10	
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 13 ^h 00 ^m 4		Mag: -4.1 PMG: 9 ^h 35 ^m		Mag: +1.1 PMG: 11 ^h 48 ^m		Mag: -2.1 PMG: 13 ^h 36 ^m		Mag: +0.5 PMG: 2 ^h 05 ^m					
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	164	22.2	216	20.9	182	57.9	155	32.5	+2 36.5	328	40.9	-3 46.6		
1	179	24.7	231	20.3	197	58.5	170	34.4	36.8	343	43.5	46.6		
2	194	27.2	246	19.7	212	59.1	185	36.3	37.0	358	46.1	46.5		
3	209	29.6	261	19.1	227	59.7	200	38.3	37.2	373	48.7	46.4		
4	224	32.1	276	18.5	243	00.3	215	40.2	37.5	388	51.3	46.4		
5	239	34.6	291	17.9	258	01.0	230	42.1	+2 37.7	403	53.9	-3 46.3		
6	254	37.0	306	17.3	273	01.6	245	44.0	+2 37.9	418	56.5	-3 46.2		
7	269	39.5	321	16.7	288	02.2	260	46.0	38.2	433	59.1	46.2		
8	284	41.9	336	16.1	303	02.8	275	47.9	38.4	448	01.7	46.1		
9	299	44.4	351	15.5	318	03.4	290	49.8	38.6	463	04.3	46.0		
10	314	46.9	6	14.9	333	04.0	305	51.8	38.8	478	06.9	46.0		
11	329	49.3	21	14.3	348	04.7	320	53.7	+2 39.1	493	09.5	-3 45.9		
12	344	51.8	36	13.7	3	05.3	335	55.6	+2 39.3	508	12.1	-3 45.8		
13	359	54.3	51	13.1	18	05.9	350	57.5	39.5	523	14.7	45.8		
14	14	56.7	66	12.5	33	06.5	5	59.5	39.8	538	17.4	45.7		
15	29	59.2	81	11.9	48	07.1	21	01.4	40.0	553	20.0	45.6		
16	45	01.7	96	11.3	63	07.8	36	03.3	40.2	568	22.6	45.6		
17	60	04.1	111	10.7	78	08.4	51	05.3	+2 40.5	583	25.2	-3 45.5		
18	75	06.6	126	10.1	93	09.0	66	07.2	+2 40.7	598	27.8	-3 45.4		
19	90	09.0	141	09.5	108	09.6	81	09.1	40.9	613	30.4	45.4		
20	105	11.5	156	08.9	123	10.3	96	11.0	41.2	628	33.0	45.3		
21	120	14.0	171	08.3	138	10.9	111	13.0	41.4	643	35.6	45.2		
22	135	16.4	186	07.7	153	11.5	126	14.9	41.6	658	38.2	45.2		
23	150	18.9	201	07.1	168	12.1	141	16.8	41.9	673	40.8	45.1		
24	165	21.4	216	06.5	183	12.7	156	18.8	+2 42.1	688	43.4	-3 45.0		
Dif	—		-6		+6		+8		+19		+2		+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 9			Edad: 3 ^d 1 PHE { 4 ^h : 54'1 12 ^h : 54'2 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	h m m	h m m	h m m	h m m				
0	177	15.3	-5	06.5	147	36.0	+12 32.7	60 N	5 09	5 58	6 39	6 42 12	22 50 79					
1	192	15.5		05.5	162	10.0 ¹⁵⁰	43.1 ¹⁰⁴	58	12	58	37	50 15	40 75					
2	207	15.6		04.5	176	44.0 ¹⁵⁰	+12 53.3 ¹⁰²	56	15	58	35	6 57 18	31 72					
3	222	15.8		03.5	191	17.9 ¹⁴⁹	+13 03.6 ¹⁰³	54	17	58	33	7 04 19	23 69					
4	237	15.9		02.6	205	51.8 ¹⁴⁹	13.7 ¹⁰¹	52	19	58	31	10 21	15 68					
5	252	16.1	-5	01.6	220	25.6 ¹⁴⁸	+13 23.9 ¹⁰²	50	5 20	5 57	6 30	7 15 23	22 09 66					
6	267	16.2	-5	00.6	234	59.4 ¹⁴⁸	+13 33.9 ¹⁰⁰	45	5 23	5 57	6 26	7 26 27	21 55 62					
7	282	16.4	-4	59.6	249	33.2 ¹⁴⁸	44.0 ¹⁰¹	40	25	56	23	36 30	43 60					
8	297	16.5		58.7	264	06.9 ¹⁴⁷	+13 53.9 ⁹⁹	35	26	56	21	44 32	34 57					
9	312	16.7		57.7	278	40.5 ¹⁴⁶	+14 03.8 ⁹⁹	30	27	55	19	7 51 35	25 55					
10	327	16.8		56.7	293	14.1 ¹⁴⁶	13.7 ⁹⁹	20	27	53	15	8 03 39	21 11 51					
11	342	17.0	-4	55.7	307	47.6 ¹⁴⁵	+14 23.5 ⁹⁸	10 N	5 26	5 50	6 11	8 14 42	20 58 48					
12	357	17.1	-4	54.8	322	21.1 ¹⁴⁵	+14 33.2 ⁹⁷	0	5 23	5 47	6 08	8 25 44	20 46 46					
13	12	17.3		53.8	336	54.6 ¹⁴⁵	42.9 ⁹⁷	10 S	18	43	04	35 48	34 43					
14	27	17.4		52.8	351	28.0 ¹⁴⁴	+14 52.6 ⁹⁷	20	12	38	6 00	46 51	21 40					
15	42	17.6		51.8	6	01.3 ¹⁴³	+15 02.1 ⁹⁵	30	5 03	31	5 55	8 59 54	20 07 36					
16	57	17.7		50.9	20	34.6 ¹⁴³	11.6 ⁹⁵	35	4 57	27	53	9 06 57	19 59 34					
17	72	17.9	-4	49.9	35	07.9 ¹⁴³	+15 21.1 ⁹⁵	40	4 50	5 22	5 50	9 15 59	19 49 32					
18	87	18.0	-4	48.9	49	41.0 ¹⁴¹	+15 30.5 ⁹⁴	45	4 41	5 16	5 46	9 25 62	19 38 29					
19	102	18.2		47.9	64	14.2 ¹⁴²	39.8 ⁹³	50	29	09	42	37 66	25 25					
20	117	18.3		47.0	78	47.2 ¹⁴⁰	49.1 ⁹³	52	23	05	40	43 68	19 23					
21	132	18.5		46.0	93	20.3 ¹⁴¹	+15 58.3 ⁹²	54	17	5 01	37	49 70	12 21					
22	147	18.6		45.0	107	53.2 ¹³⁹	+16 07.4 ⁹¹	56	10	4 57	35	9 56 73	19 04 20					
23	162	18.8		44.0	122	26.2 ¹⁴⁰	16.5 ⁹¹	58	4 02	52	32	10 04 75	18 56 16					
24	177	19.0	-4	43.1	136	59.0 ¹³⁸	+16 25.5 ⁹⁰	60 S	3 52	4 46	5 29	10 13 79	18 46 13					
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO					
	PMG: 12 ^h 56 ^m 4			Mag: -4.1 PMG: 9 ^h 36 ^m			Mag: +1.1 PMG: 11 ^h 47 ^m			Mag: -2.1 PMG: 13 ^h 33 ^m			Mag: +0.5 PMG: 2 ^h 01 ^m					
	hG ♈		Dec	hG ♀		Dec	hG ♂		Dec	hG ♃		Dec	hG ♄		Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°			
0	165	21.4	216	06.5	-18	05.6	183	12.7	-8	41.8	156	18.8	+2	42.1	329	43.4	-3	45.0
1	180	23.8	231	05.9		05.0	198	13.4		41.1	171	20.7		42.3	344	46.0		45.0
2	195	26.3	246	05.3		04.4	213	14.0		40.3	186	22.6		42.6	359	48.6		44.9
3	210	28.8	261	04.7		03.8	228	14.6		39.6	201	24.5		42.8	14	51.2		44.8
4	225	31.2	276	04.1		03.2	243	15.2		38.8	216	26.5		43.0	29	53.8		44.8
5	240	33.7	291	03.5	-18	02.6	258	15.8	-8	38.1	231	28.4	+2	43.3	44	56.5	-3	44.7
6	255	36.2	306	02.9	-18	02.0	273	16.5	-8	37.3	246	30.3	+2	43.5	59	59.1	-3	44.6
7	270	38.6	321	02.3		01.4	288	17.1		36.6	261	32.3		43.7	75	01.7		44.6
8	285	41.1	336	01.7		00.8	303	17.7		35.8	276	34.2		44.0	90	04.3		44.5
9	300	43.5	351	01.1	-18	00.2	318	18.3		35.1	291	36.1		44.2	105	06.9		44.4
10	315	46.0	6	00.5	-17	59.6	333	19.0		34.3	306	38.0		44.4	120	09.5		44.4
11	330	48.5	20	59.9	-17	59.0	348	19.6	-8	33.6	321	40.0	+2	44.6	135	12.1	-3	44.3
12	345	50.9	35	59.3	-17	58.4	3	20.2	-8	32.8	336	41.9	+2	44.9	150	14.7	-3	44.2
13	0	53.4	50	58.7		57.8	18	20.8		32.0	351	43.8		45.1	165	17.3		44.2
14	15	55.9	65	58.1		57.2	33	21.5		31.3	6	45.7		45.3	180	19.9		44.1
15	30	58.3	80	57.6		56.6	48	22.1		30.5	21	47.7		45.6	195	22.5		44.0
16	46	00.8	95	57.0		56.0	63	22.7		29.8	36	49.6		45.8	210	25.1		44.0
17	61	03.3	110	56.4	-17	55.4	78	23.3	-8	29.0	51	51.5	+2	46.0	225	27.7	-3	43.9
18	76	05.7	125	55.8	-17	54.7	93	23.9	-8	28.3	66	53.5	+2	46.3	240	30.4	-3	43.8
19	91	08.2	140	55.2		54.1	108	24.6		27.5	81	55.4		46.5	255	33.0		43.8
20	106	10.7	155	54.6		53.5	123	25.2		26.8	96	57.3		46.7	270	35.6		43.7
21	121	13.1	170	54.0		52.9	138	25.8		26.0	111	59.2		47.0	285	38.2		43.6
22	136	15.6	185	53.4		52.3	153	26.4		25.2	127	01.2		47.2	300	40.8		43.6
23	151	18.0	200	52.8		51.7	168	27.1		24.5	142	03.1		47.4	315	43.4		43.5
24	166	20.5	215	52.2	-17	51.1	183	27.7	-8	23.7	157	05.0	+2	47.7	330	46.0	-3	43.4
Dif	—			-6 +6			+6 +8			+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 6			Edad: 4 ^d 1 SD: 14:8 PMG: 15 ^h 20 ^m	PHE { 4 ^h : 54:4 12 ^h : 54:5 20 ^h : 54:6 R°: 48 ^m										
	hG ☉	Dec				hG ☾			Dif	Dec	Dif	Civil	Náutico	Hora	R°
h	°	'	°	°	'	°	'	h	m	h	m	h	m	h	m
0	177	19.0	-4 43.1	136	59.0	+16 25.5	89	60 N	17 46	18 28	19 16	6 54	16	**	**
1	192	19.1	42.1	151	31.8 ¹³⁸	34.4	89	58	48	28	13	7 05	20	23 55	73
2	207	19.3	41.1	166	04.6 ¹³⁸	43.3	89	56	50	27	11	15 22		43 70	
3	222	19.4	40.1	180	37.2 ¹³⁶	+16 52.1	88	54	52	27	08	23 25		32 68	
4	237	19.6	39.2	195	09.9 ¹³⁷	+17 00.8	87	52	53	27	06	31 27		23 66	
5	252	19.7	-4 38.2	209	42.4 ¹³⁵	+17 09.5	87	50	17 55	18 27	19 04	7 38 29		23 15 64	
6	267	19.9	-4 37.2	224	14.9 ¹³⁵	+17 18.1	86	45	17 58	18 27	19 01	7 53 32		22 57 62	
7	282	20.0	36.2	238	47.4 ¹³⁵	26.6	85	40	18 00	27	18 58	8 06 34		43 59	
8	297	20.2	35.2	253	19.8 ¹³⁴	35.1	85	35	02	27	57	16 37		31 57	
9	312	20.3	34.3	267	52.1 ¹³³	43.5	84	30	04	28	56	26 38		20 56	
10	327	20.5	33.3	282	24.4 ¹³³	+17 51.8	83	20	08	30	55	42 42		22 02 53	
11	342	20.7	-4 32.3	296	56.6 ¹³²	+18 00.0	82	10 N	18 11	18 32	18 56	8 56 44		21 46 51	
12	357	20.8	-4 31.3	311	28.8 ¹³²	+18 08.2	82	0	18 14	18 35	18 59	9 09 47		21 32 48	
13	12	21.0	30.4	326	00.9 ¹³¹	16.3	81	10 S	17	38	19 03	23 49		17 46	
14	27	21.1	29.4	340	32.9 ¹³⁰	24.3	80	20	21	43	08	37 52		21 01 44	
15	42	21.3	28.4	355	04.9 ¹³⁰	32.2	79	30	25	49	17	9 53 56		20 43 41	
16	57	21.4	27.4	9	36.8 ¹²⁹	40.1	79	35	27	52	22	10 03 57		33 39	
17	72	21.6	-4 26.4	24	08.6 ¹²⁸	+18 47.8	77	40	18 30	18 57	19 29	10 14 60		20 21 37	
18	87	21.8	-4 25.5	38	40.4 ¹²⁸	+18 55.5	77	45	18 33	19 03	19 38	10 27 63		20 07 35	
19	102	21.9	24.5	53	12.1 ¹²⁷	+19 03.1	76	50	37	10	49	43 66		19 50 32	
20	117	22.1	23.5	67	43.8 ¹²⁷	10.7	76	52	39	13	19 54	51 67		42 30	
21	132	22.2	22.5	82	15.3 ¹²⁵	18.1	74	54	41	17	20 00	10 59 70		33 29	
22	147	22.4	21.6	96	46.9 ¹²⁶	25.5	74	56	43	21	07	11 09 71		24 25	
23	162	22.5	20.6	111	18.3 ¹²⁴	32.8	73	58	45	25	15	19 75		19 12 23	
24	177	22.7	-4 19.6	125	49.7 ¹²⁴	+19 40.0	72	60 S	18 48	19 31	20 24	11 32 78		18 59 20	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 12 ^h 52 ^m 5		Mag: -4.1 PMG: 9 ^h 37 ^m		Mag: +1.1 PMG: 11 ^h 46 ^m		Mag: -2.1 PMG: 13 ^h 30 ^m		Mag: +0.5 PMG: 1 ^h 57 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	166	20.5	215	52.2	183	27.7	157	05.0	330	46.0
1	181	23.0	230	51.6	198	28.3	172	06.9	345	48.6
2	196	25.4	245	51.0	213	28.9	187	08.9	0	51.2
3	211	27.9	260	50.4	228	29.6	202	10.8	15	53.8
4	226	30.4	275	49.9	243	30.2	217	12.7	30	56.4
5	241	32.8	290	49.3	258	30.8	232	14.6	45	59.1
6	256	35.3	305	48.7	273	31.4	247	16.6	61	01.7
7	271	37.8	320	48.1	288	32.1	262	18.5	76	04.3
8	286	40.2	335	47.5	303	32.7	277	20.4	91	06.9
9	301	42.7	350	46.9	318	33.3	292	22.3	106	09.5
10	316	45.1	5	46.3	333	33.9	307	24.3	121	12.1
11	331	47.6	20	45.7	348	34.6	322	26.2	136	14.7
12	346	50.1	35	45.1	3	35.2	337	28.1	151	17.3
13	1	52.5	50	44.5	18	35.8	352	30.1	166	19.9
14	16	55.0	65	44.0	33	36.5	7	32.0	181	22.5
15	31	57.5	80	43.4	48	37.1	22	33.9	196	25.2
16	46	59.9	95	42.8	63	37.7	37	35.8	211	27.8
17	62	02.4	110	42.2	78	38.3	52	37.8	226	30.4
18	77	04.9	125	41.6	93	39.0	67	39.7	241	33.0
19	92	07.3	140	41.0	108	39.6	82	41.6	256	35.6
20	107	09.8	155	40.4	123	40.2	97	43.5	271	38.2
21	122	12.3	170	39.9	138	40.8	112	45.5	286	40.8
22	137	14.7	185	39.3	153	41.5	127	47.4	301	43.4
23	152	17.2	200	38.7	168	42.1	142	49.3	316	46.0
24	167	19.6	215	38.1	183	42.7	157	51.2	331	48.7
Dif	—		-6		+6		+19		+26	

UT	SOL			 LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna				
	SD: 16'1 PMG: 12 ^h 10 ^m 4			Edad: 5 ^d 1 SD: 14'9 PMG: 16 ^h 08 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	h	m
0	177	22.7	-4	19.6	125	49.7	+19 40.0	60 N	5 03	5 52	6 33	7 10	25	0 09	76		
1	192	22.9			140	21.1 ¹²⁴	47.1 71	58	07	52	31	25	28	**	**	**	
2	207	23.0			154	52.4 ¹²³	+19 54.1 69	56	09	53	30	37	31	**	**	**	
3	222	23.2			169	23.6 ¹²²	+20 01.0 69	54	12	53	28	48	33	**	**	**	
4	237	23.3			183	54.7 ¹²¹	07.9 69	52	14	53	27	7 58	34	**	**	**	
5	252	23.5	-4	14.7	198	25.8 ¹²¹	+20 14.7 68	50	5 16	5 53	6 25	8 07	35	**	**	**	
6	267	23.6	-4	13.7	212	56.8 ¹²⁰	+20 21.3 66	45	5 19	5 53	6 23	8 25	39	23 59	59		
7	282	23.8		12.7	227	27.7 ¹¹⁹	27.9 65	40	22	53	20	40	41	42	58		
8	297	24.0		11.8	241	58.6 ¹¹⁹	34.4 66	35	24	53	18	8 53	42	28	56		
9	312	24.1		10.8	256	29.5 ¹¹⁹	40.8 64	30	25	52	16	9 04	44	23 16	55		
10	327	24.3		09.8	271	00.2 ¹¹⁷	47.1 63	20	25	51	13	24	46	22 55	54		
11	342	24.4	-4	08.8	285	30.9 ¹¹⁷	+20 53.3 62	10 N	5 25	5 49	6 10	9 40	48	22 37	52		
12	357	24.6	-4	07.8	300	01.5 ¹¹⁶	+20 59.5 62	0	5 22	5 46	6 07	9 56	50	22 20	51		
13	12	24.8		06.9	314	32.1 ¹¹⁶	+21 05.5 60	10 S	18	43	04	10 12	52	22 03	50		
14	27	24.9		05.9	329	02.6 ¹¹⁵	11.4 59	20	13	39	6 01	29	54	21 45	48		
15	42	25.1		04.9	343	33.0 ¹¹⁴	17.2 58	30	5 05	33	5 57	10 49	56	24	47		
16	57	25.2		03.9	358	03.4 ¹¹⁴	23.0 58	35	4 59	29	54	11 00	58	21 12	46		
17	72	25.4	-4	02.9	12	33.7 ¹¹³	+21 28.6 56	40	4 52	5 25	5 52	11 14	58	20 58	44		
18	87	25.6	-4	02.0	27	03.9 ¹¹²	+21 34.2 56	45	4 44	5 19	5 49	11 30	60	20 42	42		
19	102	25.7	-4	01.0	41	34.1 ¹¹²	39.6 54	50	33	12	45	49	63	22	40		
20	117	25.9	-4	00.0	56	04.2 ¹¹¹	44.9 53	52	28	09	43	11 58	65	12	39		
21	132	26.0	-3	59.0	70	34.2 ¹¹⁰	50.2 51	54	22	05	41	12 09	66	20 02	37		
22	147	26.2		58.0	85	04.2 ¹¹⁰	+21 55.3 51	56	15	5 01	39	20	68	19 49	36		
23	162	26.4		57.1	99	34.1 ¹⁰⁹	+22 00.4 51	58	4 07	4 57	37	34	70	35	34		
24	177	26.5	-3	56.1	114	04.0 ¹⁰⁹	+22 05.3 49	60 S	3 58	4 51	5 34	12 50	74	19 19	30		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 12 ^h 48 ^m 6		Mag: -4.1 PMG: 9 ^h 38 ^m		Mag: +1.1 PMG: 11 ^h 45 ^m		Mag: -2.1 PMG: 13 ^h 27 ^m		Mag: +0.5 PMG: 1 ^h 52 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	167	19.6	215	38.1	-17	36.1	183	42.7	-8	05.5	157	51.2	+2	53.3	331	48.7	-3	41.8
1	182	22.1	230	37.5		35.5	198	43.4		04.8	172	53.2		53.5	346	51.3		41.7
2	197	24.6	245	36.9		34.8	213	44.0		04.0	187	55.1		53.7	1	53.9		41.7
3	212	27.0	260	36.3		34.2	228	44.6		03.3	202	57.0		54.0	16	56.5		41.6
4	227	29.5	275	35.8		33.5	243	45.2		02.5	217	58.9		54.2	31	59.1		41.5
5	242	32.0	290	35.2	-17	32.9	258	45.9	-8	01.7	233	00.9	+2	54.4	47	01.7	-3	41.5
6	257	34.4	305	34.6	-17	32.3	273	46.5	-8	01.0	248	02.8	+2	54.7	62	04.3	-3	41.4
7	272	36.9	320	34.0		31.6	288	47.1	-8	00.2	263	04.7		54.9	77	06.9		41.3
8	287	39.4	335	33.4		31.0	303	47.8	-7	59.5	278	06.6		55.1	92	09.6		41.3
9	302	41.8	350	32.8		30.3	318	48.4		58.7	293	08.6		55.4	107	12.2		41.2
10	317	44.3	5	32.3		29.7	333	49.0		57.9	308	10.5		55.6	122	14.8		41.1
11	332	46.8	20	31.7	-17	29.1	348	49.6	-7	57.2	323	12.4	+2	55.8	137	17.4	-3	41.0
12	347	49.2	35	31.1	-17	28.4	3	50.3	-7	56.4	338	14.3	+2	56.1	152	20.0	-3	41.0
13	2	51.7	50	30.5		27.8	18	50.9		55.7	353	16.3		56.3	167	22.6		40.9
14	17	54.1	65	29.9		27.1	33	51.5		54.9	8	18.2		56.5	182	25.2		40.8
15	32	56.6	80	29.4		26.5	48	52.2		54.1	23	20.1		56.8	197	27.8		40.8
16	47	59.1	95	28.8		25.8	63	52.8		53.4	38	22.0		57.0	212	30.5		40.7
17	63	01.5	110	28.2	-17	25.2	78	53.4	-7	52.6	53	24.0	+2	57.2	227	33.1	-3	40.6
18	78	04.0	125	27.6	-17	24.5	93	54.1	-7	51.9	68	25.9	+2	57.5	242	35.7	-3	40.6
19	93	06.5	140	27.0		23.9	108	54.7		51.1	83	27.8		57.7	257	38.3		40.5
20	108	08.9	155	26.5		23.2	123	55.3		50.3	98	29.7		57.9	272	40.9		40.4
21	123	11.4	170	25.9		22.6	138	56.0		49.6	113	31.6		58.2	287	43.5		40.4
22	138	13.9	185	25.3		21.9	153	56.6		48.8	128	33.6		58.4	302	46.1		40.3
23	153	16.3	200	24.7		21.3	168	57.2		48.0	143	35.5		58.6	317	48.8		40.2
24	168	18.8	215	24.1	-17	20.6	183	57.8	-7	47.3	158	37.4	+2	58.8	332	51.4	-3	40.1
Dif	—		-6	+6			+6	+8			+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: 6 ^d 1	PHE { 4 ^h : 55/3 12 ^h : 55/5 20 ^h : 55/7	Puesta de Sol			Salida de Luna		Puesta de Luna								
	PMG: 12 ^h 10 ^m 1					R°: 53 ^m			Hora		R°								
	hG ☉	Dec				hG ☾			Dif	Dec	Dif	Civil	Náutico	Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m			
0	177	26.5	-3	56.1	114	04.0	+22	05.3	60 N	17 51	18 33	19 22	7 35	39	1 25	69			
1	192	26.7		55.1	128	33.8 ¹⁰⁸		10.1 ⁴⁸	58	53	32	18	7 53	41	1 08	66			
2	207	26.8		54.1	143	03.5 ¹⁰⁷		14.8 ⁴⁷	56	54	31	15	8 08	42	0 53	64			
3	222	27.0		53.1	157	33.1 ¹⁰⁶		19.4 ⁴⁶	54	56	31	12	21	43	40	63			
4	237	27.2		52.2	172	02.7 ¹⁰⁶		24.0 ⁴⁶	52	57	30	10	32	45	29	62			
5	252	27.3	-3	51.2	186	32.3 ¹⁰⁶	+22	28.4 ⁴⁴	50	17 58	18 30	19 08	8 42	46	0 19	61			
6	267	27.5	-3	50.2	201	01.8 ¹⁰⁵	+22	32.7 ⁴³	45	18 00	18 29	19 04	9 04	46	**	** *			
7	282	27.7		49.2	215	31.2 ¹⁰⁴		36.8 ⁴¹	40	02	29	19 01	21	48	**	** *			
8	297	27.8		48.2	230	00.5 ¹⁰³		40.9 ⁴¹	35	04	29	18 59	35	49	**	** *			
9	312	28.0		47.2	244	29.8 ¹⁰³		44.9 ⁴⁰	30	05	29	57	9 48	49	**	** *			
10	327	28.1		46.3	258	59.0 ¹⁰²		48.7 ³⁸	20	08	30	56	10 10	50	23	49 54			
11	342	28.3	-3	45.3	273	28.2 ¹⁰²	+22	52.5 ³⁸	10 N	18 11	18 32	18 56	10 28	52	23	29 54			
12	357	28.5	-3	44.3	287	57.3 ¹⁰¹	+22	56.1 ³⁶	0	18 13	18 34	18 58	10 46	52	23	11 53			
13	12	28.6		43.3	302	26.3 ¹⁰⁰	+22	59.6 ³⁵	10 S	16	37	19 01	11 04	53	22	53 53			
14	27	28.8		42.3	316	55.3 ¹⁰⁰	+23	03.0 ³⁴	20	19	41	07	23	54	33	53			
15	42	29.0		41.4	331	24.3 ¹⁰⁰		06.3 ³³	30	22	46	14	45	55	22	11 52			
16	57	29.1		40.4	345	53.1 ⁹⁸		09.5 ³²	35	24	50	20	11 58	55	21	58 52			
17	72	29.3	-3	39.4	0	21.9 ⁹⁸	+23	12.5 ³⁰	40	18 27	18 54	19 26	12 12	57	21	42 52			
18	87	29.5	-3	38.4	14	50.7 ⁹⁸	+23	15.5 ³⁰	45	18 29	18 59	19 34	12 30	57	21	24 51			
19	102	29.6		37.4	29	19.4 ⁹⁷		18.3 ²⁸	50	33	19 05	44	12 52	59	21	02 50			
20	117	29.8		36.4	43	48.0 ⁹⁶		21.0 ²⁷	52	34	08	49	13 03	59	20	51 50			
21	132	29.9		35.5	58	16.6 ⁹⁶		23.6 ²⁶	54	36	12	19 55	15	59	39	50			
22	147	30.1		34.5	72	45.1 ⁹⁵		26.0 ²⁴	56	38	15	20 01	28	61	25	49			
23	162	30.3		33.5	87	13.6 ⁹⁵		28.4 ²⁴	58	40	20	08	13 44	62	20	09 48			
24	177	30.4	-3	32.5	101	42.0 ⁹⁴	+23	30.6 ²²	60 S	18 42	19 24	20 17	14 04	62	19	49 47			
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO							
	PMG: 12 ^h 44 ^m 7		Mag: -4.1 PMG: 9 ^h 39 ^m			Mag: +1.1 PMG: 11 ^h 44 ^m			Mag: -2.1 PMG: 13 ^h 24 ^m			Mag: +0.4 PMG: 1 ^h 48 ^m							
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec						
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'			
0	168	18.8	215	24.1	-17	20.6	183	57.8	-7	47.3	158	37.4	+2	58.8	332	51.4	-3	40.1	
1	183	21.2	230	23.6		19.9	198	58.5		46.5	173	39.3		59.1	347	54.0		40.1	
2	198	23.7	245	23.0		19.3	213	59.1		45.8	188	41.3		59.3	2	56.6		40.0	
3	213	26.2	260	22.4		18.6	228	59.7		45.0	203	43.2		59.5	17	59.2		39.9	
4	228	28.6	275	21.8		18.0	244	00.4		44.2	218	45.1	+2	59.8	33	01.8		39.9	
5	243	31.1	290	21.3	-17	17.3	259	01.0	-7	43.5	233	47.0	+3	00.0	48	04.4	-3	39.8	
6	258	33.6	305	20.7	-17	16.6	274	01.6	-7	42.7	248	49.0	+3	00.2	63	07.1	-3	39.7	
7	273	36.0	320	20.1		16.0	289	02.3		41.9	263	50.9		00.5	78	09.7		39.7	
8	288	38.5	335	19.5		15.3	304	02.9		41.2	278	52.8		00.7	93	12.3		39.6	
9	303	41.0	350	19.0		14.7	319	03.5		40.4	293	54.7		00.9	108	14.9		39.5	
10	318	43.4	5	18.4		14.0	334	04.2		39.7	308	56.7		01.2	123	17.5		39.5	
11	333	45.9	20	17.8	-17	13.3	349	04.8	-7	38.9	323	58.6	+3	01.4	138	20.1	-3	39.4	
12	348	48.4	35	17.2	-17	12.7	4	05.4	-7	38.1	339	00.5	+3	01.6	153	22.7	-3	39.3	
13	3	50.8	50	16.7		12.0	19	06.1		37.4	354	02.4		01.9	168	25.4		39.2	
14	18	53.3	65	16.1		11.3	34	06.7		36.6	9	04.3		02.1	183	28.0		39.2	
15	33	55.7	80	15.5		10.7	49	07.3		35.8	24	06.3		02.3	198	30.6		39.1	
16	48	58.2	95	14.9		10.0	64	08.0		35.1	39	08.2		02.6	213	33.2		39.0	
17	64	00.7	110	14.4	-17	09.3	79	08.6	-7	34.3	54	10.1	+3	02.8	228	35.8	-3	39.0	
18	79	03.1	125	13.8	-17	08.7	94	09.2	-7	33.5	69	12.0	+3	03.0	243	38.4	-3	38.9	
19	94	05.6	140	13.2		08.0	109	09.9		32.8	84	14.0		03.3	258	41.0		38.8	
20	109	08.1	155	12.6		07.3	124	10.5		32.0	99	15.9		03.5	273	43.7		38.8	
21	124	10.5	170	12.1		06.6	139	11.1		31.3	114	17.8		03.7	288	46.3		38.7	
22	139	13.0	185	11.5		06.0	154	11.8		30.5	129	19.7		04.0	303	48.9		38.6	
23	154	15.5	200	10.9		05.3	169	12.4		29.7	144	21.6		04.2	318	51.5		38.5	
24	169	17.9	215	10.4	-17	04.6	184	13.0	-7	29.0	159	23.6	+3	04.4	333	54.1	-3	38.5	
Dif	—		-6			+7	+6			+8	+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 09 ^m 8			Edad: 7 ^d 1 PHE { 4 ^h : 55:9 12 ^h : 56:2 20 ^h : 56:4 R°: 55 ^m																				
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°									
h	°	'	°	°	'	°	'	°	'	h	m	h	m	h	m	h	m							
0	177	30.4	-3	32.5	101	42.0	+23	30.6	21	60 N	4	57	5	46	6	27	8	14	56	2	34	55		
1	192	30.6		31.5	116	10.4	94	32.7	21	58	5	01	47	26			34	56		2	14	55		
2	207	30.8		30.5	130	38.7	93	34.7	20	56		04	47	24			8	50	57	1	57	55		
3	222	30.9		29.6	145	07.0	93	36.6	19	54		07	48	23			9	04	57		43	55		
4	237	31.1		28.6	159	35.2	92	38.3	17	52		09	49	22			17	56		31	55			
5	252	31.3	-3	27.6	174	03.3	91	+23	39.9	16	50	5	12	5	49	6	21	9	28	56	1	20	55	
6	267	31.4	-3	26.6	188	31.4	91	+23	41.4	15	45	5	16	5	50	6	19	9	50	56	0	58	54	
7	282	31.6		25.6	202	59.5	91		42.8	14	40		19	50	17			10	09	55		40	54	
8	297	31.8		24.7	217	27.5	90		44.0	12	35		21	50	15				24	55		24	55	
9	312	31.9		23.7	231	55.5	90		45.1	11	30		22	50	14			10	37	56		0	11	54
10	327	32.1		22.7	246	23.4	89		46.1	10	20		24	49	11			11	00	55	**	**	**	
11	342	32.3	-3	21.7	260	51.2	88	+23	46.9	8	10 N	5	24	5	48	6	09	11	20	55	**	**	**	
12	357	32.4	-3	20.7	275	19.1	89	+23	47.7	8	0	5	22	5	46	6	07	11	38	55	**	**	**	
13	12	32.6		19.7	289	46.8	87		48.3	6	10 S		19	43	04			11	57	54	23	46	56	
14	27	32.8		18.7	304	14.6	88		48.7	4	20		14	39	6	01		12	17	53		26	57	
15	42	32.9		17.8	318	42.3	87		49.1	4	30		06	34	5	58		40	53		23	03	58	
16	57	33.1		16.8	333	09.9	86		49.3	2	35	5	01	31	56			12	53	53	22	50	58	
17	72	33.3	-3	15.8	347	37.5	86	+23	49.4	1	40	4	55	5	27	5	54	13	09	52	22	34	59	
18	87	33.4	-3	14.8	2	05.1	86	+23	49.3	1	45	4	47	5	22	5	51	13	27	52	22	15	61	
19	102	33.6		13.8	16	32.6	85		49.1	2	50		37	16	48			13	51	50	21	52	62	
20	117	33.8		12.8	31	00.1	85		48.8	3	52		32	13	47			14	02	50		41	62	
21	132	33.9		11.9	45	27.5	84		48.4	4	54		26	09	45				14	50		29	62	
22	147	34.1		10.9	59	54.9	84		47.8	6	56		20	06	43				29	49	21	14	64	
23	162	34.3		09.9	74	22.3	84		47.1	7	58		13	5	01	41		14	46	48	20	57	65	
24	177	34.4	-3	08.9	88	49.6	83	+23	46.3	8	60 S	4	04	4	57	5	39	15	06	48	20	36	67	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 12 ^h 40 ^m 7		Mag: -4.0 PMG: 9 ^h 40 ^m		Mag: +1.1 PMG: 11 ^h 43 ^m		Mag: -2.1 PMG: 13 ^h 21 ^m		Mag: +0.4 PMG: 1 ^h 44 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	169	17.9	215	10.4	-17	04.6	184	13.0	-7	29.0	159	23.6	+3	04.4	333	54.1	-3	38.5
1	184	20.4	230	09.8		03.9	199	13.7		28.2	174	25.5		04.7	348	56.7		38.4
2	199	22.9	245	09.2		03.3	214	14.3		27.4	189	27.4		04.9	3	59.4		38.3
3	214	25.3	260	08.6		02.6	229	14.9		26.7	204	29.3		05.2	19	02.0		38.3
4	229	27.8	275	08.1		01.9	244	15.6		25.9	219	31.3		05.4	34	04.6		38.2
5	244	30.2	290	07.5	-17	01.2	259	16.2	-7	25.1	234	33.2	+3	05.6	49	07.2	-3	38.1
6	259	32.7	305	06.9	-17	00.5	274	16.8	-7	24.4	249	35.1	+3	05.9	64	09.8	-3	38.1
7	274	35.2	320	06.4	-16	59.9	289	17.5		23.6	264	37.0		06.1	79	12.4		38.0
8	289	37.6	335	05.8		59.2	304	18.1		22.8	279	38.9		06.3	94	15.1		37.9
9	304	40.1	350	05.2		58.5	319	18.8		22.1	294	40.9		06.6	109	17.7		37.8
10	319	42.6	5	04.7		57.8	334	19.4		21.3	309	42.8		06.8	124	20.3		37.8
11	334	45.0	20	04.1	-16	57.1	349	20.0	-7	20.5	324	44.7	+3	07.0	139	22.9	-3	37.7
12	349	47.5	35	03.5	-16	56.4	4	20.7	-7	19.8	339	46.6	+3	07.3	154	25.5	-3	37.6
13	4	50.0	50	03.0		55.8	19	21.3		19.0	354	48.6		07.5	169	28.1		37.6
14	19	52.4	65	02.4		55.1	34	21.9		18.2	9	50.5		07.7	184	30.8		37.5
15	34	54.9	80	01.8		54.4	49	22.6		17.5	24	52.4		08.0	199	33.4		37.4
16	49	57.3	95	01.3		53.7	64	23.2		16.7	39	54.3		08.2	214	36.0		37.4
17	64	59.8	110	00.7	-16	53.0	79	23.8	-7	15.9	54	56.2	+3	08.4	229	38.6	-3	37.3
18	80	02.3	125	00.1	-16	52.3	94	24.5	-7	15.2	69	58.2	+3	08.7	244	41.2	-3	37.2
19	95	04.7	139	59.6		51.6	109	25.1		14.4	85	00.1		08.9	259	43.9		37.1
20	110	07.2	154	59.0		50.9	124	25.8		13.6	100	02.0		09.1	274	46.5		37.1
21	125	09.7	169	58.4		50.2	139	26.4		12.9	115	03.9		09.4	289	49.1		37.0
22	140	12.1	184	57.9		49.5	154	27.0		12.1	130	05.8		09.6	304	51.7		36.9
23	155	14.6	199	57.3		48.8	169	27.7		11.3	145	07.8		09.8	319	54.3		36.9
24	170	17.1	214	56.8	-16	48.2	184	28.3	-7	10.6	160	09.7	+3	10.1	334	56.9	-3	36.8
Dif	—		-6		+7		+6		+8		+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: 8 ^d 1	PHE	SD: 15 ^h 4			PMG: 18 ^h 46 ^m	R ^o : 55 ^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	177	34.4	-3 08.9	88	49.6	+23 46.3	10	60 N	17 56	18 38	19 27	9 10 76	3 29 39		
1	192	34.6		103	16.9 83		45.3	58	58	37	23	30 73	3 09 41		
2	207	34.8	06.9	117	44.2 83		44.2	56	59	36	19	9 47 70	2 52 44		
3	222	34.9	06.0	132	11.4 82		42.9	54	17 59	35	16	10 01 69	38 45		
4	237	35.1	05.0	146	38.6 82		41.5	52	18 00	34	13	13 68	26 46		
5	252	35.3	-3 04.0	161	05.8 82	+23 40.0	15	50	18 01	18 33	19 11	10 24 66	2 15 47		
6	267	35.4	-3 03.0	175	32.9 81	+23 38.4	16	45	18 03	18 32	19 06	10 46 65	1 52 49		
7	282	35.6	02.0	190	00.0 81		36.6	40	04	31	03	11 04 63	34 50		
8	297	35.8	-3 01.0	204	27.1 81		34.7	35	06	31	19 00	19 62	19 50		
9	312	36.0	-3 00.0	218	54.2 81		32.6	30	07	31	18 58	33 60	1 05 52		
10	327	36.1	-2 59.1	233	21.2 80		30.4	20	09	31	56	11 55 59	0 43 52		
11	342	36.3	-2 58.1	247	48.2 80	+23 28.1	23	10 N	18 11	18 32	18 56	12 15 56	0 23 54		
12	357	36.5	-2 57.1	262	15.1 79	+23 25.6	25	0	18 13	18 34	18 58	12 33 55	0 04 55		
13	12	36.6	56.1	276	42.1 80		23.0	10 S	15	36	19 00	12 51 54	** ** *		
14	27	36.8	55.1	291	09.0 79		20.3	20	17	39	05	13 10 52	** ** *		
15	42	37.0	54.1	305	35.9 79		17.4	30	20	44	12	33 50	** ** *		
16	57	37.1	53.2	320	02.8 79		14.4	35	22	47	17	13 46 49	23 48 64		
17	72	37.3	-2 52.2	334	29.7 79	+23 11.2	32	40	18 23	18 51	19 22	14 01 47	23 33 66		
18	87	37.5	-2 51.2	348	56.5 78	+23 07.9	33	45	18 26	18 55	19 30	14 19 45	23 16 68		
19	102	37.7	50.2	3	23.3 78		04.5	50	28	19 01	39	41 43	22 54 71		
20	117	37.8	49.2	17	50.1 78	+23 00.9	36	52	30	03	44	14 52 42	43 73		
21	132	38.0	48.2	32	16.9 78	+22 57.2	37	54	31	07	49	15 04 40	31 75		
22	147	38.2	47.2	46	43.7 78		53.4	56	32	10	19 55	18 38	18 76		
23	162	38.3	46.3	61	10.5 78		49.4	58	34	14	20 02	34 36	22 02 79		
24	177	38.5	-2 45.3	75	37.2 77	+22 45.3	41	60 S	18 36	19 18	20 10	15 54 32	21 43 82		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG 12 ^h 36 ^m 8		Mag: -4.0 PMG: 9 ^h 41 ^m			Mag: +1.1 PMG: 11 ^h 42 ^m			Mag: -2.1 PMG: 13 ^h 18 ^m			Mag: +0.4 PMG: 1 ^h 40 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	
0	170	17.1	214	56.8	-16 48.2	184	28.3	-7 10.6	160	09.7	+3 10.1	334	56.9	-3 36.8	
1	185	19.5	229	56.2	47.5	199	28.9	09.8	175	11.6	10.3	349	59.6	36.7	
2	200	22.0	244	55.6	46.8	214	29.6	09.0	190	13.5	10.5	5	02.2	36.7	
3	215	24.5	259	55.1	46.1	229	30.2	08.3	205	15.5	10.8	20	04.8	36.6	
4	230	26.9	274	54.5	45.4	244	30.9	07.5	220	17.4	11.0	35	07.4	36.5	
5	245	29.4	289	53.9	-16 44.7	259	31.5	-7 06.7	235	19.3	+3 11.2	50	10.0	-3 36.4	
6	260	31.8	304	53.4	-16 44.0	274	32.1	-7 06.0	250	21.2	+3 11.5	65	12.7	-3 36.4	
7	275	34.3	319	52.8	43.3	289	32.8	05.2	265	23.1	11.7	80	15.3	36.3	
8	290	36.8	334	52.3	42.6	304	33.4	04.4	280	25.1	11.9	95	17.9	36.2	
9	305	39.2	349	51.7	41.9	319	34.1	03.7	295	27.0	12.2	110	20.5	36.2	
10	320	41.7	4	51.1	41.1	334	34.7	02.9	310	28.9	12.4	125	23.1	36.1	
11	335	44.2	19	50.6	-16 40.4	349	35.3	-7 02.1	325	30.8	+3 12.6	140	25.7	-3 36.0	
12	350	46.6	34	50.0	-16 39.7	4	36.0	-7 01.4	340	32.7	+3 12.9	155	28.4	-3 35.9	
13	5	49.1	49	49.5	39.0	19	36.6	-7 00.6	355	34.7	13.1	170	31.0	35.9	
14	20	51.6	64	48.9	38.3	34	37.2	-6 59.8	10	36.6	13.3	185	33.6	35.8	
15	35	54.0	79	48.3	37.6	49	37.9	59.1	25	38.5	13.6	200	36.2	35.7	
16	50	56.5	94	47.8	36.9	64	38.5	58.3	40	40.4	13.8	215	38.8	35.7	
17	65	59.0	109	47.2	-16 36.2	79	39.2	-6 57.5	55	42.3	+3 14.0	230	41.5	-3 35.6	
18	81	01.4	124	46.7	-16 35.5	94	39.8	-6 56.8	70	44.3	+3 14.3	245	44.1	-3 35.5	
19	96	03.9	139	46.1	34.8	109	40.4	56.0	85	46.2	14.5	260	46.7	35.4	
20	111	06.3	154	45.5	34.1	124	41.1	55.2	100	48.1	14.7	275	49.3	35.4	
21	126	08.8	169	45.0	33.4	139	41.7	54.4	115	50.0	15.0	290	51.9	35.3	
22	141	11.3	184	44.4	32.6	154	42.4	53.7	130	51.9	15.2	305	54.6	35.2	
23	156	13.7	199	43.9	31.9	169	43.0	52.9	145	53.9	15.4	320	57.2	35.2	
24	171	16.2	214	43.3	-16 31.2	184	43.6	-6 52.1	160	55.8	+3 15.7	335	59.8	-3 35.1	
Dif	—		-6	+7		+6	+8		+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: 9 ^d 1	PHE { 4 ^h : 57 ^m /6 12 ^h : 57 ^m /9 20 ^h : 58 ^m /3	SD: 15 ^m /6																		
	PMG: 12 ^h 09 ^m 3					PMG: 19 ^h 41 ^m				R°: 55 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°									
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m								
0	177	38.5	-2	45.3		75	37.2	+22	45.3	4	51	5	40	6	21	10	26	88	4	08	26			
1	192	38.7		44.3		90	04.0		41.0	55	41		20		43	84		3	50	30				
2	207	38.8		43.3		104	30.7		36.6	4	59	42	19		10	57	82		36	32				
3	222	39.0		42.3		118	57.4		32.1	5	02	43	18		11	10	79		23	35				
4	237	39.2		41.3		133	24.1		27.4	05	44		18		21	76		12	37					
5	252	39.4	-2	40.3		147	50.8	+22	22.6	5	07	5	45	6	17	11	30	75	3	02	38			
6	267	39.5	-2	39.4		162	17.5	+22	17.6	5	12	5	46	6	15	11	51	71	2	41	42			
7	282	39.7		38.4		176	44.1		12.6	16	47		14		12	07	69		24	44				
8	297	39.9		37.4		191	10.8		07.3	18	48		13		21	66		2	09	47				
9	312	40.0		36.4		205	37.5	+22	02.0	20	48		12		33	64		1	57	48				
10	327	40.2		35.4		220	04.1	+21	56.5	22	48		10		12	54	60		35	51				
11	342	40.4	-2	34.4		234	30.8	+21	50.8	5	22	5	47	6	08	13	11	58	1	17	53			
12	357	40.6	-2	33.4		248	57.4	+21	45.1	5	21	5	45	6	06	13	28	55	0	59	55			
13	12	40.7		32.5		263	24.1		39.2	19	43		04		13	45	52		42	57				
14	27	40.9		31.5		277	50.7		33.1	14	40		6	02	14	02	50		23	59				
15	42	41.1		30.5		292	17.4		26.9	07	35		5	59		23	46		0	01	62			
16	57	41.3		29.5		306	44.0		20.6	5	03	32	58		35	44		**	**	**				
17	72	41.4	-2	28.5		321	10.7	+21	14.2	4	57	5	29	5	56	14	48	42	**	**	**			
18	87	41.6	-2	27.5		335	37.3	+21	07.6	4	50	5	24	5	54	15	04	39	**	**	**			
19	102	41.8		26.5		350	04.0	+21	00.9	40	19	51			24	35		**	**	**				
20	117	42.0		25.6		4	30.6	+20	54.0	36	16	50			34	33		23	56	80				
21	132	42.1		24.6		18	57.3		47.0	30	13	49			44	31		46	82					
22	147	42.3		23.6		33	23.9		39.9	25	10	48			15	56	28		34	86				
23	162	42.5		22.6		47	50.6		32.6	18	06	46			16	10	25		21	89				
24	177	42.6	-2	21.6		62	17.3	+20	25.2	4	10	5	02	5	44	16	26	21	23	05	94			
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO									
	PMG: 12 ^h 32 ^m 9		Mag: -4.0 PMG: 9 ^h 41 ^m				Mag: +1.1 PMG: 11 ^h 41 ^m				Mag: -2.1 PMG: 13 ^h 15 ^m				Mag: +0.4 PMG: 1 ^h 36 ^m									
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		hG ♅	Dec								
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'						
0	171	16.2	214	43.3	-16	31.2	184	43.6	-6	52.1	160	55.8	+3	15.7	335	59.8	-3	35.1						
1	186	18.7	229	42.8		30.5	199	44.3		51.4	175	57.7		15.9	351	02.4		35.0						
2	201	21.1	244	42.2		29.8	214	44.9		50.6	190	59.6		16.1	6	05.0		34.9						
3	216	23.6	259	41.7		29.1	229	45.6		49.8	206	01.5		16.4	21	07.7		34.9						
4	231	26.1	274	41.1		28.3	244	46.2		49.1	221	03.5		16.6	36	10.3		34.8						
5	246	28.5	289	40.5	-16	27.6	259	46.9	-6	48.3	236	05.4	+3	16.8	51	12.9	-3	34.7						
6	261	31.0	304	40.0	-16	26.9	274	47.5	-6	47.5	251	07.3	+3	17.1	66	15.5	-3	34.7						
7	276	33.5	319	39.4		26.2	289	48.1		46.7	266	09.2		17.3	81	18.2		34.6						
8	291	35.9	334	38.9		25.5	304	48.8		46.0	281	11.1		17.5	96	20.8		34.5						
9	306	38.4	349	38.3		24.7	319	49.4		45.2	296	13.1		17.8	111	23.4		34.5						
10	321	40.8	4	37.8		24.0	334	50.1		44.4	311	15.0		18.0	126	26.0		34.4						
11	336	43.3	19	37.2	-16	23.3	349	50.7	-6	43.7	326	16.9	+3	18.2	141	28.6	-3	34.3						
12	351	45.8	34	36.7	-16	22.6	4	51.3	-6	42.9	341	18.8	+3	18.5	156	31.3	-3	34.2						
13	6	48.2	49	36.1		21.8	19	52.0		42.1	356	20.7		18.7	171	33.9		34.2						
14	21	50.7	64	35.6		21.1	34	52.6		41.4	11	22.7		18.9	186	36.5		34.1						
15	36	53.2	79	35.0		20.4	49	53.3		40.6	26	24.6		19.2	201	39.1		34.0						
16	51	55.6	94	34.5		19.7	64	53.9		39.8	41	26.5		19.4	216	41.7		33.9						
17	66	58.1	109	33.9	-16	18.9	79	54.6	-6	39.0	56	28.4	+3	19.6	231	44.4	-3	33.9						
18	82	00.6	124	33.4	-16	18.2	94	55.2	-6	38.3	71	30.3	+3	19.9	246	47.0	-3	33.8						
19	97	03.0	139	32.8		17.5	109	55.8		37.5	86	32.2		20.1	261	49.6		33.7						
20	112	05.5	154	32.3		16.7	124	56.5		36.7	101	34.2		20.4	276	52.2		33.7						
21	127	07.9	169	31.7		16.0	139	57.1		36.0	116	36.1		20.6	291	54.9		33.6						
22	142	10.4	184	31.2		15.3	154	57.8		35.2	131	38.0		20.8	306	57.5		33.5						
23	157	12.9	199	30.6		14.5	169	58.4		34.4	146	39.9		21.1	322	00.1		33.4						
24	172	15.3	214	30.1	-16	13.8	184	59.1	-6	33.6	161	41.8	+3	21.3	337	02.7	-3	33.4						
Dif	—		-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 09 ^m 0			Edad: 10 ^d 1 PHE { 4 ^h : 58/6 12 ^h : 58/9 20 ^h : 59/2 PMG: 20 ^h 36 ^m R°: 55 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m
0	177	42.6	-2 21.6	62	17.3	+20 25.2	75	60 N	18 01	18 43	19 32	11 54 96	4 34 18		
1	192	42.8		76	44.0		77	58	02	41	27	12 07 92	20 22		
2	207	43.0		91	10.6		76	56	03	40	23	19 88	4 08 25		
3	222	43.2		105	37.3	+20 02.3	77	54	03	38	20	29 85	3 58 28		
4	237	43.3		120	04.0	+19 54.3	80	52	04	37	17	37 83	49 30		
5	252	43.5	-2 16.7	134	30.7	+19 46.3	80	50	18 04	18 37	19 14	12 45 81	3 40 32		
6	267	43.7	-2 15.7	148	57.5	+19 38.1	82	45	18 05	18 35	19 09	13 02 76	3 23 36		
7	282	43.9		163	24.2		83	40	06	33	05	16 72	3 08 40		
8	297	44.0		177	50.9		84	35	07	32	02	27 69	2 56 42		
9	312	44.2		192	17.7		86	30	08	32	19 00	37 67	45 45		
10	327	44.4		206	44.4	+19 04.1	87	20	09	31	18 57	13 54 63	26 49		
11	342	44.6	-2 10.8	221	11.2	+18 55.3	88	10 N	18 11	18 32	18 56	14 09 59	2 10 52		
12	357	44.7	-2 09.8	235	38.0	+18 46.4	89	0	18 12	18 33	18 57	14 23 55	1 54 56		
13	12	44.9		250	04.8		91	10 S	14	35	18 59	37 52	39 58		
14	27	45.1		264	31.6		92	20	15	38	19 03	14 52 48	22 62		
15	42	45.3		278	58.4		93	30	18	41	09	15 09 43	1 03 66		
16	57	45.4		293	25.2	+18 09.3	95	35	19	44	14	19 40	0 52 68		
17	72	45.6	-2 04.8	307	52.1	+17 59.8	95	40	18 20	18 47	19 19	15 30 38	0 39 71		
18	87	45.8	-2 03.8	322	18.9	+17 50.1	97	45	18 22	18 51	19 26	15 43 34	0 24 73		
19	102	46.0		336	45.8		98	50	24	56	35	15 59 30	0 05 78		
20	117	46.1		351	12.7		100	52	25	18 59	39	16 07 27	** ** *		
21	132	46.3	-2 00.9	5	39.6		100	54	26	19 01	44	15 25	** ** *		
22	147	46.5	-1 59.9	20	06.6	+17 10.1	102	56	27	04	49	24 22	** ** *		
23	162	46.7		34	33.5	+16 59.9	102	58	28	08	19 56	35 19	** ** *		
24	177	46.9	-1 57.9	49	00.4	+16 49.5	104	60 S	18 30	19 12	20 03	16 47 15	** ** *		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 12 ^h 28 ^m 9		Mag: -4.0 PMG: 9 ^h 42 ^m			Mag: +1.1 PMG: 11 ^h 40 ^m			Mag: -2.1 PMG: 13 ^h 12 ^m			Mag: +0.4 PMG: 1 ^h 32 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	
0	172	15.3	214 30.1	-16 13.8		184 59.1	-6 33.6		161 41.8	+3 21.3		337 02.7	-3 33.4		
1	187	17.8	229 29.5		13.1	199 59.7		32.9	176 43.8		21.5	352 05.3		33.3	
2	202	20.3	244 29.0		12.3	215 00.3		32.1	191 45.7		21.8	7 08.0		33.2	
3	217	22.7	259 28.4		11.6	230 01.0		31.3	206 47.6		22.0	22 10.6		33.2	
4	232	25.2	274 27.9		10.8	245 01.6		30.6	221 49.5		22.2	37 13.2		33.1	
5	247	27.7	289 27.3	-16 10.1		260 02.3	-6 29.8		236 51.4	+3 22.5		52 15.8	-3 33.0		
6	262	30.1	304 26.8	-16 09.4		275 02.9	-6 29.0		251 53.4	+3 22.7		67 18.5	-3 32.9		
7	277	32.6	319 26.2		08.6	290 03.6		28.2	266 55.3		22.9	82 21.1		32.9	
8	292	35.1	334 25.7		07.9	305 04.2		27.5	281 57.2		23.2	97 23.7		32.8	
9	307	37.5	349 25.1		07.1	320 04.9		26.7	296 59.1		23.4	112 26.3		32.7	
10	322	40.0	4 24.6		06.4	335 05.5		25.9	312 01.0		23.6	127 28.9		32.7	
11	337	42.4	19 24.1	-16 05.7		350 06.2	-6 25.1		327 02.9	+3 23.9		142 31.6	-3 32.6		
12	352	44.9	34 23.5	-16 04.9		5 06.8	-6 24.4		342 04.9	+3 24.1		157 34.2	-3 32.5		
13	7	47.4	49 23.0		04.2	20 07.4		23.6	357 06.8		24.3	172 36.8		32.4	
14	22	49.8	64 22.4		03.4	35 08.1		22.8	12 08.7		24.6	187 39.4		32.4	
15	37	52.3	79 21.9		02.7	50 08.7		22.1	27 10.6		24.8	202 42.1		32.3	
16	52	54.8	94 21.3		01.9	65 09.4		21.3	42 12.5		25.0	217 44.7		32.2	
17	67	57.2	109 20.8	-16 01.2		80 10.0	-6 20.5		57 14.5	+3 25.3		232 47.3	-3 32.2		
18	82	59.7	124 20.2	-16 00.4		95 10.7	-6 19.7		72 16.4	+3 25.5		247 49.9	-3 32.1		
19	98	02.2	139 19.7	-15 59.7		110 11.3		19.0	87 18.3		25.7	262 52.6		32.0	
20	113	04.6	154 19.2		58.9	125 12.0		18.2	102 20.2		26.0	277 55.2		31.9	
21	128	07.1	169 18.6		58.2	140 12.6		17.4	117 22.1		26.2	292 57.8		31.9	
22	143	09.6	184 18.1		57.4	155 13.3		16.6	132 24.0		26.4	308 00.4		31.8	
23	158	12.0	199 17.5		56.7	170 13.9		15.9	147 26.0		26.7	323 03.1		31.7	
24	173	14.5	214 17.0	-15 55.9		185 14.5	-6 15.1		162 27.9	+3 26.9		338 05.7	-3 31.6		
Dif	—		-5 +7		+6 +8		+8		+19 +2		+2		+26 +1		

UT	SOL			O LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16:1 PMG: 12 ^h 08 ^m 7			Edad: 11 ^d 1 PHE { 4 ^h : 59:5 12 ^h : 59:8 20 ^h : 60:1 Rº: 54 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	Rº	Hora	Rº
h	°	'	°	°	'	°	°	h	m	h	m	h	m	h	m
0	177	46.9	-1 57.9	49	00.4	+16 49.5	60 N	4 45	5 34	6 15	13 30	99	4 52	13	
1	192	47.0	56.9	63	27.4	80 38.9	58	49	35	14	39	95	42	17	
2	207	47.2	55.9	77	54.4	80 28.3	56	53	37	14	47	92	33	20	
3	222	47.4	55.0	92	21.4	80 17.6	54	4 57	38	13	13 54	89	26	22	
4	237	47.6	54.0	106	48.4	80 +16 06.7	52	5 00	39	13	14 00	86	19	25	
5	252	47.7	-1 53.0	121	15.5	81 +15 55.7	50	5 03	5 40	6 12	14 06	84	4 12	28	
6	267	47.9	-1 52.0	135	42.5	80 +15 44.7	45	5 08	5 42	6 12	14 18	79	3 59	32	
7	282	48.1	51.0	150	09.6	81 33.5	40	12	44	11	28	74	48	35	
8	297	48.3	50.0	164	36.7	81 22.2	35	15	45	10	36	71	38	39	
9	312	48.4	49.0	179	03.8	81 +15 10.8	30	18	45	09	44	68	30	41	
10	327	48.6	48.0	193	30.9	81 +14 59.3	20	20	46	08	14 57	62	15	46	
11	342	48.8	-1 47.1	207	58.0	81 +14 47.6	10 N	5 21	5 46	6 07	15 08	58	3 02	50	
12	357	49.0	-1 46.1	222	25.2	82 +14 35.9	0	5 21	5 45	6 05	15 18	54	2 50	54	
13	12	49.2	45.1	236	52.4	82 24.1	10 S	19	43	04	29	50	37	59	
14	27	49.3	44.1	251	19.6	82 12.2	20	15	41	03	40	45	24	62	
15	42	49.5	43.1	265	46.8	82 +14 00.1	30	09	37	01	52	41	09	67	
16	57	49.7	42.1	280	14.0	82 +13 48.0	35	5 05	34	6 00	15 59	38	2 00	70	
17	72	49.9	-1 41.1	294	41.2	82 +13 35.8	40	4 59	5 31	5 58	16 08	34	1 50	73	
18	87	50.0	-1 40.1	309	08.5	83 +13 23.4	45	4 52	5 27	5 57	16 17	31	1 37	78	
19	102	50.2	39.2	323	35.8	83 +13 11.0	50	44	22	55	29	25	23	82	
20	117	50.4	38.2	338	03.0	82 +12 58.5	52	39	20	54	34	23	16	85	
21	132	50.6	37.2	352	30.3	83 45.9	54	35	17	53	40	21	08	88	
22	147	50.8	36.2	6 57.7	84 33.2	127 56	56	29	14	52	46	18	1 00	90	
23	162	50.9	35.2	21 25.0	83 20.4	128 58	58	23	11	51	16 54	15	0 50	94	
24	177	51.1	-1 34.2	35 52.3	83 +12 07.5	129 60 S	60 S	4 16	5 07	5 49	17 02	11	0 39	97	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 12 ^h 25 ^m 0		Mag: -4.0 PMG: 9 ^h 43 ^m		Mag: +1.1 PMG: 11 ^h 39 ^m		Mag: -2.1 PMG: 13 ^h 08 ^m		Mag: +0.4 PMG: 1 ^h 27 ^m					
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	173	14.5	214	17.0	-15 55.9	185	14.5	-6 15.1	162	27.9	+3 26.9	338	05.7	-3 31.6
1	188	16.9	229	16.5	55.2	200	15.2	14.3	177	29.8	27.1	353	08.3	31.6
2	203	19.4	244	15.9	54.4	215	15.8	13.5	192	31.7	27.4	8	10.9	31.5
3	218	21.9	259	15.4	53.7	230	16.5	12.8	207	33.6	27.6	23	13.6	31.4
4	233	24.3	274	14.8	52.9	245	17.1	12.0	222	35.5	27.8	38	16.2	31.4
5	248	26.8	289	14.3	-15 52.1	260	17.8	-6 11.2	237	37.5	+3 28.1	53	18.8	-3 31.3
6	263	29.3	304	13.8	-15 51.4	275	18.4	-6 10.4	252	39.4	+3 28.3	68	21.4	-3 31.2
7	278	31.7	319	13.2	50.6	290	19.1	09.7	267	41.3	28.5	83	24.1	31.1
8	293	34.2	334	12.7	49.9	305	19.7	08.9	282	43.2	28.8	98	26.7	31.1
9	308	36.7	349	12.1	49.1	320	20.4	08.1	297	45.1	29.0	113	29.3	31.0
10	323	39.1	4 11.6	48.3	335	21.0	07.4	312	47.0	29.3	128	31.9	30.9	
11	338	41.6	19 11.1	-15 47.6	350	21.7	-6 06.6	327	49.0	+3 29.5	143	34.6	-3 30.8	
12	353	44.1	34 10.5	-15 46.8	5 22.3	-6 05.8	342	50.9	+3 29.7	158	37.2	-3 30.8		
13	8 46.5	49 10.0	46.1	20 23.0	05.0	357	52.8	30.0	173	39.8	30.7			
14	23 49.0	64 09.5	45.3	35 23.6	04.3	12 54.7	30.2	188	42.4	30.6				
15	38 51.4	79 08.9	44.5	50 24.3	03.5	27 56.6	30.4	203	45.1	30.6				
16	53 53.9	94 08.4	43.8	65 24.9	02.7	42 58.5	30.7	218	47.7	30.5				
17	68 56.4	109 07.9	-15 43.0	80 25.6	-6 01.9	58 00.5	+3 30.9	233	50.3	-3 30.4				
18	83 58.8	124 07.3	-15 42.2	95 26.2	-6 01.2	73 02.4	+3 31.1	248	52.9	-3 30.3				
19	99 01.3	139 06.8	41.5	110 26.9	-6 00.4	88 04.3	31.4	263	55.6	30.3				
20	114 03.8	154 06.3	40.7	125 27.5	-5 59.6	103 06.2	31.6	278	58.2	30.2				
21	129 06.2	169 05.7	39.9	140 28.2	58.8	118 08.1	31.8	294	00.8	30.1				
22	144 08.7	184 05.2	39.1	155 28.8	58.0	133 10.0	32.1	309	03.4	30.0				
23	159 11.2	199 04.7	38.4	170 29.4	57.3	148 12.0	32.3	324	06.1	30.0				
24	174 13.6	214 04.1	-15 37.6	185 30.1	-5 56.5	163 13.9	+3 32.5	339	08.7	-3 29.9				
Dif	—	-5	+8	+6	+8	+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 08 ^m 4			Edad: 12 ^d 1 PHE { 4 ^h : 60'4 12 ^h : 60'6 20 ^h : 60'9 PMG: 22 ^h 25 ^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	177	51.1	-1 34.2	35	52.3	+12 07.5	84	60 N	18 06	18 48	19 37	15 09 101	5 05 10		
1	192	51.3	33.2	50	19.7	+11 54.5	130	58	07	46	32	14 97	4 59 14		
2	207	51.5	32.2	64	47.1	41.5	130	56	07	44	28	19 93	53 17		
3	222	51.7	31.3	79	14.5	28.3	132	54	07	42	24	23 90	48 20		
4	237	51.8	30.3	93	41.9	15.1	132	52	07	41	21	26 88	44 22		
5	252	52.0	-1 29.3	108	09.3	+11 01.8	133	50	18 07	18 40	19 18	15 30 85	4 40 24		
6	267	52.2	-1 28.3	122	36.8	+10 48.4	134	45	18 08	18 37	19 12	15 37 80	4 31 29		
7	282	52.4	27.3	137	04.2	34.9	135	40	08	35	07	42 76	23 33		
8	297	52.6	26.3	151	31.7	21.4	135	35	09	34	04	47 73	17 36		
9	312	52.7	25.3	165	59.1	+10 07.7	137	30	09	33	19 01	52 69	11 40		
10	327	52.9	24.3	180	26.6	+9 54.0	137	20	10	32	18 58	15 59 64	4 01 45		
11	342	53.1	-1 23.3	194	54.1	+9 40.2	138	10 N	18 11	18 32	18 56	16 06 58	3 52 50		
12	357	53.3	-1 22.4	209	21.6	+9 26.4	138	0	18 12	18 32	18 56	16 12 54	3 44 54		
13	12	53.5	21.4	223	49.2	+9 12.5	139	10 S	13	34	18 58	19 49	36 58		
14	27	53.6	20.4	238	16.7	+8 58.5	140	20	14	36	19 01	25 45	26 63		
15	42	53.8	19.4	252	44.2	44.4	141	30	15	39	07	33 39	16 68		
16	57	54.0	18.4	267	11.8	30.3	141	35	16	41	11	37 36	10 72		
17	72	54.2	-1 17.4	281	39.3	+8 16.1	142	40	18 17	18 44	19 16	16 42 32	3 03 75		
18	87	54.4	-1 16.4	296	06.9	+8 01.8	143	45	18 18	18 47	19 22	16 48 28	2 55 79		
19	102	54.5	15.4	310	34.5	+7 47.5	143	50	20	52	30	54 24	45 85		
20	117	54.7	14.5	325	02.1	33.1	144	52	20	54	34	16 57 22	41 87		
21	132	54.9	13.5	339	29.7	18.6	145	54	21	56	39	17 01 19	36 89		
22	147	55.1	12.5	353	57.2	+7 04.1	145	56	22	18 59	44	04 17	30 93		
23	162	55.3	11.5	8	24.8	+6 49.6	145	58	23	19 02	50	09 13	24 96		
24	177	55.4	-1 10.5	22	52.5	+6 35.0	146	60 S	18 24	19 06	19 56	17 13 10	2 16 100		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 12 ^h 21 ^m 1		Mag: -4.0 PMG: 9 ^h 44 ^m		Mag: +1.1 PMG: 11 ^h 37 ^m		Mag: -2.1 PMG: 13 ^h 05 ^m		Mag: +0.4 PMG: 1 ^h 23 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	174	13.6	214	04.1	-15	37.6	185	30.1	-5	56.5
1	189	16.1	229	03.6		36.8	200	30.7		55.7
2	204	18.5	244	03.1		36.0	215	31.4		54.9
3	219	21.0	259	02.5		35.3	230	32.0		54.2
4	234	23.5	274	02.0		34.5	245	32.7		53.4
5	249	25.9	289	01.5	-15	33.7	260	33.3	-5	52.6
6	264	28.4	304	00.9	-15	32.9	275	34.0	-5	51.8
7	279	30.9	319	00.4		32.2	290	34.6		51.1
8	294	33.3	333	59.9		31.4	305	35.3		50.3
9	309	35.8	348	59.3		30.6	320	35.9		49.5
10	324	38.3	3	58.8		29.8	335	36.6		48.7
11	339	40.7	18	58.3	-15	29.0	350	37.2	-5	48.0
12	354	43.2	33	57.7	-15	28.3	5	37.9	-5	47.2
13	9	45.7	48	57.2		27.5	20	38.5		46.4
14	24	48.1	63	56.7		26.7	35	39.2		45.6
15	39	50.6	78	56.2		25.9	50	39.9		44.9
16	54	53.0	93	55.6		25.1	65	40.5		44.1
17	69	55.5	108	55.1	-15	24.3	80	41.2	-5	43.3
18	84	58.0	123	54.6	-15	23.6	95	41.8	-5	42.5
19	100	00.4	138	54.1		22.8	110	42.5		41.7
20	115	02.9	153	53.5		22.0	125	43.1		41.0
21	130	05.4	168	53.0		21.2	140	43.8		40.2
22	145	07.8	183	52.5		20.4	155	44.4		39.4
23	160	10.3	198	52.0		19.6	170	45.1		38.6
24	175	12.8	213	51.4	-15	18.8	185	45.7	-5	37.9
Dif	—		-5	+8		+7	+8	+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: 13 ^d 1 PHE	SD: 16 ^h 6																
	PMG: 12 ^h 08 ^m 2				PMG: 23 ^h 19 ^m																
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico	Civil		Hora	R°	Hora	R°							
h	°	'	°	°	'	°	'	h	m	h	m	h	m	m							
0	177	55.4	-1	22	52.5	+6	35.0	60	N	4	38	5	28	6	09	16	50	101	5	15	10
1	192	55.6		37	20.1		20.3	58			43	30	09		51	98		13	12		
2	207	55.8		51	47.7	+6	05.6	56			48	32	09		52	95		10	16		
3	222	56.0		66	15.3	+5	50.8	54			52	33	08		53	92		08	18		
4	237	56.2		80	42.9		36.0	52			55	35	08		54	89		06	21		
5	252	56.3	-1	95	10.5	+5	21.2	50		4	58	5	36	6	08	16	55	86	5	04	23
6	267	56.5	-1	109	38.2	+5	06.3	45		5	04	5	39	6	08	16	57	81	5	00	28
7	282	56.7		124	05.8	+4	51.3	40			09	41	07		16	58	77	4	56	32	
8	297	56.9		138	33.4		36.4	35			13	42	07		17	00	72		53	36	
9	312	57.1		153	01.0		21.3	30			15	43	07		01	69		51	38		
10	327	57.3	-1	167	28.7	+4	06.3	20			19	44	06		03	63		46	44		
11	342	57.4	-0	181	56.3	+3	51.2	10	N	5	20	5	45	6	06	17	04	59	4	42	49
12	357	57.6	-0	196	23.9	+3	36.1	0		5	20	5	44	6	05	17	06	54	4	38	54
13	12	57.8		210	51.5		20.9	10	S		19	43	04		08	49		34	58		
14	27	58.0		225	19.1	+3	05.7	20			15	41	03		10	44		29	64		
15	42	58.2		239	46.8	+2	50.5	30			10	38	02		12	39		24	70		
16	57	58.4		254	14.4		35.3	35			06	36	01		13	36		22	72		
17	72	58.5	-0	268	42.0	+2	20.0	40		5	01	5	33	6	00	17	14	32	4	18	76
18	87	58.7	-0	283	09.6	+2	04.7	45		4	55	5	30	5	59	17	16	28	4	14	81
19	102	58.9		297	37.1	+1	49.4	50			47	26	58		18	23		10	86		
20	117	59.1		312	04.7		34.1	52			43	23	57		19	20		08	88		
21	132	59.3		326	32.3		18.8	54			39	21	57		20	18		05	91		
22	147	59.4		340	59.8	+1	03.4	56			34	19	56		21	15		03	94		
23	162	59.6		355	27.4	+0	48.1	58			28	16	55		22	12		4	00	97	
24	177	59.8	-0	9	54.9	+0	32.7	60	S	4	21	5	12	5	54	17	23	9	3	56	101

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 12 ^h 17 ^m 1		Mag: -4.0 PMG: 9 ^h 45 ^m		Mag: +1.1 PMG: 11 ^h 36 ^m		Mag: -2.1 PMG: 13 ^h 02 ^m		Mag: +0.4 PMG: 1 ^h 19 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	175	12.8	213	51.4	-15	18.8	185	45.7	-5	37.9	163	59.9	+3	38.2	340	11.7	-3	28.1
1	190	15.2	228	50.9		18.0	200	46.4		37.1	179	01.8		38.4	355	14.4		28.1
2	205	17.7	243	50.4		17.2	215	47.0		36.3	194	03.7		38.6	10	17.0		28.0
3	220	20.1	258	49.9		16.5	230	47.7		35.5	209	05.6		38.9	25	19.6		27.9
4	235	22.6	273	49.3		15.7	245	48.3		34.7	224	07.5		39.1	40	22.2		27.8
5	250	25.1	288	48.8	-15	14.9	260	49.0	-5	34.0	239	09.4	+3	39.3	55	24.9	-3	27.8
6	265	27.5	303	48.3	-15	14.1	275	49.6	-5	33.2	254	11.4	+3	39.6	70	27.5	-3	27.7
7	280	30.0	318	47.8		13.3	290	50.3		32.4	269	13.3		39.8	85	30.1		27.6
8	295	32.5	333	47.2		12.5	305	50.9		31.6	284	15.2		40.0	100	32.8		27.6
9	310	34.9	348	46.7		11.7	320	51.6		30.9	299	17.1		40.3	115	35.4		27.5
10	325	37.4	3	46.2		10.9	335	52.2		30.1	314	19.0		40.5	130	38.0		27.4
11	340	39.9	18	45.7	-15	10.1	350	52.9	-5	29.3	329	20.9	+3	40.7	145	40.6	-3	27.3
12	355	42.3	33	45.1	-15	09.3	5	53.5	-5	28.5	344	22.8	+3	41.0	160	43.3	-3	27.3
13	10	44.8	48	44.6		08.5	20	54.2		27.7	359	24.8		41.2	175	45.9		27.2
14	25	47.3	63	44.1		07.7	35	54.9		27.0	14	26.7		41.4	190	48.5		27.1
15	40	49.7	78	43.6		06.9	50	55.5		26.2	29	28.6		41.7	205	51.2		27.0
16	55	52.2	93	43.1		06.1	65	56.2		25.4	44	30.5		41.9	220	53.8		27.0
17	70	54.6	108	42.5	-15	05.3	80	56.8	-5	24.6	59	32.4	+3	42.2	235	56.4	-3	26.9
18	85	57.1	123	42.0	-15	04.5	95	57.5	-5	23.8	74	34.3	+3	42.4	250	59.0	-3	26.8
19	100	59.6	138	41.5		03.7	110	58.1		23.1	89	36.2		42.6	266	01.7		26.7
20	116	02.0	153	41.0		02.9	125	58.8		22.3	104	38.2		42.9	281	04.3		26.7
21	131	04.5	168	40.5		02.0	140	59.4		21.5	119	40.1		43.1	296	06.9		26.6
22	146	07.0	183	40.0		01.2	156	00.1		20.7	134	42.0		43.3	311	09.6		26.5
23	161	09.4	198	39.4	-15	00.4	171	00.7		20.0	149	43.9		43.6	326	12.2		26.4
24	176	11.9	213	38.9	-14	59.6	186	01.4	-5	19.2	164	45.8	+3	43.8	341	14.8	-3	26.4
Dif	—		-5		+8		+7		+8		+19		+2		+26		+1	

UT	SOL			☉ LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna			Puesta de Luna		
	SD: 16 ^d 1 PMG: 12 ^h 07 ^m 9			Edad: 14 ^d 1 PHE { 4 ^h : 61 ^h 4 12 ^h : 61 ^h 5 20 ^h : 61 ^h 5 R°: ***m														
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°			
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m			
0	177	59.8	-0 46.8	9	54.9	+0 32.7	86	60 N	18 11	18 53	19 43	18 31 103	5 25 10					
1	193	00.0	45.8	24	22.5	17.3	154	58	11	50	37	29 98	25 13					
2	208	00.2	44.8	38	50.0	+0 01.9	154	56	11	48	32	27 95	26 16					
3	223	00.4	43.8	53	17.5	-0 13.5	154	54	11	46	28	25 92	26 19					
4	238	00.5	42.8	67	45.0	28.9	154	52	11	44	24	23 89	27 21					
5	253	00.7	-0 41.8	82	12.5	-0 44.3	154	50	18 11	18 43	19 21	18 21 87	5 27 24					
6	268	00.9	-0 40.9	96	39.9	-0 59.7	154	45	18 11	18 40	19 14	18 18 81	5 28 28					
7	283	01.1	39.9	111	07.4	-1 15.1	154	40	11	38	09	15 77	28 33					
8	298	01.3	38.9	125	34.8	30.5	154	35	11	36	05	12 74	29 36					
9	313	01.5	37.9	140	02.2	-1 45.9	154	30	11	34	19 02	10 70	29 40					
10	328	01.6	36.9	154	29.6	-2 01.3	154	20	11	33	18 58	06 65	30 45					
11	343	01.8	-0 35.9	168	57.0	-2 16.6	153	10 N	18 11	18 32	18 56	18 03 60	5 31 50					
12	358	02.0	-0 34.9	183	24.4	-2 32.0	154	0	18 11	18 32	18 56	18 00 55	5 32 54					
13	13	02.2	33.9	197	51.7	-2 47.4	154	10 S	12	32	18 57	17 57 51	32 59					
14	28	02.4	33.0	212	19.0	-3 02.7	153	20	12	34	19 00	54 46	33 64					
15	43	02.6	32.0	226	46.3	18.0	153	30	13	37	04	51 40	34 69					
16	58	02.7	31.0	241	13.6	33.3	153	35	13	38	08	49 37	34 73					
17	73	02.9	-0 30.0	255	40.9	-3 48.6	153	40	18 14	18 41	19 12	17 46 34	5 34 77					
18	88	03.1	-0 29.0	270	08.1	-4 03.8	152	45	18 14	18 44	19 18	17 44 29	5 35 81					
19	103	03.3	28.0	284	35.3	19.0	152	50	15	47	26	41 24	36 86					
20	118	03.5	27.0	299	02.5	34.2	152	52	16	49	29	39 23	36 89					
21	133	03.7	26.0	313	29.7	-4 49.4	152	54	16	51	33	38 20	36 92					
22	148	03.9	25.0	327	56.8	-5 04.5	151	56	17	54	38	36 17	37 94					
23	163	04.0	24.1	342	23.9	19.6	151	58	17	56	43	34 14	37 98					
24	178	04.2	-0 23.1	356	51.0	-5 34.7	151	60 S	18 18	18 59	19 50	17 32 11	5 37 102					
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO					
	PMG: 12 ^h 13 ^m 2			Mag: -4.0 PMG: 9 ^h 46 ^m			Mag: +1.1 PMG: 11 ^h 35 ^m			Mag: -2.1 PMG: 12 ^h 59 ^m			Mag: +0.4 PMG: 1 ^h 15 ^m					
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec				
h	°	'	°	°	'	°	'	°	°	'	°	°	'	°	'			
0	176	11.9	213 38.9	-14 59.6	186 01.4	-5 19.2	164 45.8	+3 43.8	341 14.8	-3 26.4								
1	191	14.4	228 38.4	58.8	201 02.1	18.4	179 47.7	44.0	356 17.4	26.3								
2	206	16.8	243 37.9	58.0	216 02.7	17.6	194 49.6	44.3	11 20.1	26.2								
3	221	19.3	258 37.4	57.2	231 03.4	16.8	209 51.6	44.5	26 22.7	26.2								
4	236	21.7	273 36.9	56.4	246 04.0	16.1	224 53.5	44.7	41 25.3	26.1								
5	251	24.2	288 36.3	-14 55.6	261 04.7	-5 15.3	239 55.4	+3 45.0	56 28.0	-3 26.0								
6	266	26.7	303 35.8	-14 54.8	276 05.3	-5 14.5	254 57.3	+3 45.2	71 30.6	-3 25.9								
7	281	29.1	318 35.3	53.9	291 06.0	13.7	269 59.2	45.4	86 33.2	25.9								
8	296	31.6	333 34.8	53.1	306 06.6	12.9	285 01.1	45.7	101 35.9	25.8								
9	311	34.1	348 34.3	52.3	321 07.3	12.2	300 03.0	45.9	116 38.5	25.7								
10	326	36.5	3 33.8	51.5	336 07.9	11.4	315 05.0	46.1	131 41.1	25.6								
11	341	39.0	18 33.3	-14 50.7	351 08.6	-5 10.6	330 06.9	+3 46.4	146 43.7	-3 25.6								
12	356	41.5	33 32.7	-14 49.9	6 09.3	-5 09.8	345 08.8	+3 46.6	161 46.4	-3 25.5								
13	11	43.9	48 32.2	49.0	21 09.9	09.0	0 10.7	46.8	176 49.0	25.4								
14	26	46.4	63 31.7	48.2	36 10.6	08.3	15 12.6	47.1	191 51.6	25.3								
15	41	48.9	78 31.2	47.4	51 11.2	07.5	30 14.5	47.3	206 54.3	25.3								
16	56	51.3	93 30.7	46.6	66 11.9	06.7	45 16.4	47.5	221 56.9	25.2								
17	71	53.8	108 30.2	-14 45.8	81 12.5	-5 05.9	60 18.4	+3 47.8	236 59.5	-3 25.1								
18	86	56.2	123 29.7	-14 44.9	96 13.2	-5 05.1	75 20.3	+3 48.0	252 02.2	-3 25.0								
19	101	58.7	138 29.2	44.1	111 13.9	04.4	90 22.2	48.3	267 04.8	25.0								
20	117	01.2	153 28.6	43.3	126 14.5	03.6	105 24.1	48.5	282 07.4	24.9								
21	132	03.6	168 28.1	42.5	141 15.2	02.8	120 26.0	48.7	297 10.0	24.8								
22	147	06.1	183 27.6	41.6	156 15.8	02.0	135 27.9	49.0	312 12.7	24.7								
23	162	08.6	198 27.1	40.8	171 16.5	01.2	150 29.8	49.2	327 15.3	24.7								
24	177	11.0	213 26.6	-14 40.0	186 17.1	-5 00.5	165 31.7	+3 49.4	342 17.9	-3 24.6								
Dif	—			-5	+8	+7	+8	+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 07 ^m 6			Edad: 15 ^d 1	PHE { 4 ^h : 61 ^m 5 12 ^h : 61 ^m 4 20 ^h : 61 ^m 3	R ^o : 55 ^m										
	hG ☉	Dec	hG ☾	Dif			Dec		Dif	Náutico		Civil	Hora	R ^o	Hora	R ^o
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m
0	178	04.2	-0 23.1	356	51.0	-5	34.7	60 N	4	32	5	21	6	03	20	14
1	193	04.4	22.1	11	18.1	81	-5	49.7 ¹⁵⁰	58	37	24	03	07	98	5	35
2	208	04.6	21.1	25	45.1	80	-6	04.7 ¹⁵⁰	56	42	26	03	20	02	94	42
3	223	04.8	20.1	40	12.1	80	19.7 ¹⁵⁰	54	47	28	04	19	57	91	45	2
4	238	05.0	19.1	54	39.1	80	34.6 ¹⁴⁹	52	50	30	04	52	89	48	23	
5	253	05.1	-0 18.1	69	06.1	80	-6	49.4 ¹⁴⁸	50	4	54	5	32	6	04	19
6	268	05.3	-0 17.1	83	33.0	79	-7	04.2 ¹⁴⁸	45	5	01	5	35	6	04	19
7	283	05.5	16.2	97	59.9	79	19.0 ¹⁴⁸	40	06	37	04	32	77	6	01	35
8	298	05.7	15.2	112	26.7	78	33.7 ¹⁴⁷	35	10	39	04	26	73	05	38	
9	313	05.9	14.2	126	53.6	79	-7	48.4 ¹⁴⁷	30	13	41	04	20	71	09	41
10	328	06.1	13.2	141	20.3	77	-8	03.0 ¹⁴⁶	20	17	43	05	11	65	15	47
11	343	06.3	-0 12.2	155	47.1	78	-8	17.5 ¹⁴⁵	10 N	5	19	5	43	6	04	19
12	358	06.4	-0 11.2	170	13.8	77	-8	32.0 ¹⁴⁵	0	5	20	5	44	6	04	18
13	13	06.6	10.2	184	40.5	77	-8	46.4 ¹⁴⁴	10 S	19	43	04	48	52	31	60
14	28	06.8	09.2	199	07.2	77	-9	00.8 ¹⁴⁴	20	16	42	04	40	48	37	65
15	43	07.0	08.3	213	33.8	76	15.1 ¹⁴³	30	11	39	03	31	43	43	71	
16	58	07.2	07.3	228	00.4	76	29.4 ¹⁴³	35	08	37	03	26	40	47	74	
17	73	07.4	-0 06.3	242	27.0	76	-9	43.5 ¹⁴¹	40	5	04	5	35	6	02	18
18	88	07.6	-0 05.3	256	53.5	75	-9	57.6 ¹⁴¹	45	4	58	5	32	6	02	18
19	103	07.7	04.3	271	20.0	75	-10	11.7 ¹⁴¹	50	51	29	01	05	28	7	02
20	118	07.9	03.3	285	46.5	75	25.6 ¹³⁹	52	47	27	01	18	02	25	05	89
21	133	08.1	02.3	300	12.9	74	39.5 ¹³⁹	54	43	25	00	17	58	23	08	92
22	148	08.3	01.3	314	39.3	74	-10	53.3 ¹³⁸	56	38	23	00	53	20	11	95
23	163	08.5	-0 00.4	329	05.7	74	-11	07.0 ¹³⁷	58	33	20	6	00	48	17	15
24	178	08.7	+0 00.6	343	32.0	73	-11	20.7 ¹³⁷	60 S	4	27	5	17	5	59	17

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 12 ^h 09 ^m 3		Mag: -4.0 PMG: 9 ^h 47 ^m		Mag: +1.2 PMG: 11 ^h 34 ^m		Mag: -2.1 PMG: 12 ^h 56 ^m		Mag: +0.4 PMG: 1 ^h 11 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	177	11.0	213	26.6	-14	40.0	186	17.1	-5	00.5	165	31.7	+3	49.4	342	17.9	-3	24.6
1	192	13.5	228	26.1	39.2	201	17.8	-4	59.7	180	33.7	49.7	357	20.6	24.5			
2	207	16.0	243	25.6	38.3	216	18.5	58.9	195	35.6	49.9	12	23.2	24.4				
3	222	18.4	258	25.1	37.5	231	19.1	58.1	210	37.5	50.1	27	25.8	24.4				
4	237	20.9	273	24.6	36.7	246	19.8	57.3	225	39.4	50.4	42	28.5	24.3				
5	252	23.4	288	24.1	-14	35.9	261	20.4	-4	56.6	240	41.3	+3	50.6	57	31.1	-3	24.2
6	267	25.8	303	23.6	-14	35.0	276	21.1	-4	55.8	255	43.2	+3	50.8	72	33.7	-3	24.1
7	282	28.3	318	23.0	34.2	291	21.7	55.0	270	45.1	51.1	87	36.4	24.1				
8	297	30.7	333	22.5	33.4	306	22.4	54.2	285	47.1	51.3	102	39.0	24.0				
9	312	33.2	348	22.0	32.5	321	23.1	53.4	300	49.0	51.5	117	41.6	23.9				
10	327	35.7	3	21.5	31.7	336	23.7	52.6	315	50.9	51.8	132	44.3	23.8				
11	342	38.1	18	21.0	-14	30.9	351	24.4	-4	51.9	330	52.8	+3	52.0	147	46.9	-3	23.8
12	357	40.6	33	20.5	-14	30.0	6	25.0	-4	51.1	345	54.7	+3	52.2	162	49.5	-3	23.7
13	12	43.1	48	20.0	29.2	21	25.7	50.3	0	56.6	52.5	177	52.1	23.6				
14	27	45.5	63	19.5	28.4	36	26.3	49.5	15	58.5	52.7	192	54.8	23.6				
15	42	48.0	78	19.0	27.5	51	27.0	48.7	31	00.4	52.9	207	57.4	23.5				
16	57	50.5	93	18.5	26.7	66	27.7	48.0	46	02.4	53.2	223	00.0	23.4				
17	72	52.9	108	18.0	-14	25.8	81	28.3	-4	47.2	61	04.3	+3	53.4	238	02.7	-3	23.3
18	87	55.4	123	17.5	-14	25.0	96	29.0	-4	46.4	76	06.2	+3	53.7	253	05.3	-3	23.3
19	102	57.8	138	17.0	24.2	111	29.6	45.6	91	08.1	53.9	268	07.9	23.2				
20	118	00.3	153	16.5	23.3	126	30.3	44.8	106	10.0	54.1	283	10.6	23.1				
21	133	02.8	168	16.0	22.5	141	31.0	44.0	121	11.9	54.4	298	13.2	23.0				
22	148	05.2	183	15.5	21.6	156	31.6	43.3	136	13.8	54.6	313	15.8	23.0				
23	163	07.7	198	15.0	20.8	171	32.3	42.5	151	15.7	54.8	328	18.5	22.9				
24	178	10.2	213	14.5	-14	19.9	186	32.9	-4	41.7	166	17.7	+3	55.1	343	21.1	-3	22.8
Dif	—		-5 +8		+7 +8		+19 +2		+26 +1									

UT	SOL			☉ LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16 ^d 1 PMG: 12 ^h 07 ^m 3			Edad: 16 ^d 1 PHE { 4 ^h : 61 ^m 2 12 ^h : 61 ^m 0 20 ^h : 60 ^m 8 PMG: 1 ^h 08 ^m R°: 57 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	
0	178	08.7	+0 00.6	343	32.0	-11 20.7	73	60 N	18 16	18 58	19 48	21 56 99	5 46 15		
1	193	08.9	01.6	357	58.3	34.3	136	58	15	55	42	45 95	5 53 19		
2	208	09.0	02.6	12	24.5	72	-11 47.7	56	15	52	37	36 91	6 00 22		
3	223	09.2	03.6	26	50.7	72	-12 01.1	54	15	50	32	28 88	06 25		
4	238	09.4	04.6	41	16.9	72	14.5	52	14	48	28	21 85	11 28		
5	253	09.6	+0 05.6	55	43.0	71	-12 27.7	50	18 14	18 46	19 24	21 14 83	6 16 30		
6	268	09.8	+0 06.6	70	09.1	71	-12 40.8	45	18 13	18 42	19 17	21 00 79	6 27 35		
7	283	10.0	07.5	84	35.2	71	-12 53.9	40	13	40	11	20 49 75	36 38		
8	298	10.2	08.5	99	01.2	70	-13 06.8	35	12	37	07	39 72	43 42		
9	313	10.3	09.5	113	27.2	70	19.7	30	12	36	19 04	31 69	6 50 45		
10	328	10.5	10.5	127	53.2	70	32.4	20	11	33	18 59	16 65	7 02 49		
11	343	10.7	+0 11.5	142	19.1	69	-13 45.1	10 N	18 11	18 32	18 56	20 03 62	7 12 54		
12	358	10.9	+0 12.5	156	45.0	69	-13 57.6	0	18 11	18 31	18 55	19 52 58	7 22 57		
13	13	11.1	13.5	171	10.8	68	-14 10.1	10 S	10	31	56	40 55	31 62		
14	28	11.3	14.5	185	36.6	68	22.4	20	10	32	18 58	28 51	42 65		
15	43	11.5	15.4	200	02.4	68	34.7	30	10	34	19 02	14 46	7 54 70		
16	58	11.7	16.4	214	28.1	67	46.8	35	10	36	05	19 06 44	8 01 72		
17	73	11.8	+0 17.4	228	53.8	67	-14 58.8	40	18 11	18 37	19 09	18 56 42	8 08 77		
18	88	12.0	+0 18.4	243	19.5	67	-15 10.8	45	18 11	18 40	19 14	18 46 37	8 18 80		
19	103	12.2	19.4	257	45.1	66	22.6	50	11	43	21	33 33	29 85		
20	118	12.4	20.4	272	10.7	66	34.3	52	11	45	24	27 31	34 87		
21	133	12.6	21.4	286	36.2	65	45.9	54	11	46	28	21 28	40 90		
22	148	12.8	22.4	301	01.7	65	-15 57.3	56	11	48	32	13 26	46 93		
23	163	13.0	23.3	315	27.2	65	-16 08.7	58	12	51	37	18 05 23	8 53 97		
24	178	13.1	+0 24.3	329	52.7	65	-16 19.9	60 S	18 12	18 53	19 43	17 56 18	9 02 101		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 12 ^h 05 ^m 3		Mag: -4.0 PMG: 9 ^h 47 ^m			Mag: +1.2 PMG: 11 ^h 33 ^m			Mag: -2.1 PMG: 12 ^h 53 ^m			Mag: +0.4 PMG: 1 ^h 06 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	°	'	°	'	°	°	'	°	°	'	°	
0	178	10.2	213	14.5	-14 19.9	186	32.9	-4 41.7	166	17.7	+3 55.1	343	21.1	-3 22.8	
1	193	12.6	228	14.0	19.1	201	33.6	40.9	181	19.6	55.3	358	23.7	22.7	
2	208	15.1	243	13.5	18.3	216	34.3	40.1	196	21.5	55.5	13	26.4	22.7	
3	223	17.6	258	13.0	17.4	231	34.9	39.4	211	23.4	55.8	28	29.0	22.6	
4	238	20.0	273	12.5	16.6	246	35.6	38.6	226	25.3	56.0	43	31.6	22.5	
5	253	22.5	288	12.0	-14 15.7	261	36.2	-4 37.8	241	27.2	+3 56.2	58	34.3	-3 22.4	
6	268	25.0	303	11.5	-14 14.9	276	36.9	-4 37.0	256	29.1	+3 56.5	73	36.9	-3 22.4	
7	283	27.4	318	11.0	14.0	291	37.6	36.2	271	31.0	56.7	88	39.5	22.3	
8	298	29.9	333	10.5	13.2	306	38.2	35.4	286	33.0	56.9	103	42.2	22.2	
9	313	32.3	348	10.0	12.3	321	38.9	34.7	301	34.9	57.2	118	44.8	22.1	
10	328	34.8	3	09.5	11.5	336	39.5	33.9	316	36.8	57.4	133	47.4	22.1	
11	343	37.3	18	09.0	-14 10.6	351	40.2	-4 33.1	331	38.7	+3 57.6	148	50.1	-3 22.0	
12	358	39.7	33	08.5	-14 09.8	6	40.9	-4 32.3	346	40.6	+3 57.9	163	52.7	-3 21.9	
13	13	42.2	48	08.0	08.9	21	41.5	31.5	1	42.5	58.1	178	55.3	21.8	
14	28	44.7	63	07.5	08.1	36	42.2	30.7	16	44.4	58.3	193	58.0	21.8	
15	43	47.1	78	07.0	07.2	51	42.8	30.0	31	46.3	58.6	209	00.6	21.7	
16	58	49.6	93	06.5	06.4	66	43.5	29.2	46	48.3	58.8	224	03.2	21.6	
17	73	52.1	108	06.0	-14 05.5	81	44.2	-4 28.4	61	50.2	+3 59.1	239	05.9	-3 21.5	
18	88	54.5	123	05.5	-14 04.6	96	44.8	-4 27.6	76	52.1	+3 59.3	254	08.5	-3 21.5	
19	103	57.0	138	05.0	03.8	111	45.5	26.8	91	54.0	59.5	269	11.1	21.4	
20	118	59.4	153	04.5	02.9	126	46.1	26.0	106	55.9	+3 59.8	284	13.8	21.3	
21	134	01.9	168	04.0	02.1	141	46.8	25.3	121	57.8	+4 00.0	299	16.4	21.2	
22	149	04.4	183	03.5	01.2	156	47.5	24.5	136	59.7	+4 00.2	314	19.0	21.2	
23	164	06.8	198	03.0	-14 00.4	171	48.1	23.7	152	01.6	00.5	329	21.7	21.1	
24	179	09.3	213	02.5	-13 59.5	186	48.8	-4 22.9	167	03.5	+4 00.7	344	24.3	-3 21.0	
Dif	—		-5		+9	+7		+8	+19		+2	+26		+1	

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'1			Edad: 17 ^d 1 PHE { 4 ^h : 60'6 12 ^h : 60'3 20 ^h : 60'1													
	PMG: 12 ^h 07 ^m 0			SD: 16'5 PMG: 2 ^h 05 ^m 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	178	13.1	+0	24.3	329	52.7	-16	19.9	60 N	4	25	5	15	5	57	23	35
1	193	13.3		25.3	344	18.1		31.0	58	31	18	58		20	85		12
2	208	13.5		26.3	358	43.5		42.0	56	37	21	58		23	07	82	22
3	223	13.7		27.3	13	08.8		52.9	54	41	23	59		22	56	79	31
4	238	13.9		28.3	27	34.1		03.7	52	45	25	59		46	77		39
5	253	14.1	+0	29.3	41	59.4		14.3	50	4	49	5	27	5	59	22	37
6	268	14.3	+0	30.3	56	24.7		24.8	45	4	57	5	31	6	00	22	19
7	283	14.5		31.2	70	49.9		35.2	40	5	02	34	01	22	04	70	14
8	298	14.6		32.2	85	15.1		45.4	35	07	36	02		21	51	68	25
9	313	14.8		33.2	99	40.2		55.5	30	10	38	02		40	66		35
10	328	15.0		34.2	114	05.4		05.5	20	15	41	03		21	64	7	51
11	343	15.2	+0	35.2	128	30.5		15.4	10 N	5	18	5	42	6	03	21	05
12	358	15.4	+0	36.2	142	55.6		25.1	0	5	19	5	43	6	04	20	50
13	13	15.6		37.2	157	20.6		34.7	10 S	19	43	04		35	56		33
14	28	15.8		38.1	171	45.6		44.1	20	17	42	04		19	53	8	47
15	43	16.0		39.1	186	10.6		53.5	30	13	40	04		20	00	51	9
16	58	16.1		40.1	200	35.6		02.6	35	10	39	04		19	50	49	13
17	73	16.3	+0	41.1	215	00.6		11.7	40	5	06	5	37	6	04	19	38
18	88	16.5	+0	42.1	229	25.5		20.6	45	5	01	5	35	6	04	19	23
19	103	16.7		43.1	243	50.4		29.4	50	4	54	32	04	19	06	41	9
20	118	16.9		44.1	258	15.3		38.0	52	51	31	04		18	58	39	10
21	133	17.1		45.1	272	40.1		46.5	54	47	29	04		49	37		10
22	148	17.3		46.0	287	05.0		54.8	56	43	27	04		39	34		19
23	163	17.5		47.0	301	29.8		03.0	58	38	25	04		28	31		30
24	178	17.6	+0	48.0	315	54.6		11.1	60 S	4	32	5	22	6	04	18	14

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO					
	PMG: 12 ^h 01 ^m 4		Mag: -4.0 PMG: 9 ^h 48 ^m			Mag: +1.2 PMG: 11 ^h 32 ^m			Mag: -2.1 PMG: 12 ^h 50 ^m			Mag: +0.4 PMG: 1 ^h 02 ^m					
	hG ♈		hG ♀			hG ♂			hG ♃			hG ♄					
h	°	'	°	'	°	°	'	°	'	°	'	°	'	°	'		
0	179	09.3	213	02.5	-13	59.5	186	48.8	-4	22.9	167	03.5	+4	00.7	344	24.3	
1	194	11.8	228	02.0		58.6	201	49.5		22.1	182	05.5		00.9	359	26.9	
2	209	14.2	243	01.5		57.8	216	50.1		21.3	197	07.4		01.2	14	29.6	
3	224	16.7	258	01.1		56.9	231	50.8		20.6	212	09.3		01.4	29	32.2	
4	239	19.2	273	00.6		56.0	246	51.4		19.8	227	11.2		01.6	44	34.8	
5	254	21.6	288	00.1	-13	55.2	261	52.1	-4	19.0	242	13.1	+4	01.9	59	37.5	
6	269	24.1	302	59.6	-13	54.3	276	52.8	-4	18.2	257	15.0	+4	02.1	74	40.1	
7	284	26.6	317	59.1		53.5	291	53.4		17.4	272	16.9		02.3	89	42.7	
8	299	29.0	332	58.6		52.6	306	54.1		16.6	287	18.8		02.6	104	45.4	
9	314	31.5	347	58.1		51.7	321	54.8		15.9	302	20.7		02.8	119	48.0	
10	329	33.9	2	57.6		50.9	336	55.4		15.1	317	22.7		03.0	134	50.6	
11	344	36.4	17	57.1	-13	50.0	351	56.1	-4	14.3	332	24.6	+4	03.3	149	53.3	
12	359	38.9	32	56.6	-13	49.1	6	56.7	-4	13.5	347	26.5	+4	03.5	164	55.9	
13	14	41.3	47	56.1		48.2	21	57.4		12.7	2	28.4		03.7	179	58.5	
14	29	43.8	62	55.7		47.4	36	58.1		11.9	17	30.3		04.0	195	01.2	
15	44	46.3	77	55.2		46.5	51	58.7		11.2	32	32.2		04.2	210	03.8	
16	59	48.7	92	54.7		45.6	66	59.4		10.4	47	34.1		04.5	225	06.4	
17	74	51.2	107	54.2	-13	44.8	82	00.1	-4	09.6	62	36.0	+4	04.7	240	09.1	
18	89	53.7	122	53.7	-13	43.9	97	00.7	-4	08.8	77	37.9	+4	04.9	255	11.7	
19	104	56.1	137	53.2		43.0	112	01.4		08.0	92	39.9		05.2	270	14.3	
20	119	58.6	152	52.7		42.1	127	02.0		07.2	107	41.8		05.4	285	17.0	
21	135	01.1	167	52.2		41.3	142	02.7		06.4	122	43.7		05.6	300	19.6	
22	150	03.5	182	51.8		40.4	157	03.4		05.7	137	45.6		05.9	315	22.3	
23	165	06.0	197	51.3		39.5	172	04.0		04.9	152	47.5		06.1	330	24.9	
24	180	08.4	212	50.8	-13	38.6	187	04.7	-4	04.1	167	49.4	+4	06.3	345	27.5	
Dif	—		-5			+9	+7			+8	+19		+2		+26		+

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 16 ^h 1 PMG: 12 ^h 06 ^m 7			Edad: 18 ^d 1 PHE { 4 ^h : 59/8 12 ^h : 59/5 20 ^h : 59/2 PMG: 3 ^h 04 ^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	m	h m m	
0	178	17.6	+0 48.0	315	54.6	-20 11.1	79	60 N	18 21	19 03	19 54	*** ** *		6 23 34	
1	193	17.8		330	19.4	58	19.0	58	20	18 59	47	*** ** *		39 37	
2	208	18.0		344	44.2	58	26.8	56	19	56	41	*** ** *		6 52 40	
3	223	18.2		359	09.0	58	34.4	54	18	54	36	*** ** *		7 04 41	
4	238	18.4		13	33.7	57	41.9	52	18	51	32	*** ** *		14 43	
5	253	18.6	+0 52.9	27	58.4	57	-20 49.2	50	18 17	18 49	19 28	23 53	65	7 23 45	
6	268	18.8	+0 53.9	42	23.2	58	-20 56.4	45	18 16	18 45	19 20	23 31	64	7 42 48	
7	283	19.0		56	47.9	57	-21 03.4	40	15	42	13	23 14	63	7 58 50	
8	298	19.2		71	12.6	57	10.3	35	14	39	09	22 59	62	8 12 51	
9	313	19.3		85	37.3	57	17.1	30	13	37	19 05	46 62		23 53	
10	328	19.5		100	02.0	57	23.7	20	12	34	18 59	25 60		8 44 55	
11	343	19.7	+0 58.9	114	26.7	57	-21 30.1	10 N	18 11	18 32	18 56	22 06	59	9 01 57	
12	358	19.9	+0 59.8	128	51.4	57	-21 36.4	0	18 10	18 31	18 55	21 48	59	9 18 58	
13	13	20.1	+1 00.8	143	16.0	56	42.5	10 S	09	30	55	31 57		34 60	
14	28	20.3		157	40.7	57	48.5	20	09	31	18 56	21 12	56	9 52 62	
15	43	20.5		172	05.4	57	-21 54.4	30	08	32	19 00	20 51	55	10 12 64	
16	58	20.7		186	30.1	57	-22 00.0	35	08	33	02	39 53		24 65	
17	73	20.8	+1 04.8	200	54.8	57	-22 05.6	40	18 07	18 34	19 06	20 24	53	10 37 67	
18	88	21.0	+1 05.8	215	19.5	57	-22 10.9	45	18 07	18 36	19 10	20 08	51	10 54 68	
19	103	21.2		229	44.2	57	16.2	50	07	39	16	19 47	49	11 14 71	
20	118	21.4		244	08.9	57	21.2	50	06	40	19	37 49		23 73	
21	133	21.6		258	33.6	57	26.2	50	06	41	23	26 47		34 74	
22	148	21.8		272	58.3	57	30.9	47	06	43	27	19 13	46	11 46 76	
23	163	22.0		287	23.0	57	35.5	46	06	45	31	18 59	44	12 00 78	
24	178	22.2	+1 11.7	301	47.8	58	-22 40.0	45	60 S	18 06	18 47	19 36	18 42	41	12 17 80

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 11 ^h 57 ^m 5		Mag: -4.0 PMG: 9 ^h 49 ^m		Mag: +1.2 PMG: 11 ^h 31 ^m		Mag: -2.1 PMG: 12 ^h 47 ^m		Mag: +0.4 PMG: 0 ^h 58 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	180	08.4	212 50.8	-13 38.6	187 04.7	-4 04.1	167 49.4	+4 06.3	345 27.5	-3 19.2
1	195	10.9	227 50.3	37.8	202 05.4	03.3	182 51.3	06.6	0 30.2	19.1
2	210	13.4	242 49.8	36.9	217 06.0	02.5	197 53.2	06.8	15 32.8	19.0
3	225	15.8	257 49.3	36.0	232 06.7	01.7	212 55.1	07.0	30 35.4	19.0
4	240	18.3	272 48.8	35.1	247 07.4	01.0	227 57.1	07.3	45 38.1	18.9
5	255	20.8	287 48.4	-13 34.2	262 08.0	-4 00.2	242 59.0	+4 07.5	60 40.7	-3 18.8
6	270	23.2	302 47.9	-13 33.4	277 08.7	-3 59.4	258 00.9	+4 07.7	75 43.3	-3 18.7
7	285	25.7	317 47.4	32.5	292 09.4	58.6	273 02.8	08.0	90 46.0	18.7
8	300	28.2	332 46.9	31.6	307 10.0	57.8	288 04.7	08.2	105 48.6	18.6
9	315	30.6	347 46.4	30.7	322 10.7	57.0	303 06.6	08.4	120 51.2	18.5
10	330	33.1	2 45.9	29.8	337 11.3	56.2	318 08.5	08.7	135 53.9	18.4
11	345	35.5	17 45.5	-13 29.0	352 12.0	-3 55.5	333 10.4	+4 08.9	150 56.5	-3 18.4
12	0	38.0	32 45.0	-13 28.1	7 12.7	-3 54.7	348 12.3	+4 09.2	165 59.1	-3 18.3
13	15	40.5	47 44.5	27.2	22 13.3	53.9	3 14.2	09.4	181 01.8	18.2
14	30	42.9	62 44.0	26.3	37 14.0	53.1	18 16.2	09.6	196 04.4	18.1
15	45	45.4	77 43.5	25.4	52 14.7	52.3	33 18.1	09.9	211 07.1	18.1
16	60	47.9	92 43.0	24.5	67 15.3	51.5	48 20.0	10.1	226 09.7	18.0
17	75	50.3	107 42.6	-13 23.6	82 16.0	-3 50.7	63 21.9	+4 10.3	241 12.3	-3 17.9
18	90	52.8	122 42.1	-13 22.7	97 16.7	-3 50.0	78 23.8	+4 10.6	256 15.0	-3 17.8
19	105	55.3	137 41.6	21.9	112 17.3	49.2	93 25.7	10.8	271 17.6	17.8
20	120	57.7	152 41.1	21.0	127 18.0	48.4	108 27.6	11.0	286 20.2	17.7
21	136	00.2	167 40.6	20.1	142 18.7	47.6	123 29.5	11.3	301 22.9	17.6
22	151	02.7	182 40.2	19.2	157 19.3	46.8	138 31.4	11.5	316 25.5	17.5
23	166	05.1	197 39.7	18.3	172 20.0	46.0	153 33.3	11.7	331 28.1	17.5
24	181	07.6	212 39.2	-13 17.4	187 20.7	-3 45.2	168 35.3	+4 12.0	346 30.8	-3 17.4
Dif	—		-5	+9	+7	+8	+19	+2	+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 4			Edad: 19 ^d 1 PHE { 4 ^h : 58'8 12 ^h : 58'5 20 ^h : 58'2 SD: 16'1 PMG: 4 ^h 02 ^m R°: 58 ^m								Hora R°		Hora R°				
	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	+1	11.7	301	47.8	-22	40.0	43	60 N	4	18	5	09	5	51	1	03
1	193	22.4		12.7	316	12.5		44.3	57	58		25		13	52	0	45	
2	208	22.5		13.6	330	37.3		48.5	42	56		31		16	53	29	67	
3	223	22.7		14.6	345	02.1		52.5	40	54		36		18	54	15	67	
4	238	22.9		15.6	359	26.9	-22	56.3	38	52		41		21	54	0	03	
5	253	23.1	+1	16.6	13	51.7	-23	00.0	37	50	4	45	5	23	5	55	**	**
6	268	23.3	+1	17.6	28	16.5	-23	03.5	35	45	4	53	5	27	5	57	**	**
7	283	23.5		18.6	42	41.4		06.9	34	40	4	59		31	58	**	**	
8	298	23.7		19.5	57	06.3		10.2	33	35	5	04		33	5	59	**	**
9	313	23.9		20.5	71	31.2		13.2	30	30		08		36	6	00	23	48
10	328	24.0		21.5	85	56.1		16.2	30	20		13		39	01	25	55	
11	343	24.2	+1	22.5	100	21.0	-23	18.9	27	10 N	5	17	5	41	6	02	23	05
12	358	24.4	+1	23.5	114	46.0	-23	21.5	26	0	5	18	5	42	6	03	22	47
13	13	24.6		24.5	129	11.1		24.0	25	10 S		19		43	04	28	57	
14	28	24.8		25.5	143	36.1		26.3	23	20		17		43	05	22	08	
15	43	25.0		26.4	158	01.2		28.5	22	30		14		42	06	21	46	
16	58	25.2		27.4	172	26.3		30.5	20	35		11		41	06	32	58	
17	73	25.4	+1	28.4	186	51.4	-23	32.4	19	40	5	08	5	39	6	06	21	17
18	88	25.6	+1	29.4	201	16.6	-23	34.1	17	45	5	03	5	38	6	07	20	59
19	103	25.7		30.4	215	41.9		35.6	15	50	4	57		35	07	36	58	
20	118	25.9		31.4	230	07.1		37.0	14	52		54		34	08	26	58	
21	133	26.1		32.3	244	32.4		38.3	13	54		51		33	08	20	13	
22	148	26.3		33.3	258	57.8		39.4	11	56		47		31	08	19	59	
23	163	26.5		34.3	273	23.2		40.4	10	58		43		29	08	43	58	
24	178	26.7	+1	35.3	287	48.6	-23	41.2	8	60 S	4	38	5	27	6	09	19	23

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 11 ^h 53 ^m 5		Mag: -4.0 PMG: 9 ^h 50 ^m		Mag: +1.2 PMG: 11 ^h 30 ^m		Mag: -2.1 PMG: 12 ^h 44 ^m		Mag: +0.4 PMG: 0 ^h 54 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	181	07.6	212	39.2	-13	17.4	187	20.7	-3	45.2
1	196	10.0	227	38.7		16.5	202	21.3		44.5
2	211	12.5	242	38.3		15.6	217	22.0		43.7
3	226	15.0	257	37.8		14.7	232	22.7		42.9
4	241	17.4	272	37.3		13.8	247	23.3		42.1
5	256	19.9	287	36.8	-13	12.9	262	24.0	-3	41.3
6	271	22.4	302	36.4	-13	12.0	277	24.7	-3	40.5
7	286	24.8	317	35.9		11.1	292	25.3		39.7
8	301	27.3	332	35.4		10.2	307	26.0		39.0
9	316	29.8	347	34.9		09.3	322	26.7		38.2
10	331	32.2	2	34.4		08.4	337	27.3		37.4
11	346	34.7	17	34.0	-13	07.5	352	28.0	-3	36.6
12	1	37.2	32	33.5	-13	06.6	7	28.7	-3	35.8
13	16	39.6	47	33.0		05.7	22	29.3		35.0
14	31	42.1	62	32.6		04.8	37	30.0		34.2
15	46	44.5	77	32.1		03.9	52	30.7		33.5
16	61	47.0	92	31.6		03.0	67	31.3		32.7
17	76	49.5	107	31.1	-13	02.1	82	32.0	-3	31.9
18	91	51.9	122	30.7	-13	01.2	97	32.7	-3	31.1
19	106	54.4	137	30.2	-13	00.3	112	33.3		30.3
20	121	56.9	152	29.7	-12	59.4	127	34.0		29.5
21	136	59.3	167	29.2		58.5	142	34.7		28.7
22	152	01.8	182	28.8		57.6	157	35.3		27.9
23	167	04.3	197	28.3		56.7	172	36.0		27.2
24	182	06.7	212	27.8	-12	55.8	187	36.7	-3	26.4
Dif	—		-5	+9		+7	+8	+19		+2
										+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 1			Edad: 20 ^d 1 PHE { 4 ^h : 57/9 12 ^h : 57/6 20 ^h : 57/3 SD: 15/8 PMG: 5 ^h 00 ^m R°: 56 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m			
0	178	26.7	+1	35.3	287	48.6	-23	41.2	60 N	18 26	19 08	19 59	2 14	48	7 47	67		
1	193	26.9		36.3	302	14.1	65	41.8	58	24	04	52	1 53	50	8 07	66		
2	208	27.1		37.3	316	39.6	65	42.4	56	23	19 01	46	36	51	24	64		
3	223	27.3		38.2	331	05.2	66	42.7	54	22	18 58	40	22	52	39	63		
4	238	27.4		39.2	345	30.8	66	43.0	52	21	55	35	1 09	53	8 51	63		
5	253	27.6	+1	40.2	359	56.5	67	-23	43.0	50	18 20	18 53	19 31	0 58	53	9 02	62	
6	268	27.8	+1	41.2	14	22.2	67	-23	43.0	45	18 18	18 48	19 22	0 35	54	9 25	61	
7	283	28.0		42.2	28	48.0	68	42.8	40	17	44	16	17	54	44	59		
8	298	28.2		43.2	43	13.8	68	42.4	35	15	41	10	0 01	55	9 59	59		
9	313	28.4		44.1	57	39.7	69	41.9	30	14	38	06	** ** *	**	10 13	58		
10	328	28.6		45.1	72	05.6	69	41.3	20	12	34	19 00	** ** *	**	36	57		
11	343	28.8	+1	46.1	86	31.6	70	-23	40.5	10 N	18 11	18 32	18 56	** ** *	**	10 55	56	
12	358	29.0	+1	47.1	100	57.7	71	-23	39.6	0	18 09	18 30	18 54	23 43	53	11 14	55	
13	13	29.1		48.1	115	23.8	71	38.5	10 S	08	29	53	25	55	32	54		
14	28	29.3		49.1	129	50.0	72	37.3	20	07	29	54	23 05	57	11 52	53		
15	43	29.5		50.0	144	16.2	72	36.0	13	30	05	29	57	22 43	58	12 15	51	
16	58	29.7		51.0	158	42.5	73	34.5	15	35	05	30	18 59	30	59	28	51	
17	73	29.9	+1	52.0	173	08.9	74	-23	32.9	40	18 04	18 31	19 02	22 15	61	12 43	50	
18	88	30.1	+1	53.0	187	35.3	74	-23	31.1	45	18 03	18 32	19 06	21 57	62	13 01	49	
19	103	30.3		54.0	202	01.8	75	29.2	19	50	02	34	12	34	65	24	47	
20	118	30.5		55.0	216	28.4	76	27.2	20	52	02	35	15	24	65	35	46	
21	133	30.7		55.9	230	55.0	76	25.1	21	54	01	36	18	21	12	66	13	47
22	148	30.8		56.9	245	21.7	77	22.8	23	56	01	38	21	20	58	68	14	01
23	163	31.0		57.9	259	48.4	77	20.3	25	58	00	39	25	41	71	17	42	
24	178	31.2	+1	58.9	274	15.3	79	-23	17.8	60 S	18 00	18 41	19 30	20 22	73	14 37	40	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 11 ^h 49 ^m 6		Mag: -4.0 PMG: 9 ^h 50 ^m		Mag: +1.2 PMG: 11 ^h 29 ^m		Mag: -2.1 PMG: 12 ^h 41 ^m		Mag: +0.4 PMG: 0 ^h 50 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	182	06.7	212	27.8	-12	55.8	187	36.7	-3	26.4
1	197	09.2	227	27.4		54.9	202	37.3		25.6
2	212	11.6	242	26.9		54.0	217	38.0		24.8
3	227	14.1	257	26.4		53.0	232	38.7		24.0
4	242	16.6	272	26.0		52.1	247	39.3		23.2
5	257	19.0	287	25.5	-12	51.2	262	40.0	-3	22.4
6	272	21.5	302	25.0	-12	50.3	277	40.7	-3	21.7
7	287	24.0	317	24.5		49.4	292	41.4		20.9
8	302	26.4	332	24.1		48.5	307	42.0		20.1
9	317	28.9	347	23.6		47.6	322	42.7		19.3
10	332	31.4	2	23.1		46.7	337	43.4		18.5
11	347	33.8	17	22.7	-12	45.7	352	44.0	-3	17.7
12	2	36.3	32	22.2	-12	44.8	7	44.7	-3	16.9
13	17	38.8	47	21.7		43.9	22	45.4		16.1
14	32	41.2	62	21.3		43.0	37	46.0		15.4
15	47	43.7	77	20.8		42.1	52	46.7		14.6
16	62	46.1	92	20.3		41.2	67	47.4		13.8
17	77	48.6	107	19.9	-12	40.2	82	48.0	-3	13.0
18	92	51.1	122	19.4	-12	39.3	97	48.7	-3	12.2
19	107	53.5	137	19.0		38.4	112	49.4		11.4
20	122	56.0	152	18.5		37.5	127	50.1		10.6
21	137	58.5	167	18.0		36.6	142	50.7		09.8
22	153	00.9	182	17.6		35.6	157	51.4		09.1
23	168	03.4	197	17.1		34.7	172	52.1		08.3
24	183	05.9	212	16.6	-12	33.8	187	52.7	-3	07.5
Dif	—		-5 +9		+7 +8		+19 +2		+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 8			Edad: 21 ^d 1 PHE { 4 ^h : 57'0 12 ^h : 56'7 20 ^h : 56'4 SD: 15'6 PMG: 5 ^h 56 ^m R°: 53 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	
0	178	31.2	+1	58.9	274	15.3	-23	17.8	60 N	4	12	5	03	5	45	3	02
1	193	31.4	+1	59.9	288	42.2	79	15.1	58	19	07	46	2	43	34	9	13
2	208	31.6	+2	00.8	303	09.2	80	12.3	56	25	10	48	27	37	28	72	
3	223	31.8		01.8	317	36.2	80	09.4	54	31	13	49	14	38	42	70	
4	238	32.0		02.8	332	03.3	81	06.3	52	36	16	50	2	02	40	9	54
5	253	32.2	+2	03.8	346	30.5	82	-23	50	4	40	5	18	5	51	10	04
6	268	32.4	+2	04.8	0	57.8	83	-22	45	4	49	5	23	5	53	10	26
7	283	32.5		05.8	15	25.1	83	56.3	40	4	56	27	55	1	11	45	43
8	298	32.7		06.7	29	52.5	84	52.8	35	5	01	31	56	0	56	47	10
9	313	32.9		07.7	44	20.0	85	49.1	30	05	33	57	43	48	11	11	58
10	328	33.1		08.7	58	47.6	86	45.2	20	12	37	5	59	20	51	33	56
11	343	33.3	+2	09.7	73	15.2	86	-22	10 N	5	16	5	40	6	01	11	51
12	358	33.5	+2	10.7	87	43.0	88	-22	0	5	18	5	42	6	03	12	09
13	13	33.7		11.6	102	10.8	88	33.1	10 S	19	43	04	05	**	**	26	50
14	28	33.9		12.6	116	38.6	88	28.8	20	18	43	05	04	**	**	12	45
15	43	34.1		13.6	131	06.6	90	24.4	30	15	43	07	07	23	41	13	06
16	58	34.2		14.6	145	34.6	90	19.8	35	13	42	08	08	29	60	19	43
17	73	34.4	+2	15.6	160	02.7	91	-22	40	5	10	5	41	6	08	13	33
18	88	34.6	+2	16.6	174	30.9	92	-22	45	5	06	5	40	6	09	13	50
19	103	34.8		17.5	188	59.2	93	05.6	50	5	01	38	11	39	67	14	11
20	118	35.0		18.5	203	27.5	93	-22	52	4	58	37	11	29	69	21	35
21	133	35.2		19.5	217	56.0	95	-21	54	55	36	12	12	18	71	32	33
22	148	35.4		20.5	232	24.5	95	50.3	56	52	35	12	12	22	06	45	31
23	163	35.6		21.5	246	53.1	96	45.0	58	48	34	13	13	21	52	14	59
24	178	35.8	+2	22.4	261	21.8	97	-21	60 S	4	43	5	32	6	14	15	17

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 11 ^h 45 ^m 7		Mag: -4.0 PMG: 9 ^h 51 ^m		Mag: +1.2 PMG: 11 ^h 28 ^m		Mag: -2.1 PMG: 12 ^h 38 ^m		Mag: +0.4 PMG: 0 ^h 45 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	183	05.9	212	16.6	-12	33.8	170	06.9	+4	23.2
1	198	08.3	227	16.2		32.9	185	08.8		23.5
2	213	10.8	242	15.7		31.9	200	10.7		23.7
3	228	13.3	257	15.2		31.0	215	12.6		23.9
4	243	15.7	272	14.8		30.1	230	14.5		24.2
5	258	18.2	287	14.3	-12	29.2	245	16.4	+4	24.4
6	273	20.6	302	13.9	-12	28.2	260	18.3	+4	24.7
7	288	23.1	317	13.4		27.3	275	20.2		24.9
8	303	25.6	332	12.9		26.4	290	22.2		25.1
9	318	28.0	347	12.5		25.5	305	24.1		25.4
10	333	30.5	2	12.0		24.5	320	26.0		25.6
11	348	33.0	17	11.6	-12	23.6	335	27.9	+4	25.8
12	3	35.4	32	11.1	-12	22.7	350	29.8	+4	26.1
13	18	37.9	47	10.6		21.7	5	31.7		26.3
14	33	40.4	62	10.2		20.8	20	33.6		26.5
15	48	42.8	77	09.7		19.9	35	35.5		26.8
16	63	45.3	92	09.3		18.9	50	37.4		27.0
17	78	47.8	107	08.8	-12	18.0	65	39.3	+4	27.2
18	93	50.2	122	08.4	-12	17.1	80	41.2	+4	27.5
19	108	52.7	137	07.9		16.1	95	43.1		27.7
20	123	55.1	152	07.4		15.2	110	45.0		27.9
21	138	57.6	167	07.0		14.3	125	47.0		28.2
22	154	00.1	182	06.5		13.3	140	48.9		28.4
23	169	02.5	197	06.1		12.4	155	50.8		28.6
24	184	05.0	212	05.6	-12	11.4	170	52.7	+4	28.9
Dif	—		-5		+9		+19		+2	

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16'0			Edad: 22 ^d 1 PHE { 4 ^h : 56'1 12 ^h : 55'9 20 ^h : 55'7										
	PMG: 12 ^h 05 ^m 5			SD: 15'3					PMG: 6 ^h 49 ^m			R°: 49 ^m		
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m
0	178	35.8	+2 22.4	261	21.8	-21 39.5	55	60 N	18 31	19 13	20 05	3 33 20	10 11 82	
1	193	35.9	23.4	275	50.5	97 34.0	55	58	29	09	19 57	17 24	27 77	
2	208	36.1	24.4	290	19.4	99 28.4	56	56	27	05	50	3 04 26	40 75	
3	223	36.3	25.4	304	48.3	99 22.6	58	54	26	19 02	44	2 52 28	10 52 72	
4	238	36.5	26.4	319	17.3	100 16.8	58	52	25	18 59	39	42 30	11 02 70	
5	253	36.7	+2 27.3	333	46.4	101 -21 10.8	60	50	18 23	18 56	19 35	2 32 32	11 11 68	
6	268	36.9	+2 28.3	348	15.5	101 -21 04.8	60	45	18 21	18 50	19 25	2 12 36	11 30 64	
7	283	37.1	29.3	2	44.8	103 -20 58.6	62	40	19	46	18	1 56 38	45 62	
8	298	37.3	30.3	17	14.1	103 52.4	62	35	17	42	12	43 40	11 58 59	
9	313	37.5	31.3	31	43.5	104 46.0	64	30	15	39	07	31 42	12 09 58	
10	328	37.6	32.2	46	13.0	105 39.6	64	20	13	35	19 01	1 11 45	29 53	
11	343	37.8	+2 33.2	60	42.6	106 -20 33.0	66	10 N	18 11	18 32	18 56	0 53 48	12 45 51	
12	358	38.0	+2 34.2	75	12.2	106 -20 26.4	68	0	18 09	18 29	18 53	0 36 50	13 01 48	
13	13	38.2	35.2	89	42.0	108 19.6	68	10 S	07	28	52	20 52	16 46	
14	28	38.4	36.1	104	11.8	108 12.8	68	20	05	27	53	0 02 55	33 43	
15	43	38.6	37.1	118	41.7	109 -20 05.9	69	30	03	27	55	** ** *	13 52 39	
16	58	38.8	38.1	133	11.7	110 -19 58.8	71	35	02	27	57	** ** *	14 02 38	
17	73	39.0	+2 39.1	147	41.8	111 -19 51.7	71	40	18 01	18 28	18 59	** ** *	14 15 35	
18	88	39.2	+2 40.1	162	11.9	111 -19 44.5	72	45	17 59	18 29	19 03	** ** *	14 30 32	
19	103	39.3	41.0	176	42.1	112 37.2	73	50	58	30	08	23 46 68	48 28	
20	118	39.5	42.0	191	12.4	113 29.9	73	52	57	31	10	38 70	14 56 27	
21	133	39.7	43.0	205	42.8	114 22.4	75	54	56	31	13	29 72	15 05 25	
22	148	39.9	44.0	220	13.3	115 14.8	76	56	56	32	16	19 75	16 23	
23	163	40.1	45.0	234	43.8	115 -19 07.2	76	58	55	34	19	23 08 77	28 20	
24	178	40.3	+2 45.9	249	14.5	117 -18 59.5	77	60 S	17 54	18 35	19 24	22 54 81	15 42 16	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 11 ^h 41 ^m 7		Mag: -4.0 PMG: 9 ^h 52 ^m			Mag: +1.2 PMG: 11 ^h 27 ^m			Mag: -2.1 PMG: 12 ^h 35 ^m			Mag: +0.4 PMG: 0 ^h 41 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'
0	184	05.0	212 05.6	-12 11.4	188 08.8	-2 48.6	170 52.7	+4 28.9	349 40.7	-3 11.9				
1	199	07.5	227 05.2	10.5	203 09.5	47.8	185 54.6	29.1	4 43.3	11.8				
2	214	09.9	242 04.7	09.6	218 10.2	47.0	200 56.5	29.3	19 46.0	11.8				
3	229	12.4	257 04.3	08.6	233 10.8	46.2	215 58.4	29.6	34 48.6	11.7				
4	244	14.9	272 03.8	07.7	248 11.5	45.4	231 00.3	29.8	49 51.3	11.6				
5	259	17.3	287 03.4	-12 06.7	263 12.2	-2 44.6	246 02.2	+4 30.1	64 53.9	-3 11.5				
6	274	19.8	302 02.9	-12 05.8	278 12.9	-2 43.9	261 04.1	+4 30.3	79 56.5	-3 11.5				
7	289	22.3	317 02.4	04.9	293 13.5	43.1	276 06.0	30.5	94 59.2	11.4				
8	304	24.7	332 02.0	03.9	308 14.2	42.3	291 07.9	30.8	110 01.8	11.3				
9	319	27.2	347 01.5	03.0	323 14.9	41.5	306 09.8	31.0	125 04.5	11.2				
10	334	29.6	2 01.1	02.0	338 15.6	40.7	321 11.7	31.2	140 07.1	11.2				
11	349	32.1	17 00.6	-12 01.1	353 16.2	-2 39.9	336 13.7	+4 31.5	155 09.7	-3 11.1				
12	4	34.6	32 00.2	-12 00.1	8 16.9	-2 39.1	351 15.6	+4 31.7	170 12.4	-3 11.0				
13	19	37.0	46 59.7	-11 59.2	23 17.6	38.3	6 17.5	31.9	185 15.0	10.9				
14	34	39.5	61 59.3	58.3	38 18.2	37.5	21 19.4	32.2	200 17.7	10.8				
15	49	42.0	76 58.8	57.3	53 18.9	36.8	36 21.3	32.4	215 20.3	10.8				
16	64	44.4	91 58.4	56.4	68 19.6	36.0	51 23.2	32.6	230 22.9	10.7				
17	79	46.9	106 57.9	-11 55.4	83 20.3	-2 35.2	66 25.1	+4 32.9	245 25.6	-3 10.6				
18	94	49.4	121 57.5	-11 54.5	98 20.9	-2 34.4	81 27.0	+4 33.1	260 28.2	-3 10.5				
19	109	51.8	136 57.0	53.5	113 21.6	33.6	96 28.9	33.3	275 30.9	10.5				
20	124	54.3	151 56.6	52.6	128 22.3	32.8	111 30.8	33.6	290 33.5	10.4				
21	139	56.7	166 56.1	51.6	143 23.0	32.0	126 32.7	33.8	305 36.1	10.3				
22	154	59.2	181 55.7	50.7	158 23.6	31.2	141 34.6	34.0	320 38.8	10.2				
23	170	01.7	196 55.2	49.7	173 24.3	30.5	156 36.5	34.3	335 41.4	10.2				
24	185	04.1	211 54.8	-11 48.8	188 25.0	-2 29.7	171 38.4	+4 34.5	350 44.1	-3 10.1				
Dif	—		-5 +9		+7 +8		+19 +2		+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 2			Edad: 23 ^d 1 PHE { 4 ^h : 55'4 12 ^h : 55'2 20 ^h : 55'1 PMG: 7 ^h 38 ^m R°: 46 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m
0	178	40.3	+2	45.9	249	14.5	-18	59.5	60 N	4 05	4 57	5 39	3 53	13	11 33	80
1	193	40.5		46.9	263	45.2 ¹¹⁷		51.7 ⁷⁸	58	13	5 01	41	41	16	44	78
2	208	40.7		47.9	278	15.9 ¹¹⁷		43.8 ⁷⁹	56	19	05	42	30	19	11 55	74
3	223	40.9		48.9	292	46.8 ¹¹⁹		35.8 ⁸⁰	54	25	08	44	20	22	12 04	77
4	238	41.0		49.8	307	17.7 ¹¹⁹		27.8 ⁸⁰	52	31	11	45	12	24	12 69	
5	253	41.2	+2	50.8	321	48.8 ¹²¹	-18	19.7 ⁸¹	50	4 35	5 14	5 46	3 04	26	12 19	68
6	268	41.4	+2	51.8	336	19.8 ¹²⁰	-18	11.5 ⁸²	45	4 45	5 20	5 49	2 48	29	12 34	64
7	283	41.6		52.8	350	51.0 ¹²²	-18	03.2 ⁸³	40	52	24	51	34	33	47	60
8	298	41.8		53.8	5	22.3 ¹²³	-17	54.8 ⁸⁴	35	4 58	28	53	23	35	12 57	58
9	313	42.0		54.7	19	53.6 ¹²³		46.4 ⁸⁴	30	5 03	31	55	2 13	37	13 07	55
10	328	42.2		55.7	34	25.0 ¹²⁴		37.9 ⁸⁵	20	10	35	5 58	1 56	40	22	52
11	343	42.4	+2	56.7	48	56.5 ¹²⁵	-17	29.3 ⁸⁶	10 N	5 14	5 39	6 00	1 41	43	13 36	49
12	358	42.6	+2	57.7	63	28.0 ¹²⁵	-17	20.6 ⁸⁷	0	5 17	5 41	6 02	1 26	47	13 49	45
13	13	42.7		58.6	77	59.6 ¹²⁶		11.9 ⁸⁷	10 S	18	43	04	1 12	50	14 02	42
14	28	42.9	+2	59.6	92	31.3 ¹²⁷	-17	03.1 ⁸⁸	20	18	44	06	0 57	53	16	38
15	43	43.1	+3	00.6	107	03.1 ¹²⁸	-16	54.2 ⁸⁹	30	16	44	08	39	57	31	35
16	58	43.3		01.6	121	34.9 ¹²⁸		45.3 ⁸⁹	35	15	44	09	29	59	40	33
17	73	43.5	+3	02.5	136	06.8 ¹²⁹	-16	36.3 ⁹⁰	40	5 12	5 44	6 11	0 17	61	14 50	30
18	88	43.7	+3	03.5	150	38.8 ¹³⁰	-16	27.2 ⁹¹	45	5 09	5 43	6 12	0 03	64	15 02	27
19	103	43.9		04.5	165	10.9 ¹³¹		18.1 ⁹¹	50	04	42	14	** ** *	**	16	24
20	118	44.1		05.5	179	43.0 ¹³¹	-16	08.9 ⁹²	52	5 02	41	15	** ** *	**	23	22
21	133	44.2		06.5	194	15.2 ¹³²	-15	59.6 ⁹³	54	4 59	40	15	** ** *	**	30	20
22	148	44.4		07.4	208	47.4 ¹³²		50.3 ⁹³	56	56	39	16	** ** *	**	39	17
23	163	44.6		08.4	223	19.8 ¹³⁴		40.9 ⁹⁴	58	52	38	17	** ** *	**	48	14
24	178	44.8	+3	09.4	237	52.2 ¹³⁴	-15	31.5 ⁹⁴	60 S	4 48	5 37	6 18	** ** *	**	15 58	12
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO			
	PMG 11 ^h 37 ^m 8			Mag: -4.0 PMG: 9 ^h 53 ^m			Mag: +1.2 PMG: 11 ^h 26 ^m			Mag: -2.1 PMG: 12 ^h 32 ^m			Mag: +0.4 PMG: 0 ^h 37 ^m			
	hG ♈			hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	185	04.1	211	54.8	-11	48.8	188	25.0	-2	29.7	171	38.4	+4	34.5	350	44.1
1	200	06.6	226	54.3		47.8	203	25.7		28.9	186	40.4		34.7	5	46.7
2	215	09.1	241	53.9		46.9	218	26.3		28.1	201	42.3		35.0	20	49.3
3	230	11.5	256	53.5		45.9	233	27.0		27.3	216	44.2		35.2	35	52.0
4	245	14.0	271	53.0		44.9	248	27.7		26.5	231	46.1		35.4	50	54.6
5	260	16.5	286	52.6	-11	44.0	263	28.3	-2	25.7	246	48.0	+4	35.7	65	57.3
6	275	18.9	301	52.1	-11	43.0	278	29.0	-2	24.9	261	49.9	+4	35.9	80	59.9
7	290	21.4	316	51.7		42.1	293	29.7		24.1	276	51.8		36.2	96	02.5
8	305	23.9	331	51.2		41.1	308	30.4		23.4	291	53.7		36.4	111	05.2
9	320	26.3	346	50.8		40.2	323	31.0		22.6	306	55.6		36.6	126	07.8
10	335	28.8	1	50.3		39.2	338	31.7		21.8	321	57.5		36.9	141	10.5
11	350	31.2	16	49.9	-11	38.2	353	32.4	-2	21.0	336	59.4	+4	37.1	156	13.1
12	5	33.7	31	49.4	-11	37.3	8	33.1	-2	20.2	352	01.3	+4	37.3	171	15.7
13	20	36.2	46	49.0		36.3	23	33.7		19.4	7	03.2		37.6	186	18.4
14	35	38.6	61	48.6		35.4	38	34.4		18.6	22	05.1		37.8	201	21.0
15	50	41.1	76	48.1		34.4	53	35.1		17.8	37	07.0		38.0	216	23.7
16	65	43.6	91	47.7		33.4	68	35.8		17.0	52	09.0		38.3	231	26.3
17	80	46.0	106	47.2	-11	32.5	83	36.4	-2	16.3	67	10.9	+4	38.5	246	29.0
18	95	48.5	121	46.8	-11	31.5	98	37.1	-2	15.5	82	12.8	+4	38.7	261	31.6
19	110	51.0	136	46.3		30.6	113	37.8		14.7	97	14.7		39.0	276	34.2
20	125	53.4	151	45.9		29.6	128	38.5		13.9	112	16.6		39.2	291	36.9
21	140	55.9	166	45.5		28.6	143	39.1		13.1	127	18.5		39.4	306	39.5
22	155	58.4	181	45.0		27.7	158	39.8		12.3	142	20.4		39.7	321	42.2
23	171	00.8	196	44.6		26.7	173	40.5		11.5	157	22.3		39.9	336	44.8
24	186	03.3	211	44.1	-11	25.7	188	41.2	-2	10.7	172	24.2	+4	40.1	351	47.4
Dif	—			-4 +10			+7 +8			+19 +2			+26 +1			

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16'0 PMG: 12 ^h 04 ^m 9			Edad: 24 ^d 1 PHE { 4 ^h : 54'9 12 ^h : 54'7 20 ^h : 54'6 SD: 15'0 PMG: 8 ^h 24 ^m R°: 43 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m
0	178	44.8	+3 09.4	237	52.2	-15 31.5		60 N	18 36	19 18	20 11	4 06 10	12 53 79	
1	193	45.0		252	24.6 ¹³⁴	21.9 ⁹⁶		58	33	13	20 02	3 57 13	13 02 76	
2	208	45.2	11.3	266	57.2 ¹³⁶	12.4 ⁹⁵		56	31	09	19 55	49 16	09 73	
3	223	45.4	12.3	281	29.8 ¹³⁶	-15 02.7 ⁹⁷		54	30	05	49	42 18	16 70	
4	238	45.6	13.3	296	02.4 ¹³⁶	-14 53.0 ⁹⁷		52	28	19 02	43	36 19	21 69	
5	253	45.8	+3 14.3	310	35.2 ¹³⁸	-14 43.3 ⁹⁷		50	18 27	18 59	19 38	3 30 21	13 27 66	
6	268	45.9	+3 15.2	325	08.0 ¹³⁸	-14 33.5 ⁹⁸		45	18 23	18 53	19 28	3 17 25	13 38 63	
7	283	46.1	16.2	339	40.8 ¹³⁸	23.6 ⁹⁹		40	21	48	20	3 07 28	47 60	
8	298	46.3	17.2	354	13.7 ¹³⁹	13.7 ⁹⁹		35	19	44	14	2 58 31	13 55 57	
9	313	46.5	18.2	8	46.7 ¹⁴⁰	-14 03.8 ⁹⁹		30	17	41	09	50 33	14 02 54	
10	328	46.7	19.1	23	19.8 ¹⁴¹	-13 53.7 ¹⁰¹		20	13	35	19 01	36 38	14 50	
11	343	46.9	+3 20.1	37	52.9 ¹⁴¹	-13 43.7 ¹⁰⁰		10 N	18 11	18 32	18 56	2 24 41	14 25 46	
12	358	47.1	+3 21.1	52	26.0 ¹⁴¹	-13 33.5 ¹⁰²		0	18 08	18 29	18 53	2 13 44	14 34 43	
13	13	47.3	22.1	66	59.2 ¹⁴²	23.4 ¹⁰¹		10 S	06	27	51	2 02 47	44 40	
14	28	47.4	23.0	81	32.5 ¹⁴³	13.1 ¹⁰³		20	03	25	51	1 50 50	14 54 36	
15	43	47.6	24.0	96	05.9 ¹⁴⁴	-13 02.9 ¹⁰²		30	18 01	25	52	36 54	15 06 32	
16	58	47.8	25.0	110	39.2 ¹⁴³	-12 52.5 ¹⁰⁴		35	17 59	24	54	28 57	13 29	
17	73	48.0	+3 26.0	125	12.7 ¹⁴⁵	-12 42.2 ¹⁰³		40	17 58	18 25	18 56	1 18 60	15 20 27	
18	88	48.2	+3 26.9	139	46.2 ¹⁴⁵	-12 31.7 ¹⁰⁵		45	17 56	18 25	18 59	1 07 64	15 29 24	
19	103	48.4	27.9	154	19.8 ¹⁴⁶	21.3 ¹⁰⁴		50	54	26	19 03	0 54 67	40 20	
20	118	48.6	28.9	168	53.4 ¹⁴⁶	10.8 ¹⁰⁵		52	53	26	05	48 69	45 18	
21	133	48.8	29.9	183	27.0 ¹⁴⁶	-12 00.2 ¹⁰⁶		54	51	27	08	41 72	50 16	
22	148	48.9	30.8	198	00.8 ¹⁴⁸	-11 49.6 ¹⁰⁶		56	50	27	10	34 73	15 56 14	
23	163	49.1	31.8	212	34.5 ¹⁴⁷	39.0 ¹⁰⁶		58	49	28	14	25 76	16 02 12	
24	178	49.3	+3 32.8	227	08.3 ¹⁴⁸	-11 28.3 ¹⁰⁷		60 S	17 48	18 29	19 17	0 15 80	16 10 9	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 11 ^h 33 ^m 9		Mag: -4.0 PMG: 9 ^h 53 ^m			Mag: +1.2 PMG: 11 ^h 25 ^m			Mag: -2.1 PMG: 12 ^h 29 ^m			Mag: +0.4 PMG: 0 ^h 33 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	°	'	°	°	'	°	'	°	'	°	'
0	186	03.3	211 44.1	-11 25.7		188 41.2	-2 10.7		172 24.2	+4 40.1		351 47.4	-3 08.2	
1	201	05.7	226 43.7	24.8		203 41.8	09.9		187 26.1	40.4		6 50.1	08.2	
2	216	08.2	241 43.3	23.8		218 42.5	09.2		202 28.0	40.6		21 52.7	08.1	
3	231	10.7	256 42.8	22.8		233 43.2	08.4		217 29.9	40.8		36 55.4	08.0	
4	246	13.1	271 42.4	21.9		248 43.9	07.6		232 31.8	41.1		51 58.0	07.9	
5	261	15.6	286 41.9	-11 20.9		263 44.5	-2 06.8		247 33.7	+4 41.3		67 00.6	-3 07.9	
6	276	18.1	301 41.5	-11 19.9		278 45.2	-2 06.0		262 35.6	+4 41.5		82 03.3	-3 07.8	
7	291	20.5	316 41.1	19.0		293 45.9	05.2		277 37.5	41.8		97 05.9	07.7	
8	306	23.0	331 40.6	18.0		308 46.6	04.4		292 39.5	42.0		112 08.6	07.6	
9	321	25.5	346 40.2	17.0		323 47.2	03.6		307 41.4	42.2		127 11.2	07.6	
10	336	27.9	1 39.8	16.0		338 47.9	02.9		322 43.3	42.5		142 13.8	07.5	
11	351	30.4	16 39.3	-11 15.1		353 48.6	-2 02.1		337 45.2	+4 42.7		157 16.5	-3 07.4	
12	6	32.8	31 38.9	-11 14.1		8 49.3	-2 01.3		352 47.1	+4 43.0		172 19.1	-3 07.3	
13	21	35.3	46 38.4	13.1		23 49.9	-2 00.5		7 49.0	43.2		187 21.8	07.3	
14	36	37.8	61 38.0	12.2		38 50.6	-1 59.7		22 50.9	43.4		202 24.4	07.2	
15	51	40.2	76 37.6	11.2		53 51.3	58.9		37 52.8	43.7		217 27.1	07.1	
16	66	42.7	91 37.1	10.2		68 52.0	58.1		52 54.7	43.9		232 29.7	07.0	
17	81	45.2	106 36.7	-11 09.2		83 52.7	-1 57.3		67 56.6	+4 44.1		247 32.3	-3 06.9	
18	96	47.6	121 36.3	-11 08.3		98 53.3	-1 56.5		82 58.5	+4 44.4		262 35.0	-3 06.9	
19	111	50.1	136 35.8	07.3		113 54.0	55.8		98 00.4	44.6		277 37.6	06.8	
20	126	52.6	151 35.4	06.3		128 54.7	55.0		113 02.3	44.8		292 40.3	06.7	
21	141	55.0	166 35.0	05.3		143 55.4	54.2		128 04.2	45.1		307 42.9	06.6	
22	156	57.5	181 34.5	04.3		158 56.0	53.4		143 06.1	45.3		322 45.5	06.6	
23	172	00.0	196 34.1	03.4		173 56.7	52.6		158 08.0	45.5		337 48.2	06.5	
24	187	02.4	211 33.7	-11 02.4		188 57.4	-1 51.8		173 09.9	+4 45.8		352 50.8	-3 06.4	
Dif	—		-4		+10	+7		+8	+19		+2	+26		+1

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna														
	SD: 16'0 PMG: 12 ^h 04 ^m 6			Edad: 25 ^d 1 PHE { 4 ^h : 54'5 12 ^h : 54'3 20 ^h : 54'3 PMG: 9 ^h 07 ^m R°: 42 ^m																							
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°												
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	m												
0	178	49.3	+3	32.8	227	08.3	-11	28.3	60 N	3 58	4 50	5 33	4 16	8	14 12 78												
1	193	49.5		33.7	241	42.2 ¹⁴⁹		17.6 ¹⁰⁷	58	4 06	55	35	10	10	18 74												
2	208	49.7		34.7	256	16.1 ¹⁴⁹	-11	06.8 ¹⁰⁸	56	14	4 59	37	05	12	22 72												
3	223	49.9		35.7	270	50.1 ¹⁵⁰	-10	56.0 ¹⁰⁸	54	20	5 03	39	4	00	15 26 70												
4	238	50.1		36.7	285	24.1 ¹⁵⁰		45.2 ¹⁰⁸	52	25	06	41	3	55	17 30 67												
5	253	50.3	+3	37.6	299	58.2 ¹⁵¹	-10	34.3 ¹⁰⁹	50	4 30	5 09	5 42	3 51	19	14 33 66												
6	268	50.4	+3	38.6	314	32.3 ¹⁵¹	-10	23.4 ¹⁰⁹	45	4 41	5 16	5 45	3 42	23	14 41 61												
7	283	50.6		39.6	329	06.5 ¹⁵²		12.5 ¹⁰⁹	40	49	21	48	35	26	47 58												
8	298	50.8		40.6	343	40.7 ¹⁵²	-10	01.5 ¹¹⁰	35	4 55	25	50	29	28	52 55												
9	313	51.0		41.5	358	14.9 ¹⁵²	-9	50.5 ¹¹⁰	30	5 00	28	52	23	31	14 56 53												
10	328	51.2		42.5	12	49.2 ¹⁵³		39.4 ¹¹¹	20	08	34	56	14	34	15 04 49												
11	343	51.4	+3	43.5	27	23.5 ¹⁵³	-9	28.3 ¹¹¹	10 N	5 13	5 38	5 59	3 05	39	15 11 45												
12	358	51.6	+3	44.4	41	57.9 ¹⁵⁴	-9	17.2 ¹¹¹	0	5 17	5 41	6 01	2 57	42	15 17 42												
13	13	51.8		45.4	56	32.3 ¹⁵⁴	-9	06.1 ¹¹¹	10 S	18	43	04	49	45	24 38												
14	28	51.9		46.4	71	06.8 ¹⁵⁵	-8	54.9 ¹¹²	20	19	44	06	40	49	30 35												
15	43	52.1		47.4	85	41.2 ¹⁵⁴		43.7 ¹¹²	30	18	45	09	30	54	38 30												
16	58	52.3		48.3	100	15.8 ¹⁵⁶		32.4 ¹¹³	35	16	46	11	25	56	42 28												
17	73	52.5	+3	49.3	114	50.3 ¹⁵⁵	-8	21.2 ¹¹²	40	5 14	5 46	6 13	2 18	59	15 47 25												
18	88	52.7	+3	50.3	129	24.9 ¹⁵⁶	-8	09.9 ¹¹³	45	5 11	5 45	6 15	2 11	62	15 53 22												
19	103	52.9		51.2	143	59.6 ¹⁵⁷	-7	58.5 ¹¹⁴	50	07	45	17	2	01	66 16 00 17												
20	118	53.1		52.2	158	34.3 ¹⁵⁷		47.2 ¹¹³	52	05	44	18	1	57	68 03 16												
21	133	53.2		53.2	173	09.0 ¹⁵⁷		35.8 ¹¹⁴	54	03	44	19	53	69	06 14												
22	148	53.4		54.2	187	43.7 ¹⁵⁷		24.4 ¹¹⁴	56	5 00	43	20	47	73	10 12												
23	163	53.6		55.1	202	18.5 ¹⁵⁸		13.0 ¹¹⁴	58	4 57	43	22	41	75	14 10												
24	178	53.8	+3	56.1	216	53.3 ¹⁵⁸	-7	01.5 ¹¹⁵	60 S	4 53	5 42	6 23	1 35	78	16 19 7												
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO														
	PMG: 11 ^h 29 ^m 9			Mag: -4.0 PMG: 9 ^h 54 ^m			Mag: +1.2 PMG: 11 ^h 24 ^m			Mag: -2.1 PMG: 12 ^h 26 ^m			Mag: +0.4 PMG: 0 ^h 29 ^m														
	hG ♈			hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec													
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°												
0	187	02.4	211	33.7	-11	02.4	188	57.4	-1	51.8	173	09.9	+4	45.8	352	50.8	-3	06.4									
1	202	04.9	226	33.2		01.4	203	58.1		51.0	188	11.9		46.0	7	53.5		06.3									
2	217	07.3	241	32.8	-11	00.4	218	58.7		50.2	203	13.8		46.2	22	56.1		06.3									
3	232	09.8	256	32.4	-10	59.4	233	59.4		49.4	218	15.7		46.5	37	58.8		06.2									
4	247	12.3	271	31.9		58.5	249	00.1		48.6	233	17.6		46.7	53	01.4		06.1									
5	262	14.7	286	31.5	-10	57.5	264	00.8	-1	47.9	248	19.5	+4	46.9	68	04.0	-3	06.0									
6	277	17.2	301	31.1	-10	56.5	279	01.5	-1	47.1	263	21.4	+4	47.2	83	06.7	-3	06.0									
7	292	19.7	316	30.6		55.5	294	02.1		46.3	278	23.3		47.4	98	09.3		05.9									
8	307	22.1	331	30.2		54.5	309	02.8		45.5	293	25.2		47.6	113	12.0		05.8									
9	322	24.6	346	29.8		53.5	324	03.5		44.7	308	27.1		47.9	128	14.6		05.7									
10	337	27.1	1	29.4		52.6	339	04.2		43.9	323	29.0		48.1	143	17.2		05.6									
11	352	29.5	16	28.9	-10	51.6	354	04.8	-1	43.1	338	30.9	+4	48.3	158	19.9	-3	05.6									
12	7	32.0	31	28.5	-10	50.6	9	05.5	-1	42.3	353	32.8	+4	48.6	173	22.5	-3	05.5									
13	22	34.4	46	28.1		49.6	24	06.2		41.5	8	34.7		48.8	188	25.2		05.4									
14	37	36.9	61	27.6		48.6	39	06.9		40.8	23	36.6		49.0	203	27.8		05.3									
15	52	39.4	76	27.2		47.6	54	07.6		40.0	38	38.5		49.3	218	30.5		05.3									
16	67	41.8	91	26.8		46.6	69	08.2		39.2	53	40.4		49.5	233	33.1		05.2									
17	82	44.3	106	26.4	-10	45.7	84	08.9	-1	38.4	68	42.3	+4	49.7	248	35.7	-3	05.1									
18	97	46.8	121	25.9	-10	44.7	99	09.6	-1	37.6	83	44.2	+4	50.0	263	38.4	-3	05.0									
19	112	49.2	136	25.5		43.7	114	10.3		36.8	98	46.2		50.2	278	41.0		05.0									
20	127	51.7	151	25.1		42.7	129	10.9		36.0	113	48.1		50.4	293	43.7		04.9									
21	142	54.2	166	24.6		41.7	144	11.6		35.2	128	50.0		50.7	308	46.3		04.8									
22	157	56.6	181	24.2		40.7	159	12.3		34.4	143	51.9		50.9	323	48.9		04.7									
23	172	59.1	196	23.8		39.7	174	13.0		33.7	158	53.8		51.2	338	51.6		04.7									
24	188	01.6	211	23.4	-10	38.7	189	13.7	-1	32.9	173	55.7	+4	51.4	353	54.2	-3	04.6									
Dif	—			-4			+10			+7			+8			+19			+2			+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 3			Edad: 26 ^d 1 PHE { 4 ^h : 54/2 12 ^h : 54/1 20 ^h : 54/0 Rº: 40 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	Rº	Hora	Rº
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m
0	178	53.8	+3 56.1	216	53.3	-7 01.5		60 N	18 40	19 23	20 17	4 24 7	15 30 76		
1	193	54.0		231	28.1 ¹⁵⁸	-6 50.0 ¹¹⁵		58	38	18	08	20 10	32 73		
2	208	54.2		246	03.0 ¹⁵⁹	38.5 ¹¹⁵		56	35	13	20 00	17 12	34 71		
3	223	54.4	+3 59.0	260	37.9 ¹⁵⁹	27.0 ¹¹⁵		54	33	09	19 53	15 13	36 68		
4	238	54.6	+4 00.0	275	12.8 ¹⁵⁹	15.5 ¹¹⁵		52	31	06	47	12 16	37 67		
5	253	54.7	+4 00.9	289	47.8 ¹⁶⁰	-6 03.9 ¹¹⁶		50	18 30	19 02	19 42	4 10 17	15 39 65		
6	268	54.9	+4 01.9	304	22.7 ¹⁵⁹	-5 52.3 ¹¹⁶		45	18 26	18 56	19 31	4 05 21	15 42 61		
7	283	55.1	02.9	318	57.7 ¹⁶⁰	40.7 ¹¹⁶		40	23	50	22	4 01 24	45 57		
8	298	55.3	03.8	333	32.8 ¹⁶¹	29.1 ¹¹⁶		35	20	46	16	3 57 27	47 55		
9	313	55.5	04.8	348	07.8 ¹⁶⁰	17.5 ¹¹⁶		30	18	42	10	54 29	49 52		
10	328	55.7	05.8	2	42.9 ¹⁶¹	-5 05.8 ¹¹⁷		20	14	36	19 02	48 34	53 48		
11	343	55.9	+4 06.8	17	18.0 ¹⁶¹	-4 54.1 ¹¹⁷		10 N	18 11	18 32	18 56	3 44 37	15 56 44		
12	358	56.0	+4 07.7	31	53.1 ¹⁶¹	-4 42.5 ¹¹⁶		0	18 08	18 28	18 52	3 39 41	15 59 40		
13	13	56.2	08.7	46	28.3 ¹⁶²	30.8 ¹¹⁷		10 S	05	26	50	34 45	16 02 37		
14	28	56.4	09.7	61	03.4 ¹⁶¹	19.0 ¹¹⁸		20	18 02	24	49	29 49	05 33		
15	43	56.6	10.6	75	38.6 ¹⁶²	-4 07.3 ¹¹⁷		30	17 58	22	50	24 52	08 29		
16	58	56.8	11.6	90	13.8 ¹⁶²	-3 55.6 ¹¹⁷		35	56	22	51	21 54	10 27		
17	73	57.0	+4 12.6	104	49.0 ¹⁶²	-3 43.8 ¹¹⁸		40	17 54	18 21	18 53	3 17 58	16 12 24		
18	88	57.2	+4 13.5	119	24.3 ¹⁶³	-3 32.1 ¹¹⁷		45	17 52	18 21	18 55	3 13 61	16 15 20		
19	103	57.3	14.5	133	59.5 ¹⁶²	20.3 ¹¹⁸		50	49	21	18 59	07 65	17 18		
20	118	57.5	15.5	148	34.8 ¹⁶³	-3 08.5 ¹¹⁸		52	48	22	19 01	05 67	19 15		
21	133	57.7	16.4	163	10.1 ¹⁶³	-2 56.7 ¹¹⁸		54	47	22	03	02 69	20 14		
22	148	57.9	17.4	177	45.4 ¹⁶³	44.9 ¹¹⁸		56	45	22	05	3 00 71	22 11		
23	163	58.1	18.4	192	20.7 ¹⁶³	33.1 ¹¹⁸		58	43	22	08	2 56 74	24 9		
24	178	58.3	+4 19.3	206	56.0 ¹⁶³	-2 21.3 ¹¹⁸		60 S	17 42	18 23	19 11	2 53 76	16 26 6		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 11 ^h 26 ^m 0		Mag: -3.9 PMG: 9 ^h 55 ^m			Mag: +1.2 PMG: 11 ^h 23 ^m			Mag: -2.1 PMG: 12 ^h 23 ^m			Mag: +0.4 PMG: 0 ^h 24 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	°	'	°	'	°	°	'	°	°	'	°	'
0	188	01.6	211 23.4	-10 38.7		189 13.7	-1 32.9		173 55.7	+4 51.4		353 54.2	-3 04.6		
1	203	04.0	226 22.9	37.7		204 14.3	32.1		188 57.6	51.6		8 56.9	04.5		
2	218	06.5	241 22.5	36.7		219 15.0	31.3		203 59.5	51.9		23 59.5	04.4		
3	233	08.9	256 22.1	35.7		234 15.7	30.5		219 01.4	52.1		39 02.2	04.3		
4	248	11.4	271 21.7	34.7		249 16.4	29.7		234 03.3	52.3		54 04.8	04.3		
5	263	13.9	286 21.2	-10 33.8		264 17.0	-1 28.9		249 05.2	+4 52.6		69 07.4	-3 04.2		
6	278	16.3	301 20.8	-10 32.8		279 17.7	-1 28.1		264 07.1	+4 52.8		84 10.1	-3 04.1		
7	293	18.8	316 20.4	31.8		294 18.4	27.3		279 09.0	53.0		99 12.7	04.0		
8	308	21.3	331 20.0	30.8		309 19.1	26.6		294 10.9	53.3		114 15.4	04.0		
9	323	23.7	346 19.5	29.8		324 19.8	25.8		309 12.8	53.5		129 18.0	03.9		
10	338	26.2	1 19.1	28.8		339 20.4	25.0		324 14.7	53.7		144 20.7	03.8		
11	353	28.7	16 18.7	-10 27.8		354 21.1	-1 24.2		339 16.6	+4 54.0		159 23.3	-3 03.7		
12	8	31.1	31 18.3	-10 26.8		9 21.8	-1 23.4		354 18.5	+4 54.2		174 25.9	-3 03.7		
13	23	33.6	46 17.9	25.8		24 22.5	22.6		9 20.4	54.4		189 28.6	03.6		
14	38	36.1	61 17.4	24.8		39 23.2	21.8		24 22.4	54.7		204 31.2	03.5		
15	53	38.5	76 17.0	23.8		54 23.8	21.0		39 24.3	54.9		219 33.9	03.4		
16	68	41.0	91 16.6	22.8		69 24.5	20.2		54 26.2	55.1		234 36.5	03.4		
17	83	43.4	106 16.2	-10 21.8		84 25.2	-1 19.5		69 28.1	+4 55.4		249 39.2	-3 03.3		
18	98	45.9	121 15.8	-10 20.8		99 25.9	-1 18.7		84 30.0	+4 55.6		264 41.8	-3 03.2		
19	113	48.4	136 15.3	19.8		114 26.6	17.9		99 31.9	55.8		279 44.4	03.1		
20	128	50.8	151 14.9	18.8		129 27.2	17.1		114 33.8	56.1		294 47.1	03.0		
21	143	53.3	166 14.5	17.8		144 27.9	16.3		129 35.7	56.3		309 49.7	03.0		
22	158	55.8	181 14.1	16.8		159 28.6	15.5		144 37.6	56.5		324 52.4	02.9		
23	173	58.2	196 13.7	15.8		174 29.3	14.7		159 39.5	56.8		339 55.0	02.8		
24	189	00.7	211 13.2	-10 14.8		189 30.0	-1 13.9		174 41.4	+4 57.0		354 57.6	-3 02.7		
Dif	—		-4		+10	+7		+8	+19		+2	+26		+	

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 0			Edad: 27 ^d 1 PHE { 4 ^h : 54 ^o 0 12 ^h : 54 ^o 0 20 ^h : 53 ^o 9 PMG: 10 ^h 29 ^m R°: 41 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	m	
0	178	58.3	+4	19.3	206	56.0	-2	21.3	60 N	3 51	4 44	5 27	4 31	6	16 46	76		
1	193	58.5		20.3	221	31.3 ¹⁶³	-2	09.4 ¹¹⁹	58	4 00	49	29	30	9	45	74		
2	208	58.6		21.3	236	06.7 ¹⁶⁴	-1	57.6 ¹¹⁸	56	08	54	32	29	11	45	71		
3	223	58.8		22.2	250	42.0 ¹⁶³		45.8 ¹¹⁸	54	14	4 58	34	28	14	44	66		
4	238	59.0		23.2	265	17.4 ¹⁶⁴		33.9 ¹¹⁹	52	20	5 02	36	28	15	44	67		
5	253	59.2	+4	24.2	279	52.7 ¹⁶³	-1	22.1 ¹¹⁸	50	4 26	5 05	5 38	4 27	17	16 44	65		
6	268	59.4	+4	25.1	294	28.1 ¹⁶⁴	-1	10.2 ¹¹⁹	45	4 37	5 12	5 42	4 26	21	16 43	61		
7	283	59.6		26.1	309	03.5 ¹⁶⁴	-0	58.4 ¹¹⁸	40	45	18	45	25	24	42	58		
8	298	59.8		27.1	323	38.9 ¹⁶⁴		46.5 ¹¹⁹	35	52	22	48	24	27	42	55		
9	313	59.9		28.0	338	14.3 ¹⁶⁴		34.7 ¹¹⁸	30	4 58	26	50	23	29	41	53		
10	329	00.1		29.0	352	49.7 ¹⁶⁴		22.8 ¹¹⁹	20	5 06	32	54	22	33	41	48		
11	344	00.3	+4	30.0	7	25.1 ¹⁶⁴	-0	10.9 ¹¹⁹	10 N	5 12	5 36	5 58	4 21	37	16 40	44		
12	359	00.5	+4	30.9	22	00.5 ¹⁶⁴	+0	00.9 ¹¹⁸	0	5 16	5 40	6 01	4 20	40	16 39	41		
13	14	00.7		31.9	36	35.9 ¹⁶⁴		12.8 ¹¹⁹	10 S	18	43	04	19	44	39	37		
14	29	00.9		32.9	51	11.3 ¹⁶⁴		24.6 ¹¹⁸	20	19	45	07	18	47	38	33		
15	44	01.1		33.8	65	46.7 ¹⁶⁴		36.5 ¹¹⁹	30	19	46	10	16	52	37	29		
16	59	01.2		34.8	80	22.1 ¹⁶⁴	+0	48.3 ¹¹⁸	35	18	47	12	15	55	37	26		
17	74	01.4	+4	35.8	94	57.5 ¹⁶⁴	+1	00.2 ¹¹⁹	40	5 16	5 48	6 15	4 15	57	16 36	24		
18	89	01.6	+4	36.7	109	32.9 ¹⁶⁴	+1	12.0 ¹¹⁸	45	5 14	5 48	6 17	4 14	60	16 35	21		
19	104	01.8		37.7	124	08.3 ¹⁶⁴		23.8 ¹¹⁸	50	10	48	20	12	65	35	17		
20	119	02.0		38.7	138	43.7 ¹⁶⁴		35.7 ¹¹⁹	52	08	48	21	12	67	34	16		
21	134	02.2		39.6	153	19.1 ¹⁶⁴		47.5 ¹¹⁸	54	06	48	23	11	69	34	13		
22	149	02.3		40.6	167	54.4 ¹⁶³	+1	59.3 ¹¹⁸	56	04	47	24	11	70	33	12		
23	164	02.5		41.5	182	29.8 ¹⁶⁴	+2	11.1 ¹¹⁸	58	5 01	47	26	10	73	33	9		
24	179	02.7	+4	42.5	197	05.2 ¹⁶⁴	+2	22.9 ¹¹⁸	60 S	4 58	5 47	6 28	4 09	76	16 32	7		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 11 ^h 22 ^m 1		Mag: -3.9 PMG: 9 ^h 55 ^m			Mag: +1.2 PMG: 11 ^h 21 ^m			Mag: -2.1 PMG: 12 ^h 20 ^m			Mag: +0.4 PMG: 0 ^h 20 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	189	00.7	211	13.2	-10	14.8	189	30.0	-1	13.9	174	41.4	+4	57.0	354	57.6	-3	02.7
1	204	03.2	226	12.8		13.8	204	30.6		13.1	189	43.3		57.2	10	00.3		02.7
2	219	05.6	241	12.4		12.7	219	31.3		12.4	204	45.2		57.5	25	02.9		02.6
3	234	08.1	256	12.0		11.7	234	32.0		11.6	219	47.1		57.7	40	05.6		02.5
4	249	10.5	271	11.6		10.7	249	32.7		10.8	234	49.0		57.9	55	08.2		02.4
5	264	13.0	286	11.1	-10	09.7	264	33.4	-1	10.0	249	50.9	+4	58.2	70	10.9	-3	02.4
6	279	15.5	301	10.7	-10	08.7	279	34.0	-1	09.2	264	52.8	+4	58.4	85	13.5	-3	02.3
7	294	17.9	316	10.3		07.7	294	34.7		08.4	279	54.7		58.6	100	16.1		02.2
8	309	20.4	331	09.9		06.7	309	35.4		07.6	294	56.6		58.9	115	18.8		02.1
9	324	22.9	346	09.5		05.7	324	36.1		06.8	309	58.5		59.1	130	21.4		02.1
10	339	25.3	1	09.1		04.7	339	36.8		06.0	325	00.4		59.3	145	24.1		02.0
11	354	27.8	16	08.7	-10	03.7	354	37.4	-1	05.3	340	02.4	+4	59.6	160	26.7	-3	01.9
12	9	30.3	31	08.2	-10	02.7	9	38.1	-1	04.5	355	04.3	+4	59.8	175	29.4	-3	01.8
13	24	32.7	46	07.8		01.7	24	38.8		03.7	10	06.2	+5	00.0	190	32.0		01.7
14	39	35.2	61	07.4	-10	00.6	39	39.5		02.9	25	08.1	+5	00.3	205	34.6		01.7
15	54	37.7	76	07.0	-9	59.6	54	40.2		02.1	40	10.0		00.5	220	37.3		01.6
16	69	40.1	91	06.6		58.6	69	40.8		01.3	55	11.9		00.7	235	39.9		01.5
17	84	42.6	106	06.2	-9	57.6	84	41.5	-1	00.5	70	13.8	+5	01.0	250	42.6	-3	01.4
18	99	45.0	121	05.8	-9	56.6	99	42.2	-0	59.7	85	15.7	+5	01.2	265	45.2	-3	01.4
19	114	47.5	136	05.3		55.6	114	42.9		58.9	100	17.6		01.4	280	47.9		01.3
20	129	50.0	151	04.9		54.6	129	43.6		58.2	115	19.5		01.7	295	50.5		01.2
21	144	52.4	166	04.5		53.5	144	44.2		57.4	130	21.4		01.9	310	53.1		01.1
22	159	54.9	181	04.1		52.5	159	44.9		56.6	145	23.3		02.1	325	55.8		01.1
23	174	57.4	196	03.7		51.5	174	45.6		55.8	160	25.2		02.4	340	58.4		01.0
24	189	59.8	211	03.3	-9	50.5	189	46.3	-0	55.0	175	27.1	+5	02.6	356	01.1	-3	00.9
Dif	—		-4		+10		+7		+8		+19		+2		+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 7			Edad: 28 ^d 1 PHE { 4 ^h : 53/9 12 ^h : 53/9 20 ^h : 53/9 PMG: 11 ^h 10 ^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	
0	179	02.7	+4	42.5	197	05.2	+2 22.9	60 N	18 45	19 28	20 23	4 37	7	18 02	77	
1	194	02.9		43.5	211	40.5 ¹⁶³	34.7 ¹¹⁸	58	42	23	13	39	10	17 59	74	
2	209	03.1		44.4	226	15.9 ¹⁶⁴	46.5 ¹¹⁸	56	39	18	20 05	40	12	56	71	
3	224	03.3		45.4	240	51.2 ¹⁶³	+2 58.3 ¹¹⁸	54	37	13	19 57	42	14	53	69	
4	239	03.5		46.4	255	26.6 ¹⁶⁴	+3 10.0 ¹¹⁷	52	35	09	51	43	16	51	67	
5	254	03.6	+4	47.3	270	01.9 ¹⁶³	+3 21.8 ¹¹⁸	50	18 33	19 06	19 45	4 44	18	17 49	65	
6	269	03.8	+4	48.3	284	37.2 ¹⁶³	+3 33.5 ¹¹⁷	45	18 28	18 58	19 34	4 47	21	17 44	61	
7	284	04.0		49.3	299	12.5 ¹⁶³	45.2 ¹¹⁷	40	25	52	25	49	24	40	58	
8	299	04.2		50.2	313	47.8 ¹⁶³	+3 56.9 ¹¹⁷	35	22	47	17	51	27	37	55	
9	314	04.4		51.2	328	23.1 ¹⁶³	+4 08.6 ¹¹⁷	30	19	43	11	52	30	34	52	
10	329	04.6		52.1	342	58.3 ¹⁶²	20.3 ¹¹⁷	20	14	37	19 02	55	34	29	48	
11	344	04.7	+4	53.1	357	33.6 ¹⁶³	+4 31.9 ¹¹⁶	10 N	18 11	18 32	18 56	4 58	37	17 24	45	
12	359	04.9	+4	54.1	12	08.8 ¹⁶²	+4 43.6 ¹¹⁷	0	18 07	18 28	18 52	5 00	41	17 20	41	
13	14	05.1		55.0	26	44.0 ¹⁶²	+4 55.2 ¹¹⁶	10 S	03	25	49	03	44	16	38	
14	29	05.3		56.0	41	19.2 ¹⁶²	+5 06.8 ¹¹⁶	20	18 00	22	47	05	49	11	35	
15	44	05.5		56.9	55	54.4 ¹⁶²	18.4 ¹¹⁶	30	17 56	20	47	08	53	06	31	
16	59	05.7		57.9	70	29.5 ¹⁶¹	30.0 ¹¹⁶	35	54	19	48	10	55	03	28	
17	74	05.8	+4	58.9	85	04.6 ¹⁶¹	+5 41.5 ¹¹⁵	40	17 51	18 18	18 49	5 12	58	17 00	25	
18	89	06.0	+4	59.8	99	39.7 ¹⁶¹	+5 53.0 ¹¹⁵	45	17 48	18 18	18 51	5 14	61	16 56	22	
19	104	06.2	+5	00.8	114	14.8 ¹⁶¹	+6 04.5 ¹¹⁵	50	45	17	54	17	65	52	18	
20	119	06.4		01.8	128	49.9 ¹⁶¹	16.0 ¹¹⁵	52	43	17	56	19	66	50	16	
21	134	06.6		02.7	143	25.0 ¹⁶¹	27.5 ¹¹⁵	54	42	17	18 58	20	69	47	15	
22	149	06.8		03.7	158	00.0 ¹⁶⁰	38.9 ¹¹⁴	56	40	17	19 00	21	72	45	13	
23	164	06.9		04.6	172	35.0 ¹⁶⁰	+6 50.3 ¹¹⁴	58	38	17	02	23	74	42	10	
24	179	07.1	+5	05.6	187	10.0 ¹⁶⁰	+7 01.7 ¹¹⁴	60 S	17 36	18 17	19 05	5 25	77	16 39	8	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO				
	PMG: 11 ^h 18 ^m 2		Mag: -3.9 PMG: 9 ^h 56 ^m			Mag: +1.2 PMG: 11 ^h 20 ^m			Mag: -2.1 PMG: 12 ^h 17 ^m			Mag: +0.4 PMG: 0 ^h 16 ^m				
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	189	59.8	211	03.3	-9	50.5	189	46.3	-0	55.0	175	27.1	+5	02.6	356	01.1
1	205	02.3	226	02.9		49.5	204	47.0		54.2	190	29.0		02.8	11	03.7
2	220	04.8	241	02.5		48.5	219	47.7		53.4	205	30.9		03.1	26	06.4
3	235	07.2	256	02.0		47.4	234	48.3		52.6	220	32.8		03.3	41	09.0
4	250	09.7	271	01.6		46.4	249	49.0		51.9	235	34.7		03.5	56	11.6
5	265	12.1	286	01.2	-9	45.4	264	49.7	-0	51.1	250	36.6	+5	03.8	71	14.3
6	280	14.6	301	00.8	-9	44.4	279	50.4	-0	50.3	265	38.5	+5	04.0	86	16.9
7	295	17.1	316	00.4		43.4	294	51.1		49.5	280	40.4		04.2	101	19.6
8	310	19.5	331	00.0		42.4	309	51.7		48.7	295	42.3		04.5	116	22.2
9	325	22.0	345	59.6		41.3	324	52.4		47.9	310	44.2		04.7	131	24.9
10	340	24.5	0	59.2		40.3	339	53.1		47.1	325	46.2		05.0	146	27.5
11	355	26.9	15	58.8	-9	39.3	354	53.8	-0	46.3	340	48.1	+5	05.2	161	30.1
12	10	29.4	30	58.4	-9	38.3	9	54.5	-0	45.5	355	50.0	+5	05.4	176	32.8
13	25	31.9	45	58.0		37.2	24	55.1		44.8	10	51.9		05.7	191	35.4
14	40	34.3	60	57.5		36.2	39	55.8		44.0	25	53.8		05.9	206	38.1
15	55	36.8	75	57.1		35.2	54	56.5		43.2	40	55.7		06.1	221	40.7
16	70	39.3	90	56.7		34.2	69	57.2		42.4	55	57.6		06.4	236	43.4
17	85	41.7	105	56.3	-9	33.1	84	57.9	-0	41.6	70	59.5	+5	06.6	251	46.0
18	100	44.2	120	55.9	-9	32.1	99	58.6	-0	40.8	86	01.4	+5	06.8	266	48.6
19	115	46.6	135	55.5		31.1	114	59.2		40.0	101	03.3		07.1	281	51.3
20	130	49.1	150	55.1		30.1	129	59.9		39.2	116	05.2		07.3	296	53.9
21	145	51.6	165	54.7		29.0	145	00.6		38.4	131	07.1		07.5	311	56.6
22	160	54.0	180	54.3		28.0	160	01.3		37.7	146	09.0		07.8	326	59.2
23	175	56.5	195	53.9		27.0	175	02.0		36.9	161	10.9		08.0	342	01.9
24	190	59.0	210	53.5	-9	26.0	190	02.7	-0	36.1	176	12.8	+5	08.2	357	04.5
Dif	—		-4	+10		+7	+8		+19	+2		+26		+1		

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 16'0 PMG: 12 ^h 03 ^m 4			Edad: 29 ^d 1 SD: 14'7 PMG: 11 ^h 51 ^m	PHE { 4 ^h : 53'9 12 ^h : 54'0 20 ^h : 54'0 R ^o : 43 ^m													
	hG ☉	Dec																
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m			
0	179	07.1	+5	05.6	187	10.0	+7 01.7	60 N	3 43	4 37	5 21	4 44	9	19 19	78			
1	194	07.3		06.6	201	44.9	13.1 ¹¹⁴	58	3 53	43	24	49	11	13	75			
2	209	07.5		07.5	216	19.8	24.4 ¹¹³	56	4 02	48	27	52	14	07	72			
3	224	07.7		08.5	230	54.7	35.7 ¹¹³	54	09	53	29	56	16	19	02 70			
4	239	07.9		09.4	245	29.6	47.0 ¹¹³	52	15	4 57	31	4 59	18	18 58	68			
5	254	08.0	+5	10.4	260	04.4	58.2 ¹¹²	50	4 21	5 01	5 33	5 02	19	18 54	66			
6	269	08.2	+5	11.4	274	39.2	09.5 ¹¹³	45	4 33	5 08	5 38	5 08	23	18 45	62			
7	284	08.4		12.3	289	14.0	20.6 ¹¹¹	40	42	14	42	13	27	38	59			
8	299	08.6		13.3	303	48.8	31.8 ¹¹²	35	49	19	45	18	29	32	56			
9	314	08.8		14.2	318	23.5	42.9 ¹¹¹	30	4 55	23	48	22	31	26	54			
10	329	09.0		15.2	332	58.2	54.0 ¹¹¹	20	5 04	30	52	29	35	17	50			
11	344	09.1	+5	16.1	347	32.8	05.1 ¹¹¹	10 N	5 11	5 35	5 56	5 35	39	18 09	46			
12	359	09.3	+5	17.1	2	07.4	16.1 ¹¹⁰	0	5 15	5 39	6 00	5 41	42	18 01	43			
13	14	09.5		18.1	16	42.0	27.1 ¹¹⁰	10 S	18	43	04	47	46	17 54	40			
14	29	09.7		19.0	31	16.6	38.1 ¹¹⁰	20	20	45	07	5 54	49	46	36			
15	44	09.9		20.0	45	51.1	49.0 ¹⁰⁹	30	20	48	12	6 01	53	37	32			
16	59	10.1		20.9	60	25.6	59.9 ¹⁰⁹	35	19	49	14	05	56	31	30			
17	74	10.2	+5	21.9	75	00.0	10.7 ¹⁰⁸	40	5 18	5 49	6 17	6 10	58	17 25	28			
18	89	10.4	+5	22.9	89	34.4	21.5 ¹⁰⁸	45	5 16	5 50	6 20	6 15	62	17 18	25			
19	104	10.6		23.8	104	08.8	32.3 ¹⁰⁸	50	13	51	23	22	66	10	21			
20	119	10.8		24.8	118	43.1	43.0 ¹⁰⁷	52	12	51	25	25	68	06	19			
21	134	11.0		25.7	133	17.4	53.7 ¹⁰⁷	54	10	51	26	29	69	17	02 17			
22	149	11.1		26.7	147	51.7	04.4 ¹⁰⁷	56	08	51	28	33	72	16 58	14			
23	164	11.3		27.6	162	25.9	15.0 ¹⁰⁶	58	06	51	31	37	75	52	13			
24	179	11.5	+5	28.6	177	00.1	25.5 ¹⁰⁵	60 S	5 03	5 51	6 33	6 42	77	16 47	9			
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 11 ^h 14 ^m 2		Mag: -3.9 PMG: 9 ^h 57 ^m			Mag: +1.2 PMG: 11 ^h 19 ^m			Mag: -2.1 PMG: 12 ^h 14 ^m			Mag: +0.4 PMG: 0 ^h 12 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	190	59.0	210	53.5	-9	26.0	190	02.7	-0	36.1	176	12.8	+5	08.2	357	04.5	-2	59.1
1	206	01.4	225	53.1		24.9	205	03.3		35.3	191	14.7		08.5	12	07.2		59.0
2	221	03.9	240	52.7		23.9	220	04.0		34.5	206	16.6		08.7	27	09.8		58.9
3	236	06.4	255	52.3		22.9	235	04.7		33.7	221	18.5		08.9	42	12.4		58.8
4	251	08.8	270	51.9		21.8	250	05.4		32.9	236	20.4		09.2	57	15.1		58.8
5	266	11.3	285	51.5	-9	20.8	265	06.1	-0	32.1	251	22.3	+5	09.4	72	17.7	-2	58.7
6	281	13.7	300	51.1	-9	19.8	280	06.8	-0	31.4	266	24.2	+5	09.6	87	20.4	-2	58.6
7	296	16.2	315	50.7		18.8	295	07.4		30.6	281	26.1		09.9	102	23.0		58.5
8	311	18.7	330	50.3		17.7	310	08.1		29.8	296	28.0		10.1	117	25.7		58.5
9	326	21.1	345	49.8		16.7	325	08.8		29.0	311	29.9		10.3	132	28.3		58.4
10	341	23.6	0	49.4		15.7	340	09.5		28.2	326	31.8		10.6	147	30.9		58.3
11	356	26.1	15	49.0	-9	14.6	355	10.2	-0	27.4	341	33.7	+5	10.8	162	33.6	-2	58.2
12	11	28.5	30	48.6	-9	13.6	10	10.9	-0	26.6	356	35.7	+5	11.0	177	36.2	-2	58.2
13	26	31.0	45	48.2		12.6	25	11.5		25.8	11	37.6		11.3	192	38.9		58.1
14	41	33.5	60	47.8		11.5	40	12.2		25.0	26	39.5		11.5	207	41.5		58.0
15	56	35.9	75	47.4		10.5	55	12.9		24.3	41	41.4		11.7	222	44.2		57.9
16	71	38.4	90	47.0		09.5	70	13.6		23.5	56	43.3		12.0	237	46.8		57.9
17	86	40.9	105	46.6	-9	08.4	85	14.3	-0	22.7	71	45.2	+5	12.2	252	49.4	-2	57.8
18	101	43.3	120	46.2	-9	07.4	100	15.0	-0	21.9	86	47.1	+5	12.4	267	52.1	-2	57.7
19	116	45.8	135	45.8		06.3	115	15.6		21.1	101	49.0		12.7	282	54.7		57.6
20	131	48.2	150	45.4		05.3	130	16.3		20.3	116	50.9		12.9	297	57.4		57.6
21	146	50.7	165	45.0		04.3	145	17.0		19.5	131	52.8		13.1	313	00.0		57.5
22	161	53.2	180	44.6		03.2	160	17.7		18.7	146	54.7		13.4	328	02.7		57.4
23	176	55.6	195	44.2		02.2	175	18.4		18.0	161	56.6		13.6	343	05.3		57.3
24	191	58.1	210	43.8	-9	01.2	190	19.1	-0	17.2	176	58.5	+5	13.8	358	07.9	-2	57.3
Dif	—		-4		+10		+7		+8		+19		+2		+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 1			Edad: 30 ^d 1 PHE { 4 ^h : 54'1 12 ^h : 54'1 20 ^h : 54'2 PMG: 12 ^h 34 ^m R°: 44 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°			
h	°	'	°	°	'	°	°	h m	h m	h m	h m m	h m m	h m m					
0	179	11.5	+5 28.6	177	00.1	+11 25.5	60 N	18 50	19 34	20 29	4 53 11	20 37 78						
1	194	11.7		191	34.2 ¹⁵¹	36.1 ¹⁰⁶	58	47	28	18	5 00 14	28 75						
2	209	11.9		206	08.3 ¹⁵¹	46.5 ¹⁰⁴	56	44	22	09	06 16	19 73						
3	224	12.0		220	42.4 ¹⁵¹	+11 57.0 ¹⁰⁵	54	41	17	20 02	12 18	12 70						
4	239	12.2		235	16.4 ¹⁵⁰	+12 07.4 ¹⁰⁴	52	38	13	19 55	17 20	06 68						
5	254	12.4	+5 33.4	249	50.3 ¹⁴⁹	+12 17.7 ¹⁰³	50	18 36	19 09	19 49	5 21 23	20 00 66						
6	269	12.6	+5 34.3	264	24.3 ¹⁵⁰	+12 28.0 ¹⁰³	45	18 31	19 01	19 37	5 31 27	19 47 63						
7	284	12.8		278	58.1 ¹⁴⁸	38.2 ¹⁰²	40	27	18 54	27	40 29	37 59						
8	299	13.0		293	32.0 ¹⁴⁹	48.4 ¹⁰²	35	23	49	19	47 32	28 57						
9	314	13.1		308	05.7 ¹⁴⁷	+12 58.6 ¹⁰²	30	20	44	13	5 53 34	20 55						
10	329	13.3		322	39.5 ¹⁴⁸	+13 08.7 ¹⁰¹	20	15	37	19 03	6 04 38	19 07 51						
11	344	13.5	+5 39.1	337	13.2 ¹⁴⁷	+13 18.7 ¹⁰⁰	10 N	18 10	18 32	18 56	6 14 41	18 55 48						
12	359	13.7	+5 40.1	351	46.8 ¹⁴⁶	+13 28.7 ¹⁰⁰	0	18 06	18 27	18 51	6 23 45	18 44 46						
13	14	13.9		6	20.4 ¹⁴⁶	38.6 ⁹⁹	10 S	18 02	23	48	33 47	34 42						
14	29	14.0		20	54.0 ¹⁴⁶	48.5 ⁹⁹	20	17 58	20	46	43 50	22 39						
15	44	14.2		35	27.5 ¹⁴⁵	+13 58.4 ⁹⁹	30	54	17	45	6 54 54	09 36						
16	59	14.4		50	00.9 ¹⁴⁴	+14 08.1 ⁹⁷	35	51	16	45	7 01 56	18 01 34						
17	74	14.6	+5 44.8	64	34.3 ¹⁴⁴	+14 17.9 ⁹⁸	40	17 48	18 15	18 46	7 08 60	17 53 31						
18	89	14.8	+5 45.8	79	07.7 ¹⁴⁴	+14 27.5 ⁹⁶	45	17 45	18 14	18 48	7 17 63	17 43 28						
19	104	14.9		93	41.0 ¹⁴³	37.1 ⁹⁶	50	41	13	50	28 66	31 24						
20	119	15.1		108	14.2 ¹⁴²	46.7 ⁹⁶	52	39	13	51	33 68	25 23						
21	134	15.3		122	47.4 ¹⁴²	+14 56.2 ⁹⁵	54	37	12	53	38 71	19 21						
22	149	15.5		137	20.6 ¹⁴²	+15 05.6 ⁹⁴	56	35	12	55	45 72	12 19						
23	164	15.7		151	53.7 ¹⁴¹	15.0 ⁹⁴	58	32	11	57	52 75	17 05 15						
24	179	15.8	+5 51.5	166	26.7 ¹⁴⁰	+15 24.3 ⁹³	60 S	17 30	18 11	18 59	7 59 79	16 56 13						
UT	ARIES		VENUS		MARTE		JÚPITER			SATURNO								
	PMG: 11 ^h 10 ^m 3		Mag: -3.9 PMG: 9 ^h 57 ^m		Mag: +1.2 PMG: 11 ^h 18 ^m		Mag: -2.1 PMG: 12 ^h 11 ^m			Mag: +0.4 PMG: 0 ^h 07 ^m								
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec		hG ♄	Dec							
h	°	'	°	°	°	'	°	°	°	'	°	'	°	'				
0	191	58.1	210	43.8	-9	01.2	190	19.1	-0	17.2	176	58.5	+5	13.8	358	07.9	-2	57.3
1	207	00.6	225	43.4	-9	00.1	205	19.7		16.4	192	00.4		14.1	13	10.6		57.2
2	222	03.0	240	43.0	-8	59.1	220	20.4		15.6	207	02.3		14.3	28	13.2		57.1
3	237	05.5	255	42.6		58.0	235	21.1		14.8	222	04.2		14.5	43	15.9		57.0
4	252	08.0	270	42.3		57.0	250	21.8		14.0	237	06.1		14.7	58	18.5		56.9
5	267	10.4	285	41.9	-8	56.0	265	22.5	-0	13.2	252	08.0	+5	15.0	73	21.2	-2	56.9
6	282	12.9	300	41.5	-8	54.9	280	23.2	-0	12.4	267	09.9	+5	15.2	88	23.8	-2	56.8
7	297	15.3	315	41.1		53.9	295	23.8		11.7	282	11.8		15.4	103	26.4		56.7
8	312	17.8	330	40.7		52.8	310	24.5		10.9	297	13.7		15.7	118	29.1		56.6
9	327	20.3	345	40.3		51.8	325	25.2		10.1	312	15.6		15.9	133	31.7		56.6
10	342	22.7	0	39.9		50.7	340	25.9		09.3	327	17.5		16.1	148	34.4		56.5
11	357	25.2	15	39.5	-8	49.7	355	26.6	-0	08.5	342	19.4	+5	16.4	163	37.0	-2	56.4
12	12	27.7	30	39.1	-8	48.7	10	27.3	-0	07.7	357	21.3	+5	16.6	178	39.7	-2	56.3
13	27	30.1	45	38.7		47.6	25	27.9		06.9	12	23.2		16.8	193	42.3		56.3
14	42	32.6	60	38.3		46.6	40	28.6		06.1	27	25.1		17.1	208	45.0		56.2
15	57	35.1	75	37.9		45.5	55	29.3		05.4	42	27.0		17.3	223	47.6		56.1
16	72	37.5	90	37.5		44.5	70	30.0		04.6	57	29.0		17.5	238	50.2		56.0
17	87	40.0	105	37.1	-8	43.4	85	30.7	-0	03.8	72	30.9	+5	17.8	253	52.9	-2	56.0
18	102	42.5	120	36.7	-8	42.4	100	31.4	-0	03.0	87	32.8	+5	18.0	268	55.5	-2	55.9
19	117	44.9	135	36.3		41.3	115	32.1		02.2	102	34.7		18.2	283	58.2		55.8
20	132	47.4	150	35.9		40.3	130	32.7		01.4	117	36.6		18.5	299	00.8		55.7
21	147	49.8	165	35.5		39.2	145	33.4	-0	00.6	132	38.5		18.7	314	03.5		55.7
22	162	52.3	180	35.1		38.2	160	34.1	+0	00.2	147	40.4		18.9	329	06.1		55.6
23	177	54.8	195	34.8		37.1	175	34.8		00.9	162	42.3		19.2	344	08.7		55.5
24	192	57.2	210	34.4	-8	36.1	190	35.5	+0	01.7	177	44.2	+5	19.4	359	11.4	-2	55.4
Dif	—		-4		+10		+7		+8		+19		+2		+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 8			Edad: 1 ^d 4 PHE { 4 ^h : 54'3 12 ^h : 54'3 20 ^h : 54'4 PMG: 13 ^h 18 ^m R°: 47 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	h	m	h	m	h	m	m	
0	179	15.8	+5	51.5	166	26.7	+15	24.3	60 N	3 36	4 31	5 15	5 04	15	21 55 77
1	194	16.0		52.4	180	59.7 ¹⁴⁰		33.5 ⁹²	58	47	37	18	14	18	43 73
2	209	16.2		53.4	195	32.6 ¹³⁹		42.7 ⁹²	56	3 56	43	21	22	22	32 70
3	224	16.4		54.3	210	05.5 ¹³⁹	+15	51.8 ⁹¹	54	4 03	48	24	30	24	22 66
4	239	16.6		55.3	224	38.3 ¹³⁸	+16	00.9 ⁹¹	52	10	52	27	37	26	14 66
5	254	16.7	+5	56.2	239	11.1 ¹³⁸	+16	09.9 ⁹⁰	50	4 16	4 56	5 29	5 44	27	21 06 65
6	269	16.9	+5	57.2	253	43.8 ¹³⁷	+16	18.8 ⁸⁹	45	4 29	5 04	5 34	5 58	30	20 50 61
7	284	17.1		58.2	268	16.5 ¹³⁷		27.6 ⁸⁸	40	38	11	38	6 09	33	36 59
8	299	17.3	+5	59.1	282	49.1 ¹³⁶		36.4 ⁸⁸	35	46	16	42	19	35	25 57
9	314	17.5	+6	00.1	297	21.7 ¹³⁶		45.1 ⁸⁷	30	4 53	21	45	27	38	20 15 55
10	329	17.6		01.0	311	54.2 ¹³⁵	+16	53.8 ⁸⁷	20	5 03	28	51	42	41	19 58 53
11	344	17.8	+6	02.0	326	26.6 ¹³⁴	+17	02.4 ⁸⁶	10 N	5 10	5 34	5 55	6 55	44	19 43 50
12	359	18.0	+6	02.9	340	59.0 ¹³⁴	+17	10.9 ⁸⁵	0	5 15	5 39	6 00	7 08	46	19 30 47
13	14	18.2		03.9	355	31.3 ¹³³		19.3 ⁸⁴	10 S	18	43	04	20	49	16 45
14	29	18.4		04.8	10	03.6 ¹³³		27.7 ⁸⁴	20	20	46	08	33	52	19 01 43
15	44	18.5		05.8	24	35.8 ¹³²		36.0 ⁸³	30	21	49	13	48	56	18 45 39
16	59	18.7		06.7	39	08.0 ¹³²		44.2 ⁸²	35	21	50	16	7 57	58	35 38
17	74	18.9	+6	07.6	53	40.1 ¹³¹	+17	52.3 ⁸¹	40	5 20	5 51	6 19	8 08	59	18 24 36
18	89	19.1	+6	08.6	68	12.1 ¹³⁰	+18	00.4 ⁸¹	45	5 19	5 53	6 22	8 20	62	18 11 33
19	104	19.2		09.5	82	44.1 ¹³⁰		08.4 ⁸⁰	50	16	54	26	34	66	17 55 30
20	119	19.4		10.5	97	16.0 ¹²⁹		16.3 ⁷⁹	52	15	54	28	41	68	48 28
21	134	19.6		11.4	111	47.9 ¹²⁹		24.1 ⁷⁸	54	14	55	30	49	69	40 26
22	149	19.8		12.4	126	19.7 ¹²⁸		31.9 ⁷⁸	56	12	55	32	8 57	72	31 24
23	164	20.0		13.3	140	51.4 ¹²⁷		39.6 ⁷⁷	58	10	56	35	9 07	75	20 22
24	179	20.1	+6	14.3	155	23.1 ¹²⁷	+18	47.2 ⁷⁶	60 S	5 08	5 56	6 38	9 18	79	17 09 18

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO										
	PMG: 11 ^h 06 ^m 4		Mag: -3.9 PMG: 9 ^h 58 ^m		Mag: +1.2 PMG: 11 ^h 17 ^m		Mag: -2.1 PMG: 12 ^h 08 ^m		Mag: +0.4 PMG: 0 ^h 03 ^m										
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec									
h	°	'	°	'	°	'	°	'	°	'									
0	192	57.2	210	34.4	-8	36.1	190	35.5	+0	01.7	177	44.2	+5	19.4	359	11.4	-2	55.4	
1	207	59.7	225	34.0		35.0	205	36.2		02.5	192	46.1		19.6		14	14.0	55.4	
2	223	02.2	240	33.6		34.0	220	36.9		03.3	207	48.0		19.9		29	16.7	55.3	
3	238	04.6	255	33.2		32.9	235	37.5		04.1	222	49.9		20.1		44	19.3	55.2	
4	253	07.1	270	32.8		31.9	250	38.2		04.9	237	51.8		20.3		59	22.0	55.1	
5	268	09.6	285	32.4	-8	30.8	265	38.9	+0	05.7	252	53.7	+5	20.6		74	24.6	-2	55.1
6	283	12.0	300	32.0	-8	29.8	280	39.6	+0	06.5	267	55.6	+5	20.8		89	27.2	-2	55.0
7	298	14.5	315	31.6		28.7	295	40.3		07.2	282	57.5		21.0		104	29.9	54.9	
8	313	17.0	330	31.2		27.7	310	41.0		08.0	297	59.4		21.3		119	32.5	54.8	
9	328	19.4	345	30.8		26.6	325	41.6		08.8	313	01.3		21.5		134	35.2	54.7	
10	343	21.9	0	30.5		25.6	340	42.3		09.6	328	03.2		21.7		149	37.8	54.7	
11	358	24.3	15	30.1	-8	24.5	355	43.0	+0	10.4	343	05.1	+5	22.0		164	40.5	-2	54.6
12	13	26.8	30	29.7	-8	23.5	10	43.7	+0	11.2	358	07.0	+5	22.2		179	43.1	-2	54.5
13	28	29.3	45	29.3		22.4	25	44.4		12.0	13	08.9		22.4		194	45.7	54.4	
14	43	31.7	60	28.9		21.3	40	45.1		12.7	28	10.8		22.7		209	48.4	54.4	
15	58	34.2	75	28.5		20.3	55	45.8		13.5	43	12.7		22.9		224	51.0	54.3	
16	73	36.7	90	28.1		19.2	70	46.4		14.3	58	14.6		23.1		239	53.7	54.2	
17	88	39.1	105	27.7	-8	18.2	85	47.1	+0	15.1	73	16.5	+5	23.4		254	56.3	-2	54.1
18	103	41.6	120	27.3	-8	17.1	100	47.8	+0	15.9	88	18.4	+5	23.6		269	59.0	-2	54.1
19	118	44.1	135	27.0		16.1	115	48.5		16.7	103	20.3		23.8		285	01.6	54.0	
20	133	46.5	150	26.6		15.0	130	49.2		17.5	118	22.2		24.1		300	04.3	53.9	
21	148	49.0	165	26.2		13.9	145	49.9		18.3	133	24.1		24.3		315	06.9	53.8	
22	163	51.4	180	25.8		12.9	160	50.6		19.0	148	26.1		24.5		330	09.5	53.8	
23	178	53.9	195	25.4		11.8	175	51.2		19.8	163	28.0		24.8		345	12.2	53.7	
24	193	56.4	210	25.0	-8	10.8	190	51.9	+0	20.6	178	29.9	+5	25.0		0	14.8	-2	53.6
Dif	—		-4		+11		+7		+8		+19		+2			-8974		+1	

UT	SOL		● LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16'0		Edad: 2 ^d 4 PHE { 4 ^h : 54'6 12 ^h : 54'7 20 ^h : 54'8 R°: 50 ^m											
	PMG: 12 ^h 02 ^m 5		PMG: 14 ^h 05 ^m											
	hG ☉	Dec	hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	m	h m m	m
0	179	20.1	+6	14.3	155	23.1	+18 47.2	60 N	18 55	19 39	20 35	5 19 22	23 12 71	
1	194	20.3		15.2	169	54.7 ¹²⁶	+18 54.7 ⁷⁵	58	51	32	24	32 26	22 56 68	
2	209	20.5		16.2	184	26.3 ¹²⁶	+19 02.1 ⁷⁴	56	48	26	14	44 28	42 66	
3	224	20.7		17.1	198	57.8 ¹²⁵	09.5 ⁷⁴	54	45	21	20 06	5 54 30	31 64	
4	239	20.8		18.1	213	29.3 ¹²⁵	16.7 ⁷²	52	42	17	19 59	6 03 32	20 63	
5	254	21.0	+6	19.0	228	00.7 ¹²⁴	+19 23.9 ⁷²	50	18 39	19 12	19 53	6 11 33	22 11 62	
6	269	21.2	+6	20.0	242	32.0 ¹²³	+19 31.0 ⁷¹	45	18 34	19 04	19 39	6 28 37	21 51 60	
7	284	21.4		20.9	257	03.3 ¹²³	38.0 ⁷⁰	40	29	18 56	29	42 39	35 58	
8	299	21.6		21.9	271	34.5 ¹²²	44.9 ⁶⁹	35	25	51	21	6 54 41	22 56	
9	314	21.7		22.8	286	05.7 ¹²²	51.8 ⁶⁹	30	21	46	14	7 05 42	21 10 56	
10	329	21.9		23.8	300	36.8 ¹²¹	+19 58.5 ⁶⁷	20	16	38	19 04	23 45	20 51 53	
11	344	22.1	+6	24.7	315	07.8 ¹²⁰	+20 05.2 ⁶⁷	10 N	18 10	18 32	18 56	7 39 47	20 33 52	
12	359	22.3	+6	25.6	329	38.8 ¹²⁰	+20 11.7 ⁶⁵	0	18 06	18 27	18 51	7 54 49	20 17 50	
13	14	22.4		26.6	344	09.7 ¹¹⁹	18.2 ⁶⁵	10 S	18 01	22	47	8 09 51	20 01 48	
14	29	22.6		27.5	358	40.6 ¹¹⁹	24.6 ⁶⁴	20	17 56	19	44	25 53	19 44 47	
15	44	22.8		28.5	13	11.4 ¹¹⁸	30.9 ⁶³	30	51	15	43	44 55	24 45	
16	59	23.0		29.4	27	42.1 ¹¹⁷	37.1 ⁶²	35	48	14	43	8 55 57	13 43	
17	74	23.2	+6	30.4	42	12.8 ¹¹⁷	+20 43.2 ⁶¹	40	17 45	18 12	18 43	9 07 59	19 00 41	
18	89	23.3	+6	31.3	56	43.4 ¹¹⁶	+20 49.2 ⁶⁰	45	17 41	18 10	18 44	9 22 61	18 44 40	
19	104	23.5		32.3	71	14.0 ¹¹⁶	+20 55.1 ⁵⁹	50	36	09	46	40 64	25 37	
20	119	23.7		33.2	85	44.5 ¹¹⁵	+21 00.9 ⁵⁸	52	34	08	47	49 65	16 36	
21	134	23.9		34.1	100	15.0 ¹¹⁵	06.6 ⁵⁷	54	32	07	48	9 58 67	18 06 35	
22	149	24.0		35.1	114	45.4 ¹¹⁴	12.3 ⁵⁷	56	30	07	50	10 09 69	17 55 32	
23	164	24.2		36.0	129	15.7 ¹¹³	17.8 ⁵⁵	58	27	06	51	22 71	42 30	
24	179	24.4	+6	37.0	143	46.0 ¹¹³	+21 23.2 ⁵⁴	60 S	17 24	18 05	18 53	10 37 74	17 27 27	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 11 ^h 02 ^m 4		Mag: -3.9 PMG: 9 ^h 59 ^m		Mag: +1.2 PMG: 11 ^h 16 ^m		Mag: -2.1 PMG: 12 ^h 04 ^m		Mag: +0.4 PMG: 23 ^h 55 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	193	56.4	210	25.0	-8	10.8	190	51.9	+0	20.6
1	208	58.8	225	24.6		09.7	205	52.6		21.4
2	224	01.3	240	24.3		08.7	220	53.3		22.2
3	239	03.8	255	23.9		07.6	235	54.0		23.0
4	254	06.2	270	23.5		06.5	250	54.7		23.8
5	269	08.7	285	23.1	-8	05.5	265	55.4	+0	24.5
6	284	11.2	300	22.7	-8	04.4	280	56.1	+0	25.3
7	299	13.6	315	22.3		03.3	295	56.7		26.1
8	314	16.1	330	21.9		02.3	310	57.4		26.9
9	329	18.6	345	21.6		01.2	325	58.1		27.7
10	344	21.0	0	21.2	-8	00.2	340	58.8		28.5
11	359	23.5	15	20.8	-7	59.1	355	59.5	+0	29.3
12	14	25.9	30	20.4	-7	58.0	11	00.2	+0	30.0
13	29	28.4	45	20.0		57.0	26	00.9		30.8
14	44	30.9	60	19.6		55.9	41	01.5		31.6
15	59	33.3	75	19.3		54.8	56	02.2		32.4
16	74	35.8	90	18.9		53.8	71	02.9		33.2
17	89	38.3	105	18.5	-7	52.7	86	03.6	+0	34.0
18	104	40.7	120	18.1	-7	51.6	101	04.3	+0	34.8
19	119	43.2	135	17.7		50.6	116	05.0		35.6
20	134	45.7	150	17.4		49.5	131	05.7		36.3
21	149	48.1	165	17.0		48.4	146	06.4		37.1
22	164	50.6	180	16.6		47.4	161	07.0		37.9
23	179	53.1	195	16.2		46.3	176	07.7		38.7
24	194	55.5	210	15.8	-7	45.2	191	08.4	+0	39.5
Dif	—		-4		+11		+7		+8	
								+19		+2
									+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 2			Edad: 3 ^d 4 PHE { SD: 14'9 PMG: 14 ^h 55 ^m																			
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°								
h	°	'	°	°	'	°	'	h	m	h	m	h	m	h	m	m							
0	179	24.4	+6	37.0	143	46.0	+21	23.2	53	60 N	3	29	4	25	5	08	5	41	34	**	**	**	
1	194	24.6			158	16.2	112	28.5	53	58	40	31	13	5	58	36				**	**	**	
2	209	24.7			172	46.4	112	33.8	51	56	49	37	16	6	12	38	23	48	58				
3	224	24.9			187	16.5	111	38.9	51	54	3	58	43	19	24	40	35	55					
4	239	25.1			201	46.5	110	43.9	50	52	4	05	47	22	35	41	23	56					
5	254	25.3	+6	41.7	216	16.5	110	48.8	49	50	4	11	4	52	5	25	6	44	42	23	13	56	
6	269	25.4	+6	42.6	230	46.5	110	+21	53.6	48	45	4	25	5	01	5	31	7	05	43	22	51	55
7	284	25.6			245	16.4	109	+21	58.3	47	40	35	08	35	21	45	33	55					
8	299	25.8			259	46.2	108	+22	02.9	46	35	43	14	39	35	46	18	55					
9	314	26.0			274	16.0	108		07.4	45	30	4	50	19	43	7	47	22	06	54			
10	329	26.1			288	45.7	107		11.8	44	20	5	01	27	49	8	08	48	21	44	53		
11	344	26.3	+6	47.3	303	15.4	107	+22	16.1	43	10 N	5	08	5	33	5	54	8	26	50	21	25	52
12	359	26.5	+6	48.3	317	45.0	106	+22	20.3	42	0	5	14	5	38	5	59	8	43	51	21	07	52
13	14	26.7			332	14.6	106		24.4	41	10 S	18	43	6	04	9	00	52	20	49	52		
14	29	26.8			346	44.1	105		28.3	39	20	21	46	09	18	54	31	50					
15	44	27.0			1	13.6	105		32.2	39	30	22	50	14	39	55	20	09	50				
16	59	27.2			15	43.0	104		35.9	37	35	22	52	17	9	52	55	19	56	49			
17	74	27.4	+6	53.0	30	12.3	103	+22	39.6	37	40	5	22	5	53	6	21	10	06	56	19	41	49
18	89	27.5	+6	53.9	44	41.7	104	+22	43.1	35	45	5	21	5	55	6	25	10	23	58	19	24	48
19	104	27.7			59	10.9	102		46.5	34	50	20	57	29	44	59	19	02	47				
20	119	27.9			73	40.1	102		49.8	33	52	19	58	31	10	54	60	18	52	46			
21	134	28.1			88	09.3	102		53.0	32	54	17	58	34	11	05	61	41	45				
22	149	28.2			102	38.4	101		56.0	30	56	16	5	59	36	18	62	27	45				
23	164	28.4			117	07.5	101	+22	59.0	30	58	15	6	00	39	33	64	18	12	43			
24	179	28.6	+6	59.5	131	36.5	100	+23	01.8	28	60 S	5	13	6	01	6	43	11	51	66	17	54	41
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO										
	PMG: 10 ^h 58 ^m 5			Mag: -3.9 PMG: 9 ^h 59 ^m			Mag: +1.2 PMG: 11 ^h 15 ^m			Mag: -2.1 PMG: 12 ^h 01 ^m			Mag: +0.4 PMG: 23 ^h 51 ^m										
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec									
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°	°	'
0	194	55.5	210	15.8	-7	45.2	191	08.4	+0	39.5	179	15.5	+5	30.6	1	18.3	-2	51.8					
1	209	58.0	225	15.5		44.1	206	09.1		40.3	194	17.4		30.8	16	20.9		51.7					
2	225	00.4	240	15.1		43.1	221	09.8		41.0	209	19.3		31.0	31	23.5		51.7					
3	240	02.9	255	14.7		42.0	236	10.5		41.8	224	21.2		31.3	46	26.2		51.6					
4	255	05.4	270	14.3		40.9	251	11.2		42.6	239	23.1		31.5	61	28.8		51.5					
5	270	07.8	285	13.9	-7	39.9	266	11.9	+0	43.4	254	25.1	+5	31.7	76	31.5	-2	51.4					
6	285	10.3	300	13.6	-7	38.8	281	12.5	+0	44.2	269	27.0	+5	32.0	91	34.1	-2	51.4					
7	300	12.8	315	13.2		37.7	296	13.2		45.0	284	28.9		32.2	106	36.8		51.3					
8	315	15.2	330	12.8		36.7	311	13.9		45.8	299	30.8		32.4	121	39.4		51.2					
9	330	17.7	345	12.4		35.6	326	14.6		46.5	314	32.7		32.7	136	42.0		51.1					
10	345	20.2	0	12.0		34.5	341	15.3		47.3	329	34.6		32.9	151	44.7		51.1					
11	0	22.6	15	11.7	-7	33.4	356	16.0	+0	48.1	344	36.5	+5	33.1	166	47.3	-2	51.0					
12	15	25.1	30	11.3	-7	32.4	11	16.7	+0	48.9	359	38.4	+5	33.3	181	50.0	-2	50.9					
13	30	27.5	45	10.9		31.3	26	17.4		49.7	14	40.3		33.6	196	52.6		50.8					
14	45	30.0	60	10.5		30.2	41	18.0		50.5	29	42.2		33.8	211	55.3		50.8					
15	60	32.5	75	10.2		29.1	56	18.7		51.3	44	44.1		34.0	226	57.9		50.7					
16	75	34.9	90	09.8		28.1	71	19.4		52.0	59	46.0		34.3	242	00.5		50.6					
17	90	37.4	105	09.4	-7	27.0	86	20.1	+0	52.8	74	47.9	+5	34.5	257	03.2	-2	50.5					
18	105	39.9	120	09.0	-7	25.9	101	20.8	+0	53.6	89	49.8	+5	34.7	272	05.8	-2	50.5					
19	120	42.3	135	08.7		24.8	116	21.5		54.4	104	51.7		35.0	287	08.5		50.4					
20	135	44.8	150	08.3		23.8	131	22.2		55.2	119	53.6		35.2	302	11.1		50.3					
21	150	47.3	165	07.9		22.7	146	22.9		56.0	134	55.5		35.4	317	13.8		50.2					
22	165	49.7	180	07.5		21.6	161	23.5		56.7	149	57.4		35.7	332	16.4		50.2					
23	180	52.2	195	07.2		20.5	176	24.2		57.5	164	59.3		35.9	347	19.0		50.1					
24	195	54.7	210	06.8	-7	19.4	191	24.9	+0	58.3	180	01.2	+5	36.1	2	21.7	-2	50.0					
Dif	—		-4	+11			+7	+8			+19	+2			+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 0		Edad: 4 ^d 4 PHE { 4 ^h : 55/4 12 ^h : 55/6 20 ^h : 55/8 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	28.6	+6 59.5	131	36.5	+23 01.8	27	60 N	19 00	19 44	20 41	6 15 50	0 23 59	
1	194	28.8	+7 00.5	146	05.5	100 04.5	27	58	18 56	37	30	34 51	0 04 58	
2	209	28.9	01.4	160	34.4	99 07.1	26	56	52	31	19	6 50 51	** ** *	
3	224	29.1	02.4	175	03.3	99 09.6	25	54	48	25	11	7 04 51	** ** *	
4	239	29.3	03.3	189	32.2	99 12.0	24	52	45	20	20 03	16 51	** ** *	
5	254	29.5	+7 04.2	204	01.0	98 14.3	23	50	18 42	19 16	19 56	7 26 52	** ** *	
6	269	29.6	+7 05.2	218	29.7	97 16.4	21	45	18 36	19 06	19 42	7 48 52	23 46 50	
7	284	29.8	06.1	232	58.5	98 18.4	20	40	31	18 59	31	8 06 52	28 50	
8	299	30.0	07.0	247	27.1	96 20.3	19	35	27	52	23	21 52	13 51	
9	314	30.1	08.0	261	55.8	97 22.1	18	30	23	47	16	34 53	23 00 51	
10	329	30.3	08.9	276	24.4	96 23.7	16	20	16	38	19 04	8 56 53	22 37 52	
11	344	30.5	+7 09.9	290	52.9	95 25.3	16	10 N	18 10	18 32	18 56	9 16 53	22 17 53	
12	359	30.7	+7 10.8	305	21.4	95 26.7	14	0	18 05	18 26	18 50	9 34 53	21 59 53	
13	14	30.8	11.7	319	49.9	95 28.0	13	10 S	18 00	21	46	9 52 53	41 54	
14	29	31.0	12.7	334	18.4	95 29.2	12	20	17 55	17	43	10 12 52	21 21 55	
15	44	31.2	13.6	348	46.8	94 30.2	10	30	49	13	41	34 53	20 59 54	
16	59	31.4	14.5	3	15.2	94 31.1	9	35	46	11	40	10 47 53	45 55	
17	74	31.5	+7 15.5	17	43.5	93 31.9	8	40	17 42	18 09	18 40	11 02 53	20 30 56	
18	89	31.7	+7 16.4	32	11.8	93 32.6	7	45	17 37	18 07	18 41	11 21 52	20 12 56	
19	104	31.9	17.3	46	40.1	93 33.2	6	50	32	05	42	43 53	19 49 56	
20	119	32.0	18.3	61	08.3	92 33.6	4	52	30	04	43	11 54 52	38 57	
21	134	32.2	19.2	75	36.5	92 33.9	3	54	27	03	44	12 06 53	26 57	
22	149	32.4	20.1	90	04.7	92 34.1	2	56	24	02	45	20 53	19 12 57	
23	164	32.6	21.1	104	32.9	92 34.1	0	58	21	01	46	37 52	18 55 58	
24	179	32.7	+7 22.0	119	01.0	91 34.1	0	60 S	17 18	18 00	18 48	12 57 51	18 35 59	
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 10 ^h 54 ^m 6		Mag: -3.9 PMG: 10 ^h 00 ^m		Mag: +1.2 PMG: 11 ^h 14 ^m		Mag: -2.1 PMG: 11 ^h 58 ^m		Mag: +0.4 PMG: 23 ^h 46 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	195	54.7	210 06.8	-7 19.4	191 24.9	+0 58.3	180 01.2	+5 36.1	2 21.7	-2 50.0				
1	210	57.1	225 06.4	18.4	206 25.6	59.1	195 03.1	36.4	17 24.3	49.9				
2	225	59.6	240 06.0	17.3	221 26.3	+0 59.9	210 05.0	36.6	32 27.0	49.9				
3	241	02.0	255 05.7	16.2	236 27.0	+1 00.7	225 06.9	36.8	47 29.6	49.8				
4	256	04.5	270 05.3	15.1	251 27.7	01.5	240 08.8	37.1	62 32.3	49.7				
5	271	07.0	285 04.9	-7 14.0	266 28.4	+1 02.2	255 10.7	+5 37.3	77 34.9	-2 49.6				
6	286	09.4	300 04.5	-7 13.0	281 29.1	+1 03.0	270 12.6	+5 37.5	92 37.5	-2 49.6				
7	301	11.9	315 04.2	11.9	296 29.7	03.8	285 14.5	37.8	107 40.2	49.5				
8	316	14.4	330 03.8	10.8	311 30.4	04.6	300 16.4	38.0	122 42.8	49.4				
9	331	16.8	345 03.4	09.7	326 31.1	05.4	315 18.3	38.2	137 45.5	49.3				
10	346	19.3	0 03.1	08.6	341 31.8	06.2	330 20.2	38.4	152 48.1	49.3				
11	1	21.8	15 02.7	-7 07.6	356 32.5	+1 06.9	345 22.1	+5 38.7	167 50.8	-2 49.2				
12	16	24.2	30 02.3	-7 06.5	11 33.2	+1 07.7	0 24.0	+5 38.9	182 53.4	-2 49.1				
13	31	26.7	45 01.9	05.4	26 33.9	08.5	15 25.9	39.1	197 56.0	49.0				
14	46	29.2	60 01.6	04.3	41 34.6	09.3	30 27.9	39.4	212 58.7	49.0				
15	61	31.6	75 01.2	03.2	56 35.2	10.1	45 29.8	39.6	228 01.3	48.9				
16	76	34.1	90 00.8	02.1	71 35.9	10.9	60 31.7	39.8	243 04.0	48.8				
17	91	36.5	105 00.5	-7 01.1	86 36.6	+1 11.6	75 33.6	+5 40.1	258 06.6	-2 48.7				
18	106	39.0	120 00.1	-7 00.0	101 37.3	+1 12.4	90 35.5	+5 40.3	273 09.3	-2 48.7				
19	121	41.5	134 59.7	-6 58.9	116 38.0	13.2	105 37.4	40.5	288 11.9	48.6				
20	136	43.9	149 59.3	57.8	131 38.7	14.0	120 39.3	40.8	303 14.5	48.5				
21	151	46.4	164 59.0	56.7	146 39.4	14.8	135 41.2	41.0	318 17.2	48.4				
22	166	48.9	179 58.6	55.6	161 40.1	15.6	150 43.1	41.2	333 19.8	48.4				
23	181	51.3	194 58.2	54.5	176 40.8	16.3	165 45.0	41.5	348 22.5	48.3				
24	196	53.8	209 57.9	-6 53.4	191 41.4	+1 17.1	180 46.9	+5 41.7	3 25.1	-2 48.2				
Dif	—		-4	+11	+7	+8	+19	+2	+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 7			Edad: 5 ^d 4 PHE { 4 ^h : 56:0 12 ^h : 56:2 20 ^h : 56:4 PMG: 16 ^h 40 ^m R°: 53 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Náutico	Civil		Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	°	h m	h m	h m	h m m	h m m	h m m	h m m
0	179	32.7	+7 22.0	119	01.0	+23 34.1	2	33.9	60 N	3 21	4 18	5 03	7 05 67	1 22 43		
1	194	32.9		133	29.1	91 33.9	2		58	33	26	07	25 65	1 02 45		
2	209	33.1		147	57.2	91 33.5	4		56	43	32	11	41 64	0 46 46		
3	224	33.2		162	25.2	90 33.1	4		54	3 52	38	14	7 55 63	32 47		
4	239	33.4		176	53.2	90 32.5	6		52	4 00	43	18	8 07 62	19 48		
5	254	33.6	+7 26.7	191	21.2	90 +23 31.8	7		50	4 07	4 47	5 21	8 18 61	0 09 48		
6	269	33.8	+7 27.6	205	49.2	90 +23 31.0	8		45	4 21	4 57	5 27	8 40 60	*** ** *		
7	284	33.9		220	17.1	89 30.0	10		40	32	5 04	32	8 58 59	*** ** *		
8	299	34.1		234	45.1	90 28.9	11		35	40	11	37	9 13 58	*** ** *		
9	314	34.3		249	13.0	89 27.7	12		30	48	16	41	27 57	23 51 48		
10	329	34.4		263	40.8	88 26.4	13		20	4 59	25	47	9 49 56	29 50		
11	344	34.6	+7 32.3	278	08.7	89 +23 24.9	15		10 N	5 07	5 32	5 53	10 09 54	23 10 52		
12	359	34.8	+7 33.2	292	36.6	89 +23 23.3	16		0	5 13	5 38	5 58	10 27 53	22 52 54		
13	14	35.0		307	04.4	88 21.6	17		10 S	18	42	6 04	10 45 52	35 55		
14	29	35.1		321	32.2	88 19.7	19		20	21	47	09	11 04 52	22 16 57		
15	44	35.3		336	00.0	88 17.7	20		30	23	51	15	27 50	21 53 59		
16	59	35.5		350	27.8	88 15.6	21		35	24	53	19	40 49	40 61		
17	74	35.6	+7 37.8	4	55.5	87 +23 13.4	22		40	5 24	5 55	6 23	11 55 48	21 26 61		
18	89	35.8	+7 38.8	19	23.3	88 +23 11.0	24		45	5 24	5 58	6 27	12 13 47	21 08 63		
19	104	36.0		33	51.0	87 08.5	25		50	23	6 00	32	36 44	20 45 66		
20	119	36.1		48	18.8	88 05.8	27		52	22	01	35	46 44	35 67		
21	134	36.3		62	46.5	87 03.1	27		54	21	02	38	12 59 42	23 68		
22	149	36.5		77	14.2	87 +23 00.2	29		56	20	03	40	13 13 40	20 09 70		
23	164	36.7		91	41.9	87 +22 57.2	30		58	19	04	44	29 39	19 53 72		
24	179	36.8	+7 44.3	106	09.6	87 +22 54.0	32		60 S	5 17	6 05	6 47	13 48 36	19 34 75		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG 10 ^h 50 ^m 6		Mag: -3.9 PMG: 10 ^h 00 ^m		Mag: +1.2 PMG: 11 ^h 13 ^m		Mag: -2.1 PMG: 11 ^h 55 ^m		Mag: +0.4 PMG: 23 ^h 42 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	196	53.8	209	57.9	-6 53.4	191	41.4	+1 17.1	180	46.9	+5 41.7	3 25.1	-2 48.2	
1	211	56.3	224	57.5	52.4	206	42.1	17.9	195	48.8	41.9	18 27.8	48.1	
2	226	58.7	239	57.1	51.3	221	42.8	18.7	210	50.7	42.2	33 30.4	48.1	
3	242	01.2	254	56.8	50.2	236	43.5	19.5	225	52.6	42.4	48 33.0	48.0	
4	257	03.6	269	56.4	49.1	251	44.2	20.3	240	54.5	42.6	63 35.7	47.9	
5	272	06.1	284	56.0	-6 48.0	266	44.9	+1 21.0	255	56.4	+5 42.8	78 38.3	-2 47.8	
6	287	08.6	299	55.7	-6 46.9	281	45.6	+1 21.8	270	58.3	+5 43.1	93 41.0	-2 47.8	
7	302	11.0	314	55.3	45.8	296	46.3	22.6	286	00.2	43.3	108 43.6	47.7	
8	317	13.5	329	54.9	44.7	311	47.0	23.4	301	02.1	43.5	123 46.3	47.6	
9	332	16.0	344	54.6	43.6	326	47.7	24.2	316	04.0	43.8	138 48.9	47.5	
10	347	18.4	359	54.2	42.6	341	48.3	25.0	331	05.9	44.0	153 51.5	47.5	
11	2	20.9	14	53.8	-6 41.5	356	49.0	+1 25.7	346	07.8	+5 44.2	168 54.2	-2 47.4	
12	17	23.4	29	53.5	-6 40.4	11	49.7	+1 26.5	1	09.7	+5 44.5	183 56.8	-2 47.3	
13	32	25.8	44	53.1	39.3	26	50.4	27.3	16	11.6	44.7	198 59.5	47.2	
14	47	28.3	59	52.7	38.2	41	51.1	28.1	31	13.5	44.9	214 02.1	47.2	
15	62	30.8	74	52.4	37.1	56	51.8	28.9	46	15.4	45.2	229 04.7	47.1	
16	77	33.2	89	52.0	36.0	71	52.5	29.7	61	17.3	45.4	244 07.4	47.0	
17	92	35.7	104	51.6	-6 34.9	86	53.2	+1 30.4	76	19.2	+5 45.6	259 10.0	-2 47.0	
18	107	38.1	119	51.3	-6 33.8	101	53.9	+1 31.2	91	21.1	+5 45.9	274 12.7	-2 46.9	
19	122	40.6	134	50.9	32.7	116	54.5	32.0	106	23.0	46.1	289 15.3	46.8	
20	137	43.1	149	50.5	31.6	131	55.2	32.8	121	24.9	46.3	304 18.0	46.7	
21	152	45.5	164	50.2	30.5	146	55.9	33.6	136	26.8	46.5	319 20.6	46.7	
22	167	48.0	179	49.8	29.4	161	56.6	34.4	151	28.7	46.8	334 23.2	46.6	
23	182	50.5	194	49.4	28.3	176	57.3	35.1	166	30.6	47.0	349 25.9	46.5	
24	197	52.9	209	49.1	-6 27.3	191	58.0	+1 35.9	181	32.5	+5 47.2	4 28.5	-2 46.4	
Dif	—		-4		+11	+7		+8	+19		+2	+26		+1

UT	SOL			 LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16:0			Edad: 6 ^d 4	PHE { 4 ^h : 56:7 12 ^h : 56:9 20 ^h : 57:2 R°: 54 ^m	Final del crepúsculo			Salida de Luna		Puesta de Luna				
	PMG: 12 ^h 01 ^m 4					Civil			Náutico	Hora	R°	Hora	R°		
	hG ☉	Dec		hG ☾	Dif	Dec	Dif								
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	
0	179	36.8	+7 44.3	106	09.6	+22 54.0	33	60 N	19 05	19 50	20 48	8 12 82	2 05 30		
1	194	37.0	45.3	120	37.3	50.7	34	58	19 00	42	35	30 78	1 47 33		
2	209	37.2	46.2	135	05.0	47.3	35	56	18 56	35	25	45 75	32 35		
3	224	37.3	47.1	149	32.7	43.8	36	54	52	29	15	8 58 73	19 37		
4	239	37.5	48.0	164	00.3	40.1	37	52	49	24	07	9 09 72	1 07 39		
5	254	37.7	+7 49.0	178	28.0	36.3	38	50	18 45	19 19	20 00	9 19 70	0 57 40		
6	269	37.8	+7 49.9	192	55.7	32.4	39	45	18 39	19 09	19 45	9 40 67	0 36 43		
7	284	38.0	50.8	207	23.3	28.3	41	40	33	19 01	34	9 57 65	18 45		
8	299	38.2	51.7	221	51.0	24.1	42	35	28	18 54	25	10 11 63	0 04 46		
9	314	38.3	52.7	236	18.6	19.8	43	30	24	48	17	24 61	** ** **		
10	329	38.5	53.6	250	46.3	15.4	44	20	17	39	19 05	10 45 58	** ** **		
11	344	38.7	+7 54.5	265	14.0	10.8	46	10 N	18 10	18 32	18 56	11 03 56	** ** **		
12	359	38.8	+7 55.4	279	41.6	06.1	47	0	18 05	18 26	18 50	11 20 54	23 46 53		
13	14	39.0	56.4	294	09.3	01.3	48	10 S	17 59	20	45	37 52	30 56		
14	29	39.2	57.3	308	36.9	56.3	50	20	53	15	41	11 56 49	23 13 58		
15	44	39.3	58.2	323	04.6	51.2	51	30	47	11	38	12 17 46	22 52 63		
16	59	39.5	+7 59.1	337	32.3	46.0	52	35	43	08	38	29 44	41 64		
17	74	39.7	+8 00.1	351	59.9	40.7	53	40	17 39	18 06	18 37	12 43 42	22 27 67		
18	89	39.8	+8 01.0	6	27.6	35.2	55	45	17 34	18 03	18 37	13 00 40	22 11 69		
19	104	40.0	01.9	20	55.3	29.6	56	50	28	18 01	38	20 37	21 51 73		
20	119	40.2	02.8	35	23.0	23.9	57	52	25	17 59	38	30 35	42 74		
21	134	40.3	03.8	49	50.7	18.1	58	54	23	58	39	41 33	31 77		
22	149	40.5	04.7	64	18.4	12.1	60	56	19	57	40	13 53 31	19 79		
23	164	40.7	05.6	78	46.1	06.0	61	58	16	55	41	14 08 28	21 05 82		
24	179	40.8	+8 06.5	93	13.9	59.8	62	60 S	17 12	17 54	18 42	14 24 25	20 49 86		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 10 ^h 46 ^m 7		Mag: -3.9 PMG: 10 ^h 01 ^m		Mag: +1.2 PMG: 11 ^h 12 ^m		Mag: -2.1 PMG: 11 ^h 52 ^m		Mag: +0.4 PMG: 23 ^h 38 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	197	52.9	209	49.1	191	58.0	181	32.5	4	28.5
1	212	55.4	224	48.7	206	58.7	196	34.4	19	31.2
2	227	57.9	239	48.3	221	59.4	211	36.4	34	33.8
3	243	00.3	254	48.0	237	00.1	226	38.3	49	36.5
4	258	02.8	269	47.6	252	00.8	241	40.2	64	39.1
5	273	05.3	284	47.3	267	01.4	256	42.1	79	41.7
6	288	07.7	299	46.9	282	02.1	271	44.0	94	44.4
7	303	10.2	314	46.5	297	02.8	286	45.9	109	47.0
8	318	12.6	329	46.2	312	03.5	301	47.8	124	49.7
9	333	15.1	344	45.8	327	04.2	316	49.7	139	52.3
10	348	17.6	359	45.4	342	04.9	331	51.6	154	54.9
11	3	20.0	14	45.1	357	05.6	346	53.5	169	57.6
12	18	22.5	29	44.7	12	06.3	1	55.4	185	00.2
13	33	25.0	44	44.4	27	07.0	16	57.3	200	02.9
14	48	27.4	59	44.0	42	07.7	31	59.2	215	05.5
15	63	29.9	74	43.6	57	08.4	47	01.1	230	08.2
16	78	32.4	89	43.3	72	09.0	62	03.0	245	10.8
17	93	34.8	104	42.9	87	09.7	77	04.9	260	13.4
18	108	37.3	119	42.6	102	10.4	92	06.8	275	16.1
19	123	39.8	134	42.2	117	11.1	107	08.7	290	18.7
20	138	42.2	149	41.8	132	11.8	122	10.6	305	21.4
21	153	44.7	164	41.5	147	12.5	137	12.5	320	24.0
22	168	47.1	179	41.1	162	13.2	152	14.4	335	26.6
23	183	49.6	194	40.8	177	13.9	167	16.3	350	29.3
24	198	52.1	209	40.4	192	14.6	182	18.2	5	31.9
Dif	—		-4	+11	+7	+8	+19	+2	+26	+1

UT	SOL			☾ LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16 ^h 0			Edad: 7 ^d 4	PHE	SD: 15 ^h 6				R ^c : 52 ^m							
	PMG: 12 ^h 01 ^m 1					PMG: 18 ^h 27 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	m		
0	179	40.8	+8 06.5	93	13.9	+20 59.8		60 N	3 13	4 12	4 57	9 34	89	2 35	20		
1	194	41.0	07.4	107	41.6	87 53.4	64	58	26	20	5 01	9 48	86	20	24		
2	209	41.2	08.4	122	09.3	87 47.0	64	56	37	26	06	10 00	83	2 07	27		
3	224	41.3	09.3	136	37.1	88 40.4	66	54	46	33	10	11 80		1 56	30		
4	239	41.5	10.2	151	04.8	87 33.7	67	52	55	38	13	21 77		46	32		
5	254	41.7	+8 11.1	165	32.6	88 +20 26.8	69	50	4 02	4 43	5 16	10 29	76	1 37	34		
6	269	41.8	+8 12.1	180	00.4	88 +20 19.9	69	45	4 17	4 53	5 23	10 47	71	1 19	37		
7	284	42.0	13.0	194	28.2	88 12.8	71	40	28	5 01	29	11 02	68	1 03	40		
8	299	42.2	13.9	208	56.0	88 +20 05.6	72	35	38	08	34	14 65		0 50	43		
9	314	42.3	14.8	223	23.8	88 +19 58.3	73	30	45	14	38	25 63		39	44		
10	329	42.5	15.7	237	51.7	89 50.8	75	20	4 57	23	46	43 59		19	48		
11	344	42.7	+8 16.7	252	19.5	88 +19 43.2	76	10 N	5 06	5 31	5 52	11 59	56	0 02	51		
12	359	42.8	+8 17.6	266	47.4	89 +19 35.6	76	0	5 13	5 37	5 58	12 14	53	** ** *	**		
13	14	43.0	18.5	281	15.3	89 27.8	78	10 S	18	42	6 04	29 50		** ** *	**		
14	29	43.2	19.4	295	43.2	89 19.8	80	20	22	47	10	12 45	46	** ** *	**		
15	44	43.3	20.3	310	11.1	89 11.8	80	30	25	52	16	13 03	43	23 55	64		
16	59	43.5	21.2	324	39.0	89 +19 03.6	82	35	25	55	20	13 41		45	66		
17	74	43.7	+8 22.2	339	06.9	89 +18 55.3	83	40	5 26	5 57	6 25	13 25	38	23 34	69		
18	89	43.8	+8 23.1	353	34.9	90 +18 47.0	83	45	5 26	6 00	6 30	13 40	34	23 20	73		
19	104	44.0	24.0	8	02.9	90 38.4	86	50	25	03	35	13 57	30	23 04	78		
20	119	44.2	24.9	22	30.8	89 29.8	86	52	25	04	38	14 05	29	22 56	80		
21	134	44.3	25.8	36	58.8	90 21.1	87	54	25	06	41	14 26		48	82		
22	149	44.5	26.7	51	26.9	91 12.2	89	56	24	07	44	24 24		38	85		
23	164	44.6	27.7	65	54.9	90 +18 03.3	89	58	23	08	48	36 20		27	89		
24	179	44.8	+8 28.6	80	22.9	90 +17 54.2	91	60 S	5 22	6 10	6 52	14 49	17	22 15	92		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG 10 ^h 42 ^m 8		Mag: -3.9 PMG: 10 ^h 02 ^m		Mag: +1.2 PMG: 11 ^h 11 ^m		Mag: -2.1 PMG: 11 ^h 49 ^m		Mag: +0.4 PMG: 23 ^h 34 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	198	52.1	209 40.4	-6 00.9	192 14.6	+1 54.7	182 18.2	+5 52.8	5 31.9	-2 44.7				
1	213	54.5	224 40.0	-5 59.8	207 15.3	55.4	197 20.1	53.0	20 34.6	44.6				
2	228	57.0	239 39.7	58.7	222 15.9	56.2	212 22.0	53.2	35 37.2	44.5				
3	243	59.5	254 39.3	57.5	237 16.6	57.0	227 23.9	53.5	50 39.8	44.4				
4	259	01.9	269 39.0	56.4	252 17.3	57.8	242 25.8	53.7	65 42.5	44.4				
5	274	04.4	284 38.6	-5 55.3	267 18.0	+1 58.6	257 27.7	+5 53.9	80 45.1	-2 44.3				
6	289	06.9	299 38.2	-5 54.2	282 18.7	+1 59.4	272 29.6	+5 54.2	95 47.8	-2 44.2				
7	304	09.3	314 37.9	53.1	297 19.4	+2 00.1	287 31.5	54.4	110 50.4	44.2				
8	319	11.8	329 37.5	52.0	312 20.1	00.9	302 33.4	54.6	125 53.1	44.1				
9	334	14.2	344 37.2	50.9	327 20.8	01.7	317 35.3	54.9	140 55.7	44.0				
10	349	16.7	359 36.8	49.8	342 21.5	02.5	332 37.2	55.1	155 58.3	43.9				
11	4	19.2	14 36.5	-5 48.7	357 22.2	+2 03.3	347 39.1	+5 55.3	171 01.0	-2 43.9				
12	19	21.6	29 36.1	-5 47.6	12 22.9	+2 04.0	2	41.0	+5 55.5	186 03.6	-2 43.8			
13	34	24.1	44 35.7	46.5	27 23.5	04.8	17 43.0	55.8	201 06.3	43.7				
14	49	26.6	59 35.4	45.4	42 24.2	05.6	32 44.9	56.0	216 08.9	43.6				
15	64	29.0	74 35.0	44.3	57 24.9	06.4	47 46.8	56.2	231 11.5	43.6				
16	79	31.5	89 34.7	43.2	72 25.6	07.2	62 48.7	56.5	246 14.2	43.5				
17	94	34.0	104 34.3	-5 42.1	87 26.3	+2 07.9	77 50.6	+5 56.7	261 16.8	-2 43.4				
18	109	36.4	119 34.0	-5 40.9	102 27.0	+2 08.7	92 52.5	+5 56.9	276 19.5	-2 43.3				
19	124	38.9	134 33.6	39.8	117 27.7	09.5	107 54.4	57.2	291 22.1	43.3				
20	139	41.4	149 33.3	38.7	132 28.4	10.3	122 56.3	57.4	306 24.7	43.2				
21	154	43.8	164 32.9	37.6	147 29.1	11.0	137 58.2	57.6	321 27.4	43.1				
22	169	46.3	179 32.5	36.5	162 29.8	11.8	153 00.1	57.8	336 30.0	43.1				
23	184	48.7	194 32.2	35.4	177 30.5	12.6	168 02.0	58.1	351 32.7	43.0				
24	199	51.2	209 31.8	-5 34.3	192 31.2	+2 13.4	183 03.9	+5 58.3	6 35.3	-2 42.9				
Dif	—		-4	+11	+7		+8	+19		+2	+26		+1	

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16'0 PMG: 12 ^h 00 ^m 9			Edad: 8 ^d 4 PHE { 4 ^h : 58'3 12 ^h : 58'5 20 ^h : 58'8 PMG: 19 ^h 19 ^m 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	179	44.8	+8 28.6	80	22.9	+17 54.2	92	60 N	19 10	19 55	20 55	11 03 94	2 55 15	
1	194	45.0		94	51.0		91	58	05	47	41	14 90	44 18	
2	209	45.1		109	19.1		91	56	19 00	40	30	23 86	34 21	
3	224	45.3		123	47.2		91	54	18 56	33	20	31 84	26 22	
4	239	45.5		138	15.3		91	52	52	27	11	38 81	18 26	
5	254	45.6	+8 33.2	152	43.5	+17 07.1	97	50	18 49	19 22	20 04	11 45 79	2 11 28	
6	269	45.8	+8 34.1	167	11.6	+16 57.4	97	45	18 41	19 12	19 48	11 58 75	1 56 32	
7	284	46.0		181	39.8		92	40	35	19 03	36	12 10 70	43 36	
8	299	46.1		196	08.0		92	35	30	18 56	26	19 68	33 38	
9	314	46.3		210	36.2		92	30	25	50	18	28 65	23 41	
10	329	46.4		225	04.4		92	20	17	40	19 06	42 61	1 07 45	
11	344	46.6	+8 38.6	239	32.6	+16 07.1	103	10 N	18 10	18 32	18 57	12 55 56	0 53 49	
12	359	46.8	+8 39.6	254	00.9	+15 56.7	104	0	18 04	18 25	18 49	13 07 52	0 39 53	
13	14	46.9		268	29.2		93	10 S	17 58	19	44	19 48	26 56	
14	29	47.1		41.4	282 57.4		92	20	52	14	39	31 45	0 11 60	
15	44	47.2		42.3	297 25.8		94	30	44	08	36	46 40	*** ** **	
16	59	47.4		43.2	311 54.1		93	35	40	06	35	13 54 37	*** ** **	
17	74	47.6	+8 44.1	326	22.4	+15 03.3	109	40	17 36	18 03	18 34	14 03 34	*** ** **	
18	89	47.7	+8 45.0	340	50.8	+14 52.3	110	45	17 30	18 00	18 34	14 14 31	*** ** **	
19	104	47.9		45.9	355 19.1		93	50	24	17 56	34	27 27	*** ** **	
20	119	48.1		46.9	9 47.5		94	52	21	55	34	34 24	*** ** **	
21	134	48.2		47.8	24 15.9		94	54	18	54	34	40 22	*** ** **	
22	149	48.4		48.7	38 44.3		94	56	14	52	35	48 19	*** ** **	
23	164	48.5		49.6	53 12.7	+13 56.0	115	58	10	50	35	14 56 16	23 56 91	
24	179	48.7	+8 50.5	67	41.2	+13 44.5	115	60 S	17 06	17 48	18 36	15 06 12	23 47 95	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 10 ^h 38 ^m 8		Mag: -3.9 PMG: 10 ^h 02 ^m		Mag: +1.2 PMG: 11 ^h 09 ^m		Mag: -2.1 PMG: 11 ^h 46 ^m		Mag: +0.4 PMG: 23 ^h 30 ^m									
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	199	51.2	209	31.8	-5	34.3	192	31.2	+2	13.4	183	03.9	+5	58.3	6	35.3	-2	42.9
1	214	53.7	224	31.5		33.2	207	31.8		14.2	198	05.8		58.5	21	38.0		42.8
2	229	56.1	239	31.1		32.1	222	32.5		14.9	213	07.7		58.8	36	40.6		42.8
3	244	58.6	254	30.8		31.0	237	33.2		15.7	228	09.6		59.0	51	43.2		42.7
4	260	01.1	269	30.4		29.8	252	33.9		16.5	243	11.5		59.2	66	45.9		42.6
5	275	03.5	284	30.1	-5	28.7	267	34.6	+2	17.3	258	13.4	+5	59.5	81	48.5	-2	42.5
6	290	06.0	299	29.7	-5	27.6	282	35.3	+2	18.1	273	15.3	+5	59.7	96	51.2	-2	42.5
7	305	08.5	314	29.4		26.5	297	36.0		18.8	288	17.2	+5	59.9	111	53.8		42.4
8	320	10.9	329	29.0		25.4	312	36.7		19.6	303	19.1	+6	00.1	126	56.4		42.3
9	335	13.4	344	28.7		24.3	327	37.4		20.4	318	21.0		00.4	141	59.1		42.3
10	350	15.9	359	28.3		23.2	342	38.1		21.2	333	22.9		00.6	157	01.7		42.2
11	5	18.3	14	28.0	-5	22.1	357	38.8	+2	22.0	348	24.8	+6	00.8	172	04.4	-2	42.1
12	20	20.8	29	27.6	-5	20.9	12	39.4	+2	22.7	3	26.7	+6	01.1	187	07.0	-2	42.0
13	35	23.2	44	27.2		19.8	27	40.1		23.5	18	28.6		01.3	202	09.6		42.0
14	50	25.7	59	26.9		18.7	42	40.8		24.3	33	30.5		01.5	217	12.3		41.9
15	65	28.2	74	26.5		17.6	57	41.5		25.1	48	32.4		01.8	232	14.9		41.8
16	80	30.6	89	26.2		16.5	72	42.2		25.8	63	34.3		02.0	247	17.6		41.7
17	95	33.1	104	25.8	-5	15.4	87	42.9	+2	26.6	78	36.2	+6	02.2	262	20.2	-2	41.7
18	110	35.6	119	25.5	-5	14.2	102	43.6	+2	27.4	93	38.1	+6	02.4	277	22.8	-2	41.6
19	125	38.0	134	25.1		13.1	117	44.3		28.2	108	40.0		02.7	292	25.5		41.5
20	140	40.5	149	24.8		12.0	132	45.0		29.0	123	41.9		02.9	307	28.1		41.5
21	155	43.0	164	24.4		10.9	147	45.7		29.7	138	43.8		03.1	322	30.8		41.4
22	170	45.4	179	24.1		09.8	162	46.4		30.5	153	45.8		03.4	337	33.4		41.3
23	185	47.9	194	23.7		08.7	177	47.1		31.3	168	47.7		03.6	352	36.0		41.2
24	200	50.4	209	23.4	-5	07.5	192	47.8	+2	32.1	183	49.6	+6	03.8	7	38.7	-2	41.2
Dif	—		-4		+11		+7		+8		+19		+2		+26		+1	

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16:0 PMG: 12 ^h 00 ^m 6			Edad: 9 ^d 4 PHE { SD: 16:1 PMG: 20 ^h 12 ^m 4 ^h : 59:1 12 ^h : 59:4 20 ^h : 59:7 Rº: 52 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico		Civil	Hora		Rº	Hora	Rº		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	179	48.7	+8	50.5	67	41.2	+13	44.5	60 N	3 06	4 05	4 51	12 37	96	3 10	11	
1	194	48.9		51.4	82	09.6	94	32.8	58	19	14	4 56	44	92	3 02	15	
2	209	49.0		52.3	96	38.1	95	21.1	56	31	21	5 01	49	89	2 55	18	
3	224	49.2		53.2	111	06.6	95	+13	09.3	54	41	27	05	55	86	49	2
4	239	49.3		54.1	125	35.1	95	+12	57.4	52	49	33	09	12 59	84	44	22
5	254	49.5	+8	55.0	140	03.6	95	+12	45.4	50	3 57	4 38	5 12	13 04	81	2 39	25
6	269	49.7	+8	56.0	154	32.1	95	+12	33.3	45	4 13	4 49	5 20	13 13	76	2 28	29
7	284	49.8		56.9	169	00.6	95	21.1	40	25	4 58	26	20	73	19	33	
8	299	50.0		57.8	183	29.2	96	+12	08.8	35	35	5 05	31	27	69	11	36
9	314	50.1		58.7	197	57.7	95	+11	56.5	30	43	12	36	33	66	2 04	39
10	329	50.3	+8	59.6	212	26.3	96	44.1	20	4 55	22	44	43	60	1 52	44	
11	344	50.5	+9	00.5	226	54.9	96	+11	31.6	10 N	5 05	5 30	5 51	13 51	56	1 42	48
12	359	50.6	+9	01.4	241	23.5	96	+11	19.0	0	5 12	5 36	5 57	13 59	52	1 32	52
13	14	50.8		02.3	255	52.1	96	+11	06.3	10 S	18	42	6 04	14 07	48	22	56
14	29	50.9		03.2	270	20.7	96	+10	53.6	20	22	48	10	16	43	1 11	60
15	44	51.1		04.1	284	49.3	96	40.8	30	26	53	18	26	38	0 59	65	
16	59	51.3		05.0	299	17.9	96	27.9	35	27	56	22	31	36	51	69	
17	74	51.4	+9	05.9	313	46.5	96	+10	14.9	40	5 28	5 59	6 27	14 37	33	0 43	72
18	89	51.6	+9	06.8	328	15.1	96	+10	01.9	45	5 28	6 02	6 32	14 45	28	0 33	76
19	104	51.7		07.7	342	43.8	97	+9	48.8	50	28	06	39	54	23	22	80
20	119	51.9		08.6	357	12.4	96	35.6	52	28	07	42	14	58	21	16	83
21	134	52.0		09.5	11	41.0	96	22.3	54	28	09	45	15	02	19	10	85
22	149	52.2		10.5	26	09.7	97	+9	09.0	56	28	11	48	07	16	0 03	88
23	164	52.4		11.4	40	38.3	96	+8	55.6	58	27	13	52	12	14	** ** *	**
24	179	52.5	+9	12.3	55	07.0	97	+8	42.1	60 S	5 26	6 15	6 57	15 18	11	** ** *	**

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG 10 ^h 34 ^m 9		Mag: -3.9 PMG: 10 ^h 03 ^m		Mag: +1.2 PMG: 11 ^h 08 ^m		Mag: -2.1 PMG: 11 ^h 43 ^m		Mag: +0.4 PMG: 23 ^h 25 ^m									
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	200	50.4	209	23.4	-5	07.5	192	47.8	+2	32.1	183	49.6	+6	03.8	7	38.7	-2	41.2
1	215	52.8	224	23.0		06.4	207	48.4		32.8	198	51.5		04.1	22	41.3		41.1
2	230	55.3	239	22.7		05.3	222	49.1		33.6	213	53.4		04.3	37	44.0		41.0
3	245	57.7	254	22.3		04.2	237	49.8		34.4	228	55.3		04.5	52	46.6		40.9
4	261	00.2	269	22.0		03.1	252	50.5		35.2	243	57.2		04.7	67	49.2		40.9
5	276	02.7	284	21.6	-5	02.0	267	51.2	+2	35.9	258	59.1	+6	05.0	82	51.9	-2	40.8
6	291	05.1	299	21.3	-5	00.8	282	51.9	+2	36.7	274	01.0	+6	05.2	97	54.5	-2	40.7
7	306	07.6	314	20.9	-4	59.7	297	52.6		37.5	289	02.9		05.4	112	57.2		40.7
8	321	10.1	329	20.6		58.6	312	53.3		38.3	304	04.8		05.7	127	59.8		40.6
9	336	12.5	344	20.2		57.5	327	54.0		39.1	319	06.7		05.9	143	02.4		40.5
10	351	15.0	359	19.9		56.4	342	54.7		39.8	334	08.6		06.1	158	05.1		40.4
11	6	17.5	14	19.5	-4	55.2	357	55.4	+2	40.6	349	10.5	+6	06.3	173	07.7	-2	40.4
12	21	19.9	29	19.2	-4	54.1	12	56.1	+2	41.4	4	12.4	+6	06.6	188	10.4	-2	40.3
13	36	22.4	44	18.8		53.0	27	56.7		42.2	19	14.3		06.8	203	13.0		40.2
14	51	24.8	59	18.5		51.9	42	57.4		42.9	34	16.2		07.0	218	15.6		40.1
15	66	27.3	74	18.1		50.7	57	58.1		43.7	49	18.1		07.3	233	18.3		40.1
16	81	29.8	89	17.8		49.6	72	58.8		44.5	64	20.0		07.5	248	20.9		40.0
17	96	32.2	104	17.5	-4	48.5	87	59.5	+2	45.3	79	21.9	+6	07.7	263	23.6	-2	39.9
18	111	34.7	119	17.1	-4	47.4	103	00.2	+2	46.0	94	23.8	+6	07.9	278	26.2	-2	39.9
19	126	37.2	134	16.8		46.3	118	00.9		46.8	109	25.7		08.2	293	28.8		39.8
20	141	39.6	149	16.4		45.1	133	01.6		47.6	124	27.6		08.4	308	31.5		39.7
21	156	42.1	164	16.1		44.0	148	02.3		48.4	139	29.5		08.6	323	34.1		39.6
22	171	44.6	179	15.7		42.9	163	03.0		49.1	154	31.4		08.9	338	36.8		39.6
23	186	47.0	194	15.4		41.8	178	03.7		49.9	169	33.3		09.1	353	39.4		39.5
24	201	49.5	209	15.0	-4	40.6	193	04.4	+2	50.7	184	35.2	+6	09.3	8	42.0	-2	39.4
Dif	—		-3 +11		+7 +8		+19 +2		+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: 15'9 PMG: 12 ^h 00 ^m 4			Edad: 10 ^d 4 PHE { 4 ^h : 59'9 12 ^h : 60'2 20 ^h : 60'4 R°: 52 ^m						Civil		Náutico		Hora R°		
	hG ☉	Dec		hG ☾	Dif	Dec	Dif									
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m	m	h m	m	
0	179	52.5	+9	55	07.0	+8	42.1	60 N	19 15	20 01	21 02	14 13	98	3 21	10	
1	194	52.7		69	35.6 ⁹⁶		28.6 ¹³⁵	58	09	19 52	20 47	16	94	17	13	
2	209	52.8		84	04.3 ⁹⁷		15.0 ¹³⁶	56	19 04	44	35	18	92	13	16	
3	224	53.0		98	33.0 ⁹⁷	+8	01.4 ¹³⁶	54	18 59	37	25	21	88	10	18	
4	239	53.1		113	01.6 ⁹⁶	+7	47.7 ¹³⁷	52	55	31	16	23	86	06	21	
5	254	53.3	+9	127	30.3 ⁹⁷	+7	33.9 ¹³⁸	50	18 52	19 26	20 08	14 25	83	3 04	22	
6	269	53.5	+9	141	58.9 ⁹⁶	+7	20.1 ¹³⁸	45	18 44	19 14	19 51	14 29	79	2 57	28	
7	284	53.6		156	27.6 ⁹⁷	+7	06.2 ¹³⁹	40	37	19 05	39	33	74	52	31	
8	299	53.8		170	56.2 ⁹⁶	+6	52.2 ¹⁴⁰	35	31	18 57	28	36	70	47	35	
9	314	53.9		185	24.9 ⁹⁷		38.2 ¹⁴⁰	30	26	51	20	39	67	43	38	
10	329	54.1		199	53.5 ⁹⁶		24.2 ¹⁴⁰	20	18	40	19 07	43	62	36	43	
11	344	54.2	+9	214	22.2 ⁹⁷	+6	10.1 ¹⁴¹	10 N	18 10	18 32	18 57	14 47	57	2 30	48	
12	359	54.4	+9	228	50.8 ⁹⁶	+5	55.9 ¹⁴²	0	18 04	18 25	18 49	14 51	53	2 24	52	
13	14	54.6		243	19.4 ⁹⁶		41.7 ¹⁴²	10 S	17 57	18	43	55	48	18	56	
14	29	54.7		257	48.0 ⁹⁶		27.5 ¹⁴²	20	50	12	38	14 59	43	11	61	
15	44	54.9		272	16.6 ⁹⁶	+5	13.2 ¹⁴³	30	42	06	34	15 04	38	04	66	
16	59	55.0		286	45.2 ⁹⁶	+4	58.9 ¹⁴³	35	38	03	33	07	34	2 00	69	
17	74	55.2	+9	301	13.8 ⁹⁶	+4	44.5 ¹⁴⁴	40	17 33	18 00	18 31	15 10	31	1 55	73	
18	89	55.3	+9	315	42.4 ⁹⁶	+4	30.1 ¹⁴⁴	45	17 27	17 56	18 30	15 13	27	1 49	77	
19	104	55.5		330	11.0 ⁹⁶		15.6 ¹⁴⁵	50	20	53	30	17	23	42	82	
20	119	55.6		344	39.5 ⁹⁵	+4	01.1 ¹⁴⁵	52	17	51	30	19	21	39	84	
21	134	55.8		359	08.1 ⁹⁶	+3	46.6 ¹⁴⁵	54	13	49	30	21	18	35	87	
22	149	56.0		13	36.6 ⁹⁵		32.0 ¹⁴⁶	56	09	47	30	23	16	31	90	
23	164	56.1		28	05.1 ⁹⁵		17.4 ¹⁴⁶	58	05	45	30	26	13	27	93	
24	179	56.3	+9	42	33.6 ⁹⁵	+3	02.7 ¹⁴⁷	60 S	17 00	17 43	18 31	15 29	9	1 22	97	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO				
	PMG: 10 ^h 31 ^m 0		Mag: -3.9 PMG: 10 ^h 03 ^m			Mag: +1.2 PMG: 11 ^h 07 ^m			Mag: -2.1 PMG: 11 ^h 40 ^m			Mag: +0.4 PMG: 23 ^h 21 ^m				
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec			
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'		
0	201	49.5	209	15.0	-4	40.6	193	04.4	+2	50.7	184	35.2	+6	09.3	8	42.0
1	216	52.0	224	14.7		39.5	208	05.1		51.5	199	37.1		09.6	23	44.7
2	231	54.4	239	14.3		38.4	223	05.8		52.2	214	39.0		09.8	38	47.3
3	246	56.9	254	14.0		37.3	238	06.4		53.0	229	40.9		10.0	53	49.9
4	261	59.3	269	13.6		36.1	253	07.1		53.8	244	42.8		10.2	68	52.6
5	277	01.8	284	13.3	-4	35.0	268	07.8	+2	54.6	259	44.7	+6	10.5	83	55.2
6	292	04.3	299	12.9	-4	33.9	283	08.5	+2	55.4	274	46.7	+6	10.7	98	57.9
7	307	06.7	314	12.6		32.8	298	09.2		56.1	289	48.6		10.9	114	00.5
8	322	09.2	329	12.3		31.6	313	09.9		56.9	304	50.5		11.2	129	03.1
9	337	11.7	344	11.9		30.5	328	10.6		57.7	319	52.4		11.4	144	05.8
10	352	14.1	359	11.6		29.4	343	11.3		58.5	334	54.3		11.6	159	08.4
11	7	16.6	14	11.2	-4	28.3	358	12.0	+2	59.2	349	56.2	+6	11.8	174	11.1
12	22	19.1	29	10.9	-4	27.1	13	12.7	+3	00.0	4	58.1	+6	12.1	189	13.7
13	37	21.5	44	10.5		26.0	28	13.4	+3	00.8	20	00.0		12.3	204	16.3
14	52	24.0	59	10.2		24.9	43	14.1		01.5	35	01.9		12.5	219	19.0
15	67	26.4	74	09.8		23.7	58	14.8		02.3	50	03.8		12.8	234	21.6
16	82	28.9	89	09.5		22.6	73	15.4		03.1	65	05.7		13.0	249	24.3
17	97	31.4	104	09.2	-4	21.5	88	16.1	+3	03.9	80	07.6	+6	13.2	264	26.9
18	112	33.8	119	08.8	-4	20.4	103	16.8	+3	04.6	95	09.5	+6	13.4	279	29.5
19	127	36.3	134	08.5		19.2	118	17.5		05.4	110	11.4		13.7	294	32.2
20	142	38.8	149	08.1		18.1	133	18.2		06.2	125	13.3		13.9	309	34.8
21	157	41.2	164	07.8		17.0	148	18.9		07.0	140	15.2		14.1	324	37.4
22	172	43.7	179	07.4		15.8	163	19.6		07.7	155	17.1		14.4	339	40.1
23	187	46.2	194	07.1		14.7	178	20.3		08.5	170	19.0		14.6	354	42.7
24	202	48.6	209	06.8	-4	13.6	193	21.0	+3	09.3	185	20.9	+6	14.8	9	45.4
Dif	—		-3	+11			+7		+8		+19		+2		+26	+1

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15 ^h 9 PMG: 12 ^h 00 ^m 1			Edad: 11 ^d 4 PHE { 4 ^h : 60 ^m 6 12 ^h : 60 ^m 8 20 ^h : 60 ^m 9 PMG: 21 ^h 56 ^m R°: 54 ^m														
	hG ☉	Dec		hG ☾	Dif		Dec			Dif			Náutico	Civil	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m
0	179	56.3	+9	33.9	42	33.6	+3	02.7	60 N		2 58	3 59	4 45	15 51	100	3 31	10	
1	194	56.4		34.8	57	02.1	95	+2 48.1 ¹⁴⁶	58		3 12	4 08	50	50	96	30	13	
2	209	56.6		35.7	71	30.6	95	33.4 ⁹⁵	56		25	16	4 56	50	93	29	16	
3	224	56.7		36.6	85	59.0	94	18.6 ¹⁴⁸	54		35	22	5 00	49	90	28	18	
4	239	56.9		37.5	100	27.5	95	+2 03.9 ¹⁴⁷	52		44	29	04	49	87	27	21	
5	254	57.0	+9	38.4	114	55.9	94	+1 49.1 ¹⁴⁸	50		3 52	4 34	5 08	15 48	85	3 26	23	
6	269	57.2	+9	39.2	129	24.3	94	+1 34.3 ¹⁴⁸	45		4 09	4 46	5 16	15 48	79	3 25	27	
7	284	57.3		40.1	143	52.6	93	19.5 ¹⁴⁸	40		21	4 55	23	47	75	23	32	
8	299	57.5		41.0	158	21.0	94	+1 04.6 ¹⁴⁹	35		32	5 03	29	46	72	22	35	
9	314	57.6		41.9	172	49.3	93	+0 49.8 ¹⁴⁸	30		40	09	34	46	68	21	38	
10	329	57.8		42.8	187	17.6	93	34.9 ¹⁴⁹	20		4 54	20	42	45	63	19	44	
11	344	57.9	+9	43.7	201	45.9	93	+0 20.0 ¹⁴⁹	10 N		5 04	5 29	5 50	15 44	58	3 18	48	
12	359	58.1	+9	44.6	216	14.1	92	+0 05.1 ¹⁴⁹	0		5 11	5 36	5 57	15 44	53	3 16	53	
13	14	58.3		45.5	230	42.4	93	-0 09.8 ¹⁴⁹	10 S		18	42	6 04	43	49	14	58	
14	29	58.4		46.4	245	10.6	92	24.8 ¹⁵⁰	20		23	49	11	42	45	12	63	
15	44	58.6		47.3	259	38.8	92	39.7 ¹⁴⁹	30		27	55	19	42	39	10	68	
16	59	58.7		48.2	274	06.9	91	-0 54.6 ¹⁴⁹	35		28	5 58	23	41	36	09	71	
17	74	58.9	+9	49.1	288	35.0	91	-1 09.6 ¹⁵⁰	40		5 30	6 01	6 29	15 41	32	3 08	75	
18	89	59.0	+9	50.0	303	03.1	91	-1 24.5 ¹⁴⁹	45		5 31	6 05	6 35	15 40	29	3 06	79	
19	104	59.2		50.9	317	31.2	91	39.5 ¹⁵⁰	50		31	09	42	40	23	04	84	
20	119	59.3		51.8	331	59.2	90	-1 54.4 ¹⁴⁹	52		31	11	45	40	21	03	87	
21	134	59.5		52.6	346	27.2	90	-2 09.4 ¹⁵⁰	54		32	13	49	39	19	02	89	
22	149	59.6		53.5	0	55.1	89	24.3 ¹⁴⁹	56		31	15	52	39	16	01	92	
23	164	59.8		54.4	15	23.1	90	39.3 ¹⁵⁰	58		31	17	6 57	39	13	3 00	95	
24	179	59.9	+9	55.3	29	51.0	89	-2 54.2 ¹⁴⁹	60 S		5 31	6 19	7 02	15 38	11	2 59	98	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 10 ^h 27 ^m 0		Mag: -3.9 PMG: 10 ^h 04 ^m		Mag: +1.2 PMG: 11 ^h 06 ^m		Mag: -2.1 PMG: 11 ^h 37 ^m		Mag: +0.4 PMG: 23 ^h 17 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	202	48.6	209	06.8	-4	13.6	193	21.0	+3	09.3
1	217	51.1	224	06.4		12.5	208	21.7		10.1
2	232	53.6	239	06.1		11.3	223	22.4		10.8
3	247	56.0	254	05.7		10.2	238	23.1		11.6
4	262	58.5	269	05.4		09.1	253	23.8		12.4
5	278	00.9	284	05.0	-4	07.9	268	24.5	+3	13.2
6	293	03.4	299	04.7	-4	06.8	283	25.1	+3	13.9
7	308	05.9	314	04.4		05.7	298	25.8		14.7
8	323	08.3	329	04.0		04.5	313	26.5		15.5
9	338	10.8	344	03.7		03.4	328	27.2		16.2
10	353	13.3	359	03.3		02.3	343	27.9		17.0
11	8	15.7	14	03.0	-4	01.1	358	28.6	+3	17.8
12	23	18.2	29	02.6	-4	00.0	13	29.3	+3	18.6
13	38	20.7	44	02.3	-3	58.9	28	30.0		19.3
14	53	23.1	59	02.0		57.7	43	30.7		20.1
15	68	25.6	74	01.6		56.6	58	31.4		20.9
16	83	28.1	89	01.3		55.5	73	32.1		21.7
17	98	30.5	104	00.9	-3	54.3	88	32.8	+3	22.4
18	113	33.0	119	00.6	-3	53.2	103	33.5	+3	23.2
19	128	35.4	134	00.3		52.1	118	34.2		24.0
20	143	37.9	148	59.9		50.9	133	34.9		24.7
21	158	40.4	163	59.6		49.8	148	35.5		25.5
22	173	42.8	178	59.2		48.7	163	36.2		26.3
23	188	45.3	193	58.9		47.5	178	36.9		27.1
24	203	47.8	208	58.6	-3	46.4	193	37.6	+3	27.8
Dif	—		-3 +11		+7 +8		+19 +2		+26 +1	

UT	SOL		LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15'9 PMG: 11 ^h 59 ^m 9		Edad: 12 ^d 4 PHE { SD: 16'6 PMG: 22 ^h 50 ^m		4 ^h : 61'1 12 ^h : 61'1 20 ^h : 61'2 R°: 56 ^m									
	hG ☉	Dec	hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	
0	179	59.9	+9	55.3	29	51.0	-2 54.2	60 N	19 20	20 06	21 09	17 31 102	3 41 10	
1	195	00.1		56.2	44	18.8 88	-3 09.1 149	58	14	19 57	20 54	26 98	43 14	
2	210	00.2		57.1	58	46.6 88	24.1 150	56	08	49	41	23 94	45 17	
3	225	00.4		58.0	73	14.4 88	39.0 149	54	19 03	41	29	19 92	46 20	
4	240	00.5		58.9	87	42.2 88	-3 53.8 148	52	18 59	35	20	16 89	48 22	
5	255	00.7	+9	59.8	102	09.9 87	-4 08.7 149	50	18 55	19 29	20 12	17 13 87	3 49 25	
6	270	00.8	+10	00.7	116	37.5 86	-4 23.6 149	45	18 46	19 17	19 54	17 07 81	3 52 30	
7	285	01.0		01.5	131	05.2 87	38.4 148	40	39	19 07	41	17 02 77	55 33	
8	300	01.1		02.4	145	32.8 86	-4 53.2 148	35	33	18 59	30	16 58 73	57 37	
9	315	01.3		03.3	160	00.3 85	-5 08.0 148	30	28	52	21	54 70	3 59 40	
10	330	01.4		04.2	174	27.8 85	22.7 147	20	18	41	19 07	48 65	4 03 45	
11	345	01.6	+10	05.1	188	55.3 85	-5 37.5 148	10 N	18 11	18 32	18 57	16 42 60	4 06 50	
12	0	01.7	+10	06.0	203	22.7 84	-5 52.2 147	0	18 03	18 24	18 49	16 37 56	4 09 54	
13	15	01.9		06.9	217	50.1 84	-6 06.8 146	10 S	17 56	17	42	32 51	12 59	
14	30	02.0		07.8	232	17.4 83	21.5 147	20	48	11	36	27 46	15 64	
15	45	02.2		08.6	246	44.7 83	36.1 146	30	40	04	32	21 41	18 70	
16	60	02.3		09.5	261	11.9 82	-6 50.6 145	35	35	18 01	30	17 39	20 73	
17	75	02.5	+10	10.4	275	39.1 82	-7 05.2 146	40	17 30	17 57	18 29	16 13 35	4 23 76	
18	90	02.6	+10	11.3	290	06.3 82	-7 19.7 145	45	17 23	17 53	18 27	16 09 31	4 25 81	
19	105	02.8		12.2	304	33.4 81	34.1 144	50	16	49	26	03 27	28 86	
20	120	02.9		13.1	319	00.4 80	-7 48.5 144	52	12	47	26	16 01 24	30 88	
21	135	03.1		14.0	333	27.4 80	-8 02.9 144	54	09	45	26	15 58 22	31 91	
22	150	03.2		14.8	347	54.4 80	17.2 143	56	04	42	25	55 19	33 94	
23	165	03.3		15.7	2	21.3 79	31.4 142	58	17 00	40	25	52 16	35 97	
24	180	03.5	+10	16.6	16	48.1 78	-8 45.6 142	60 S	16 55	17 37	18 25	15 49 12	4 37 101	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 10 ^h 23 ^m 1		Mag: -3.9 PMG: 10 ^h 04 ^m		Mag: +1.2 PMG: 11 ^h 05 ^m		Mag: -2.1 PMG: 11 ^h 34 ^m		Mag: +0.4 PMG: 23 ^h 13 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	203	47.8	208	58.6	-3	46.4	193	37.6	+3	27.8	186	06.6	+6	20.3	10	48.7	-2	36.0
1	218	50.2	223	58.2		45.3	208	38.3		28.6	201	08.5		20.5	25	51.3		35.9
2	233	52.7	238	57.9		44.1	223	39.0		29.4	216	10.4		20.7	40	53.9		35.9
3	248	55.2	253	57.5		43.0	238	39.7		30.1	231	12.3		21.0	55	56.6		35.8
4	263	57.6	268	57.2		41.8	253	40.4		30.9	246	14.2		21.2	70	59.2		35.7
5	279	00.1	283	56.9	-3	40.7	268	41.1	+3	31.7	261	16.1	+6	21.4	86	01.8	-2	35.7
6	294	02.5	298	56.5	-3	39.6	283	41.8	+3	32.5	276	18.0	+6	21.7	101	04.5	-2	35.6
7	309	05.0	313	56.2		38.4	298	42.5		33.2	291	19.9		21.9	116	07.1		35.5
8	324	07.5	328	55.9		37.3	313	43.2		34.0	306	21.8		22.1	131	09.8		35.4
9	339	09.9	343	55.5		36.2	328	43.9		34.8	321	23.7		22.3	146	12.4		35.4
10	354	12.4	358	55.2		35.0	343	44.6		35.5	336	25.6		22.6	161	15.0		35.3
11	9	14.9	13	54.8	-3	33.9	358	45.2	+3	36.3	351	27.5	+6	22.8	176	17.7	-2	35.2
12	24	17.3	28	54.5	-3	32.7	13	45.9	+3	37.1	6	29.4	+6	23.0	191	20.3	-2	35.2
13	39	19.8	43	54.2		31.6	28	46.6		37.9	21	31.3		23.2	206	22.9		35.1
14	54	22.3	58	53.8		30.5	43	47.3		38.6	36	33.3		23.5	221	25.6		35.0
15	69	24.7	73	53.5		29.3	58	48.0		39.4	51	35.2		23.7	236	28.2		35.0
16	84	27.2	88	53.1		28.2	73	48.7		40.2	66	37.1		23.9	251	30.9		34.9
17	99	29.7	103	52.8	-3	27.1	88	49.4	+3	40.9	81	39.0	+6	24.2	266	33.5	-2	34.8
18	114	32.1	118	52.5	-3	25.9	103	50.1	+3	41.7	96	40.9	+6	24.4	281	36.1	-2	34.7
19	129	34.6	133	52.1		24.8	118	50.8		42.5	111	42.8		24.6	296	38.8		34.7
20	144	37.0	148	51.8		23.6	133	51.5		43.2	126	44.7		24.8	311	41.4		34.6
21	159	39.5	163	51.5		22.5	148	52.2		44.0	141	46.6		25.1	326	44.0		34.5
22	174	42.0	178	51.1		21.4	163	52.9		44.8	156	48.5		25.3	341	46.7		34.5
23	189	44.4	193	50.8		20.2	178	53.6		45.6	171	50.4		25.5	356	49.3		34.4
24	204	46.9	208	50.4	-3	19.1	193	54.3	+3	46.3	186	52.3	+6	25.7	11	51.9	-2	34.3
Dif	—		-3	+11		+7	+8			+19	+2			+26		+1		

UT	SOL				LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15 ^h 9 PMG: 11 ^h 59 ^m 7				Edad: 13 ^d 4 PHE { 4 ^h : 61 ^m 2 12 ^h : 61 ^m 2 20 ^h : 61 ^m 2 PMG: 23 ^h 46 ^m R°: 59 ^m											
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m m	m	h m m	m
0	180	03.5	+10	16.6	16	48.1		-8 45.6	60 N	2 49	3 52	4 39	19 13	101	3 51	14
1	195	03.6		17.5	31	14.9	78	-8 59.8 ¹⁴²	58	3 05	4 02	45	19 04	98	3 57	17
2	210	03.8		18.4	45	41.7	78	-9 13.9 ¹⁴¹	56	18	10	51	18 57	94	4 02	20
3	225	03.9		19.3	60	08.4	77	27.9 ¹⁴⁰	54	29	17	4 56	51 90		06	23
4	240	04.1		20.1	74	35.0	76	41.9 ¹⁴⁰	52	39	24	5 00	45 88		10	26
5	255	04.2	+10	21.0	89	01.6	76	-9 55.8 ¹³⁹	50	3 47	4 30	5 04	18 40	85	4 14	28
6	270	04.4	+10	21.9	103	28.2	76	-10 09.6 ¹³⁸	45	4 05	4 42	5 13	18 28	81	4 22	33
7	285	04.5		22.8	117	54.7	75	23.4 ¹³⁸	40	18	4 52	20	19 77		28	37
8	300	04.7		23.7	132	21.1	74	37.1 ¹³⁷	35	29	5 00	26	11 74		34	40
9	315	04.8		24.5	146	47.5	74	-10 50.8 ¹³⁷	30	38	07	32	18 04	71	39	43
10	330	05.0		25.4	161	13.8	73	-11 04.4 ¹³⁶	20	4 52	18	41	17 53	66	48	48
11	345	05.1	+10	26.3	175	40.1	73	-11 17.9 ¹³⁵	10 N	5 03	5 27	5 49	17 42	62	4 56	53
12	0	05.2	+10	27.2	190	06.3	72	-11 31.3 ¹³⁴	0	5 11	5 35	5 56	17 33	58	5 03	57
13	15	05.4		28.1	204	32.5	72	44.6 ¹³³	10 S	18	42	6 04	23 54		11	61
14	30	05.5		28.9	218	58.6	71	-11 57.9 ¹³³	20	23	49	11	13 50		19	65
15	45	05.7		29.8	233	24.6	70	-12 11.1 ¹³²	30	28	56	20	17 02	45	28	70
16	60	05.8		30.7	247	50.6	70	24.2 ¹³¹	35	30	5 59	25	16 56	42	33	73
17	75	06.0	+10	31.6	262	16.6	70	-12 37.3 ¹³¹	40	5 32	6 03	6 31	16 48	39	5 39	77
18	90	06.1	+10	32.5	276	42.5	69	-12 50.2 ¹²⁹	45	5 33	6 07	6 37	16 40	35	5 46	81
19	105	06.3		33.3	291	08.3	68	-13 03.1 ¹²⁹	50	34	12	45	30 30		54	86
20	120	06.4		34.2	305	34.1	68	15.8 ¹²⁷	52	35	14	48	25 28		5 58	88
21	135	06.5		35.1	319	59.8	67	28.5 ¹²⁷	54	35	16	52	20 26		6 02	91
22	150	06.7		36.0	334	25.5	67	41.1 ¹²⁶	56	35	18	6 56	14 23		07	94
23	165	06.8		36.8	348	51.1	66	-13 53.6 ¹²⁵	58	35	21	7 01	08 20		12	98
24	180	07.0	+10	37.7	3	16.7	66	-14 06.0 ¹²⁴	60 S	5 35	6 24	7 07	16 01	16	6 18	102

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 10 ^h 19 ^m 2		Mag: -3.9 PMG: 10 ^h 05 ^m		Mag: +1.2 PMG: 11 ^h 04 ^m		Mag: -2.1 PMG: 11 ^h 31 ^m		Mag: +0.4 PMG: 23 ^h 08 ^m	
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄	
h	°	'	°	'	°	'	°	'	°	'
0	204	46.9	208	50.4	-3	19.1	193	54.3	+3	46.3
1	219	49.4	223	50.1		17.9	208	55.0		47.1
2	234	51.8	238	49.8		16.8	223	55.7		47.9
3	249	54.3	253	49.4		15.6	238	56.3		48.6
4	264	56.8	268	49.1		14.5	253	57.0		49.4
5	279	59.2	283	48.8	-3	13.4	268	57.7	+3	50.2
6	295	01.7	298	48.4	-3	12.2	283	58.4	+3	50.9
7	310	04.1	313	48.1		11.1	298	59.1		51.7
8	325	06.6	328	47.8		09.9	313	59.8		52.5
9	340	09.1	343	47.4		08.8	329	00.5		53.2
10	355	11.5	358	47.1		07.7	344	01.2		54.0
11	10	14.0	13	46.7	-3	06.5	359	01.9	+3	54.8
12	25	16.5	28	46.4	-3	05.4	14	02.6	+3	55.6
13	40	18.9	43	46.1		04.2	29	03.3		56.3
14	55	21.4	58	45.7		03.1	44	04.0		57.1
15	70	23.9	73	45.4		01.9	59	04.7		57.9
16	85	26.3	88	45.1	-3	00.8	74	05.4		58.6
17	100	28.8	103	44.7	-2	59.6	89	06.1	+3	59.4
18	115	31.3	118	44.4	-2	58.5	104	06.7	+4	00.2
19	130	33.7	133	44.1		57.4	119	07.4		00.9
20	145	36.2	148	43.7		56.2	134	08.1		01.7
21	160	38.6	163	43.4		55.1	149	08.8		02.5
22	175	41.1	178	43.1		53.9	164	09.5		03.2
23	190	43.6	193	42.7		52.8	179	10.2		04.0
24	205	46.0	208	42.4	-2	51.6	194	10.9	+4	04.8
Dif	—		-3 +11		+7 +8		+19 +2		+26 +1	

UT	SOL			☉ LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15'9 PMG: 11 ^h 59 ^m 4			Edad: 14 ^d 4 PHE { 4 ^h : 61'1 12 ^h : 61'0 20 ^h : 60'8 R°: ** ^m												
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°	
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m
0	180	07.0	+10 37.7	3	16.7	-14 06.0		60 N	19 25	20 12	21 17	20 54	97	4 05	19	
1	195	07.1	38.6	17	42.2	18.3	123	58	18	20 02	21 00	42	92	14	23	
2	210	07.3	39.5	32	07.6	30.5	122	56	12	19 53	20 46	31	89	22	26	
3	225	07.4	40.3	46	33.0	42.6	121	54	07	45	34	21	86	29	29	
4	240	07.5	41.2	60	58.4	54.6	120	52	19 02	39	24	13	84	36	32	
5	255	07.7	+10 42.1	75	23.7	06.4	118	50	18 58	19 33	20 15	20 05	82	4 42	34	
6	270	07.8	+10 43.0	89	48.9	18.2	118	45	18 49	19 20	19 57	19 49	78	4 55	38	
7	285	08.0	43.8	104	14.1	29.9	117	40	41	09	43	36	74	5 05	42	
8	300	08.1	44.7	118	39.2	41.4	115	35	35	19 01	32	25	72	14	45	
9	315	08.3	45.6	133	04.3	52.9	115	30	29	18 54	23	19 15	70	22	48	
10	330	08.4	46.5	147	29.3	04.2	113	20	19	42	19 08	18 59	65	36	52	
11	345	08.5	+10 47.3	161	54.3	15.4	112	10 N	18 11	18 32	18 57	18 44	63	5 49	55	
12	0	08.7	+10 48.2	176	19.2	26.6	112	0	18 03	18 24	18 48	18 31	60	6 00	59	
13	15	08.8	49.1	190	44.1	37.5	109	10 S	17 55	16	41	17	57	12	62	
14	30	09.0	50.0	205	08.9	48.4	109	20	47	09	35	18 03	54	24	66	
15	45	09.1	50.8	219	33.7	59.2	108	30	38	18 02	30	17 47	50	38	70	
16	60	09.2	51.7	233	58.4	09.8	106	35	33	17 58	28	38	48	46	73	
17	75	09.4	+10 52.6	248	23.1	20.3	105	40	17 27	17 54	18 26	17 27	46	6 56	76	
18	90	09.5	+10 53.4	262	47.7	30.7	104	45	17 20	17 50	18 24	17 15	42	7 07	79	
19	105	09.7	54.3	277	12.3	40.9	102	50	12	45	22	17 00	38	20	84	
20	120	09.8	55.2	291	36.8	51.0	101	52	08	43	22	16 53	36	26	87	
21	135	09.9	56.1	306	01.3	01.0	100	54	17 04	40	21	46	33	33	89	
22	150	10.1	56.9	320	25.8	10.9	99	56	16 59	38	21	37	31	41	92	
23	165	10.2	57.8	334	50.2	20.6	97	58	54	35	20	28	27	7 50	95	
24	180	10.4	+10 58.7	349	14.5	30.2	96	60 S	16 49	17 32	18 20	16 17	23	8 00	100	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 10 ^h 15 ^m 2		Mag: -3.9 PMG: 10 ^h 05 ^m		Mag: +1.2 PMG: 11 ^h 03 ^m		Mag: -2.1 PMG: 11 ^h 28 ^m		Mag: +0.4 PMG: 23 ^h 04 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	205	46.0	208	42.4	-2	51.6	194	10.9	+4	04.8	187	38.0	+6	31.2	12	55.2	-2	32.7
1	220	48.5	223	42.1		50.5	209	11.6		05.5	202	39.9		31.4	27	57.8		32.6
2	235	51.0	238	41.7		49.3	224	12.3		06.3	217	41.8		31.7	43	00.5		32.5
3	250	53.4	253	41.4		48.2	239	13.0		07.1	232	43.7		31.9	58	03.1		32.4
4	265	55.9	268	41.1		47.1	254	13.7		07.8	247	45.6		32.1	73	05.7		32.4
5	280	58.4	283	40.7	-2	45.9	269	14.4	+4	08.6	262	47.5	+6	32.3	88	08.4	-2	32.3
6	296	00.8	298	40.4	-2	44.8	284	15.1	+4	09.4	277	49.4	+6	32.6	103	11.0	-2	32.2
7	311	03.3	313	40.1		43.6	299	15.8		10.1	292	51.3		32.8	118	13.6		32.2
8	326	05.7	328	39.7		42.5	314	16.5		10.9	307	53.2		33.0	133	16.3		32.1
9	341	08.2	343	39.4		41.3	329	17.2		11.7	322	55.1		33.2	148	18.9		32.0
10	356	10.7	358	39.1		40.2	344	17.8		12.4	337	57.0		33.5	163	21.5		32.0
11	11	13.1	13	38.7	-2	39.0	359	18.5	+4	13.2	352	58.9	+6	33.7	178	24.2	-2	31.9
12	26	15.6	28	38.4	-2	37.9	14	19.2	+4	14.0	8	00.8	+6	33.9	193	26.8	-2	31.8
13	41	18.1	43	38.1		36.7	29	19.9		14.7	23	02.7		34.1	208	29.4		31.8
14	56	20.5	58	37.7		35.6	44	20.6		15.5	38	04.6		34.4	223	32.1		31.7
15	71	23.0	73	37.4		34.4	59	21.3		16.3	53	06.6		34.6	238	34.7		31.6
16	86	25.5	88	37.1		33.3	74	22.0		17.0	68	08.5		34.8	253	37.3		31.5
17	101	27.9	103	36.7	-2	32.1	89	22.7	+4	17.8	83	10.4	+6	35.0	268	40.0	-2	31.5
18	116	30.4	118	36.4	-2	31.0	104	23.4	+4	18.6	98	12.3	+6	35.3	283	42.6	-2	31.4
19	131	32.9	133	36.1		29.8	119	24.1		19.3	113	14.2		35.5	298	45.2		31.3
20	146	35.3	148	35.7		28.7	134	24.8		20.1	128	16.1		35.7	313	47.9		31.3
21	161	37.8	163	35.4		27.5	149	25.5		20.9	143	18.0		36.0	328	50.5		31.2
22	176	40.2	178	35.1		26.4	164	26.2		21.6	158	19.9		36.2	343	53.1		31.1
23	191	42.7	193	34.7		25.2	179	26.9		22.4	173	21.8		36.4	358	55.8		31.1
24	206	45.2	208	34.4	-2	24.1	194	27.6	+4	23.2	188	23.7	+6	36.6	13	58.4	-2	31.0
Dif	—		-3 +11		+7 +8		+19 +2		+26 +1									

UT	SOL				LUNA							Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna							
	SD: 15 ^h 9 PMG: 11 ^h 59 ^m 2				Edad: 15 ^d 4 PHE { 4 ^h : 60 ^h /7 12 ^h : 60 ^h /4 20 ^h : 60 ^h /2 SD: 16 ^h 5 PMG: 0 ^h 45 ^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	180	10.4	+10	58.7	349	14.5		-18	30.2	94	60 N	2	41	3	46	4	33	22	31	82	4	24	28		
1	195	10.5	+10	59.5	3	38.9	54		39.6	94	58	2	58	3	56		40		14	79		37	32		
2	210	10.6	+11	00.4	18	03.1	52		49.0	94	56	3	12	4	05		46	22	00	77		48	36		
3	225	10.8		01.3	32	27.4	53	-18	58.1	91	54		23		12		51	21	47	76	4	58	39		
4	240	10.9		02.1	46	51.6	52	-19	07.2	91	52		34		19		4	56		37	73	5	08	40	
5	255	11.1	+11	03.0	61	15.7	51	-19	16.1	89	50		3	43	4	25	5	00	21	27	73	5	16	42	
6	270	11.2	+11	03.9	75	39.9	52	-19	24.9	88	45		4	01	4	38	5	09	21	07	70	5	33	46	
7	285	11.3		04.7	90	04.0	51		33.5	86	40			15		49	17	20	50	69		47	49		
8	300	11.5		05.6	104	28.0	50		42.0	85	35			26	4	57	24		37	67	5	59	51		
9	315	11.6		06.5	118	52.1	51		50.3	83	30			36	5	05	29		25	66	6	10	52		
10	330	11.7		07.3	133	16.0	49	-19	58.5	82	20		4	50		17	39	20	04	64		28	56		
11	345	11.9	+11	08.2	147	40.0	50	-20	06.5	80	10 N		5	01	5	26	5	48	19	47	62	6	44	58	
12	0	12.0	+11	09.1	162	03.9	49	-20	14.4	79	0		5	10	5	35	5	56	19	31	60	6	59	60	
13	15	12.2		09.9	176	27.9	50		22.2	78	10 S			18		42	6	04	19	14	59	7	14	63	
14	30	12.3		10.8	190	51.7	48		29.8	76	20			24		50	12	18	57	57		30	65		
15	45	12.4		11.7	205	15.6	49		37.2	74	30			29	5	57	21		37	55		48	69		
16	60	12.6		12.5	219	39.4	48		44.5	73	35			31	6	01	27		26	53	7	59	70		
17	75	12.7	+11	13.4	234	03.2	48	-20	51.7	72	40			5	33	6	05	6	33	18	13	51	8	12	72
18	90	12.8	+11	14.2	248	27.0	48	-20	58.7	70	45			5	35	6	10	6	40	17	57	50	8	26	75
19	105	13.0		15.1	262	50.8	48	-21	05.5	68	50			37		15	48		38	47		44	78		
20	120	13.1		16.0	277	14.5	47		12.2	67	52			38		17	52		29	46	8	53	79		
21	135	13.2		16.8	291	38.3	48		18.7	65	54			38		19	6	56		19	44	9	02	82	
22	150	13.4		17.7	306	02.0	47		25.1	64	56			39		22	7	00	17	08	42		13	84	
23	165	13.5		18.6	320	25.7	47		31.3	62	58			39		25	06		16	55	39		25	87	
24	180	13.6	+11	19.4	334	49.4	47	-21	37.4	61	60 S			5	40	6	28	7	11	16	40	36	9	40	90

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 10 ^h 11 ^m 3		Mag: -3.9 PMG: 10 ^h 06 ^m		Mag: +1.2 PMG: 11 ^h 02 ^m		Mag: -2.1 PMG: 11 ^h 25 ^m		Mag: +0.5 PMG: 23 ^h 00 ^m									
	hG ♂		hG ♀		hG ♂		hG ♀		hG ♀									
h	°	'	°	'	°	'	°	'	°	'								
0	206	45.2	208	34.4	-2	24.1	194	27.6	+4	23.2	188	23.7	+6	36.6	13	58.4	-2	31.0
1	221	47.6	223	34.1		22.9	209	28.2		23.9	203	25.6		36.9	29	01.0		30.9
2	236	50.1	238	33.7		21.8	224	28.9		24.7	218	27.5		37.1	44	03.7		30.9
3	251	52.6	253	33.4		20.6	239	29.6		25.4	233	29.4		37.3	59	06.3		30.8
4	266	55.0	268	33.1		19.5	254	30.3		26.2	248	31.3		37.5	74	08.9		30.7
5	281	57.5	283	32.7	-2	18.3	269	31.0	+4	27.0	263	33.2	+6	37.8	89	11.6	-2	30.7
6	297	00.0	298	32.4	-2	17.2	284	31.7	+4	27.7	278	35.1	+6	38.0	104	14.2	-2	30.6
7	312	02.4	313	32.1		16.0	299	32.4		28.5	293	37.0		38.2	119	16.8		30.5
8	327	04.9	328	31.7		14.9	314	33.1		29.3	308	38.9		38.4	134	19.5		30.5
9	342	07.4	343	31.4		13.7	329	33.8		30.0	323	40.8		38.7	149	22.1		30.4
10	357	09.8	358	31.1		12.6	344	34.5		30.8	338	42.7		38.9	164	24.7		30.3
11	12	12.3	13	30.7	-2	11.4	359	35.2	+4	31.6	353	44.6	+6	39.1	179	27.4	-2	30.2
12	27	14.7	28	30.4	-2	10.3	14	35.9	+4	32.3	8	46.6	+6	39.3	194	30.0	-2	30.2
13	42	17.2	43	30.1		09.1	29	36.6		33.1	23	48.5		39.6	209	32.6		30.1
14	57	19.7	58	29.7		08.0	44	37.3		33.9	38	50.4		39.8	224	35.3		30.0
15	72	22.1	73	29.4		06.8	59	38.0		34.6	53	52.3		40.0	239	37.9		30.0
16	87	24.6	88	29.1		05.7	74	38.7		35.4	68	54.2		40.2	254	40.5		29.9
17	102	27.1	103	28.8	-2	04.5	89	39.3	+4	36.1	83	56.1	+6	40.5	269	43.2	-2	29.8
18	117	29.5	118	28.4	-2	03.4	104	40.0	+4	36.9	98	58.0	+6	40.7	284	45.8	-2	29.8
19	132	32.0	133	28.1		02.2	119	40.7		37.7	113	59.9		40.9	299	48.4		29.7
20	147	34.5	148	27.8	-2	01.1	134	41.4		38.4	129	01.8		41.1	314	51.1		29.6
21	162	36.9	163	27.4	-1	59.9	149	42.1		39.2	144	03.7		41.4	329	53.7		29.6
22	177	39.4	178	27.1		58.8	164	42.8		40.0	159	05.6		41.6	344	56.3		29.5
23	192	41.9	193	26.8		57.6	179	43.5		40.7	174	07.5		41.8	359	59.0		29.4
24	207	44.3	208	26.4	-1	56.4	194	44.2	+4	41.5	189	09.4	+6	42.1	15	01.6	-2	29.4
Dif	—		-3		+12		+7		+8		+19		+2		+26		+1	

UT	SOL			☉ LUNA					Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15'9 PMG: 11 ^h 59 ^m 0			Edad: 16 ^d 4 PHE { 4 ^h : 60'0 12 ^h : 59'7 20 ^h : 59'4 SD: 16'4 PMG: 1 ^h 45 ^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	180	13.6	+11	19.4	334	49.4	-21	37.4	60 N	19 30	20 18	21 24	23 53	60	4 52	44
1	195	13.8		20.3	349	13.1	47	43.3	58	22	20 07	21 06	33	60	5 09	47
2	210	13.9		21.1	3	36.8	47	49.1	56	16	19 58	20 52	17	60	24	48
3	225	14.0		22.0	18	00.4	46	-21 54.7	54	11	50	39	23 03	60	37	49
4	240	14.2		22.9	32	24.1	47	-22 00.1	54	06	42	29	22 50	61	48	51
5	255	14.3	+11	23.7	46	47.8	47	-22 05.4	53	50	19 01	19 36	20 19	22 40	60	5 58 51
6	270	14.4	+11	24.6	61	11.4	46	-22 10.5	51	45	18 51	19 22	20 00	22 17	60	6 19 53
7	285	14.6		25.4	75	35.1	47	15.4	49	40	43	12	19 46	21 59	60	36 54
8	300	14.7		26.3	89	58.8	47	20.2	48	35	36	19 03	34	44	60	6 50 56
9	315	14.8		27.2	104	22.4	46	24.9	47	30	30	18 55	24	31	60	7 02 57
10	330	15.0		28.0	118	46.1	47	29.4	45	20	20	42	19 09	21 08	60	24 58
11	345	15.1	+11	28.9	133	09.8	47	-22 33.7	43	10 N	18 11	18 32	18 57	20 49	60	7 42 59
12	0	15.2	+11	29.7	147	33.5	47	-22 37.8	41	0	18 02	18 23	18 48	20 31	59	7 59 61
13	15	15.4		30.6	161	57.2	47	41.8	40	10 S	17 54	15	40	20 13	59	8 17 61
14	30	15.5		31.4	176	20.9	47	45.7	39	20	45	08	34	19 54	59	35 62
15	45	15.6		32.3	190	44.6	47	49.3	36	30	36	18 00	28	32	58	8 57 63
16	60	15.8		33.2	205	08.3	47	52.9	36	35	30	17 56	25	19	58	9 09 64
17	75	15.9	+11	34.0	219	32.1	48	-22 56.2	33	40	17 24	17 51	18 23	19 04	58	9 24 64
18	90	16.0	+11	34.9	233	55.9	48	-22 59.4	32	45	17 17	17 47	18 21	18 47	57	9 41 66
19	105	16.2		35.7	248	19.7	48	-23 02.4	30	50	08	41	19	25	56	10 02 67
20	120	16.3		36.6	262	43.5	48	05.3	29	52	04	39	18	15	56	12 68
21	135	16.4		37.4	277	07.3	48	08.0	27	54	17 00	36	17	18 03	55	24 68
22	150	16.6		38.3	291	31.2	49	10.6	26	56	16 55	33	16	17 50	55	37 69
23	165	16.7		39.1	305	55.1	49	13.0	24	58	49	30	16	34	54	10 52 70
24	180	16.8	+11	40.0	320	19.0	49	-23 15.2	22	60 S	16 43	17 26	18 15	17 16	53	11 10 72

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 10 ^h 07 ^m 4		Mag: -3.9 PMG: 10 ^h 06 ^m		Mag: +1.2 PMG: 11 ^h 01 ^m		Mag: -2.1 PMG: 11 ^h 22 ^m		Mag: +0.5 PMG: 22 ^h 56 ^m									
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	207	44.3	208	26.4	-1	56.4	194	44.2	+4	41.5	189	09.4	+6	42.1	15	01.6	-2	29.4
1	222	46.8	223	26.1		55.3	209	44.9		42.2	204	11.3		42.3	30	04.2		29.3
2	237	49.2	238	25.8		54.1	224	45.6		43.0	219	13.2		42.5	45	06.9		29.2
3	252	51.7	253	25.4		53.0	239	46.3		43.8	234	15.1		42.7	60	09.5		29.2
4	267	54.2	268	25.1		51.8	254	47.0		44.5	249	17.0		43.0	75	12.1		29.1
5	282	56.6	283	24.8	-1	50.7	269	47.7	+4	45.3	264	18.9	+6	43.2	90	14.8	-2	29.0
6	297	59.1	298	24.5	-1	49.5	284	48.4	+4	46.1	279	20.8	+6	43.4	105	17.4	-2	29.0
7	313	01.6	313	24.1		48.4	299	49.1		46.8	294	22.7		43.6	120	20.0		28.9
8	328	04.0	328	23.8		47.2	314	49.7		47.6	309	24.7		43.9	135	22.7		28.8
9	343	06.5	343	23.5		46.1	329	50.4		48.3	324	26.6		44.1	150	25.3		28.8
10	358	09.0	358	23.1		44.9	344	51.1		49.1	339	28.5		44.3	165	27.9		28.7
11	13	11.4	13	22.8	-1	43.7	359	51.8	+4	49.9	354	30.4	+6	44.5	180	30.6	-2	28.6
12	28	13.9	28	22.5	-1	42.6	14	52.5	+4	50.6	9	32.3	+6	44.8	195	33.2	-2	28.6
13	43	16.3	43	22.1		41.4	29	53.2		51.4	24	34.2		45.0	210	35.8		28.5
14	58	18.8	58	21.8		40.3	44	53.9		52.1	39	36.1		45.2	225	38.5		28.4
15	73	21.3	73	21.5		39.1	59	54.6		52.9	54	38.0		45.4	240	41.1		28.4
16	88	23.7	88	21.2		38.0	74	55.3		53.7	69	39.9		45.7	255	43.7		28.3
17	103	26.2	103	20.8	-1	36.8	89	56.0	+4	54.4	84	41.8	+6	45.9	270	46.3	-2	28.2
18	118	28.7	118	20.5	-1	35.7	104	56.7	+4	55.2	99	43.7	+6	46.1	285	49.0	-2	28.2
19	133	31.1	133	20.2		34.5	119	57.4		56.0	114	45.6		46.3	300	51.6		28.1
20	148	33.6	148	19.8		33.3	134	58.1		56.7	129	47.5		46.6	315	54.2		28.0
21	163	36.1	163	19.5		32.2	149	58.8		57.5	144	49.4		46.8	330	56.9		28.0
22	178	38.5	178	19.2		31.0	164	59.5		58.2	159	51.3		47.0	345	59.5		27.9
23	193	41.0	193	18.8		29.9	180	00.1		59.0	174	53.2		47.2	1	02.1		27.8
24	208	43.5	208	18.5	-1	28.7	195	00.8	+4	59.8	189	55.1	+6	47.5	16	04.8	-2	27.8
Dif	—		-3		+12		+7		+8		+19		+2		+26		+1	

UT	SOL				LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15 ^h 9 PMG: 11 ^h 58 ^m 8				Edad: 17 ^d 4 PHE { 4 ^h : 59 ^h 1 12 ^h : 58 ^h 8 20 ^h : 58 ^h 4 PMG: 2 ^h 45 ^m R°: 59 ^m														
	hG ☉ Dec				hG ☾ Dif Dec Dif							Náutico	Civil		Hora	R°	Hora	R°	
h	o	'	o	'	o	'	o	'	o	'	o	h	m	h	m	h	m	m	
0	180	16.8	+11	40.0	320	19.0	-23	15.2	21	60 N	2	33	3	39	4	27	**	**	**
1	195	17.0		40.9	334	43.0		17.3	50	58	2	51		50	34	**	**	**	
2	210	17.1		41.7	349	07.0		19.2	19	56	3	05	3	59	41	**	**	**	
3	225	17.2		42.6	3	31.0		20.9	17	54		18	4	07	46	**	**	**	
4	240	17.3		43.4	17	55.1		22.5	16	52		28		15	51	23	51	46	
5	255	17.5	+11	44.3	32	19.2	-23	23.9	14	50	3	38	4	21	4	56	23	40	
6	270	17.6	+11	45.1	46	43.3	-23	25.2	13	45	3	57	4	35	5	06	23	17	
7	285	17.7		46.0	61	07.5		26.3	11	40	4	12		46	14	22	59	51	
8	300	17.9		46.8	75	31.8		27.3	10	35		23	4	55	21	44	52		
9	315	18.0		47.7	89	56.0		28.1	8	30		33	5	03	27	31	52		
10	330	18.1		48.5	104	20.4		28.7	6	20	4	49		15	38	22	08	54	
11	345	18.2	+11	49.4	118	44.7	-23	29.2	5	10 N	5	00	5	25	5	47	21	49	
12	0	18.4	+11	50.2	133	09.2	-23	29.6	4	0	5	10	5	34	5	55	21	30	
13	15	18.5		51.1	147	33.6		29.8	2	10 S		18		42	6	04	21	12	
14	30	18.6		51.9	161	58.2		29.8	0	20		24		50	13	20	53	58	
15	45	18.8		52.8	176	22.7		29.7	1	30		30	5	58	22	30	60		
16	60	18.9		53.6	190	47.4		29.4	3	35		33	6	02	28	17	61		
17	75	19.0	+11	54.5	205	12.1	-23	29.0	4	40	5	35	6	07	6	35	20	02	
18	90	19.1	+11	55.3	219	36.8	-23	28.4	6	45	5	38	6	12	6	42	19	44	
19	105	19.3		56.2	234	01.6		27.7	7	50		40		18	51	21	65		
20	120	19.4		57.0	248	26.5		26.8	9	52		41		20	55	19	11		
21	135	19.5		57.8	262	51.5		25.8	10	54		42		23	6	59	18	58	
22	150	19.6		58.7	277	16.5		24.6	12	56		42		26	7	04	45	66	
23	165	19.8	+11	59.5	291	41.5		23.3	13	58		43		29	10	28	68		
24	180	19.9	+12	00.4	306	06.7	-23	21.8	15	60 S	5	44	6	33	7	16	18	09	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 10 ^h 03 ^m 5		Mag: -3.9 PMG: 10 ^h 07 ^m		Mag: +1.2 PMG: 10 ^h 59 ^m		Mag: -2.1 PMG: 11 ^h 19 ^m		Mag: +0.5 PMG: 22 ^h 52 ^m	
	hG ♈		hG ♀ Dec		hG ♂ Dec		hG ♃ Dec		hG ♄ Dec	
h	o	'	o	'	o	'	o	'	o	'
0	208	43.5	208	18.5	195	00.8	189	55.1	16	04.8
1	223	45.9	223	18.2	210	01.5	204	57.0	31	07.4
2	238	48.4	238	17.9	225	02.2	219	58.9	46	10.0
3	253	50.8	253	17.5	240	02.9	235	00.9	61	12.7
4	268	53.3	268	17.2	255	03.6	250	02.8	76	15.3
5	283	55.8	283	16.9	270	04.3	265	04.7	91	17.9
6	298	58.2	298	16.5	285	05.0	280	06.6	106	20.5
7	314	00.7	313	16.2	300	05.7	295	08.5	121	23.2
8	329	03.2	328	15.9	315	06.4	310	10.4	136	25.8
9	344	05.6	343	15.6	330	07.1	325	12.3	151	28.4
10	359	08.1	358	15.2	345	07.8	340	14.2	166	31.1
11	14	10.6	13	14.9	0	08.5	355	16.1	181	33.7
12	29	13.0	28	14.6	15	09.2	10	18.0	196	36.3
13	44	15.5	43	14.2	30	09.9	25	19.9	211	39.0
14	59	18.0	58	13.9	45	10.5	40	21.8	226	41.6
15	74	20.4	73	13.6	60	11.2	55	23.7	241	44.2
16	89	22.9	88	13.3	75	11.9	70	25.6	256	46.8
17	104	25.3	103	12.9	90	12.6	85	27.5	271	49.5
18	119	27.8	118	12.6	105	13.3	100	29.4	286	52.1
19	134	30.3	133	12.3	120	14.0	115	31.3	301	54.7
20	149	32.7	148	11.9	135	14.7	130	33.2	316	57.4
21	164	35.2	163	11.6	150	15.4	145	35.2	332	00.0
22	179	37.7	178	11.3	165	16.1	160	37.1	347	02.6
23	194	40.1	193	11.0	180	16.8	175	39.0	2	05.3
24	209	42.6	208	10.6	195	17.5	190	40.9	17	07.9
Dif	—		-3 +12		+7 +8		+19 +2		+26 +1	

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15°9			Edad: 18 ^d 4	PHE {	4 ^h : 58'1 12 ^h : 57'8 20 ^h : 57'5			Final del crepúsculo			Salida de Luna		Puesta de Luna	
	PMG: 11 ^h 58 ^m 6								R°: 56 ^m						
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	m	h m m	m
0	180	19	+12 00.4	306	06.7	-23 21.8	16	60 N	19 35	20 24	21 32	0 53 39	6 38 76		
1	195	20.0	01.2	320	31.9	20.2	16	58	27	12	21 13	33 42	6 58 73		
2	210	20.1	02.1	334	57.2	18.4	18	56	20	20 02	20 57	17 43	7 14 71		
3	225	20.3	02.9	349	22.5	16.5	19	54	14	19 54	44	0 03 45	28 69		
4	240	20.4	03.8	3	47.9	14.5	20	52	09	46	33	** ** *	40 68		
5	255	20.5	+12 04.6	18	13.4	-23 12.3	22	50	19 04	19 39	20 23	** ** *	7 50 68		
6	270	20.6	+12 05.4	32	39.0	-23 10.0	23	45	18 54	19 25	20 04	** ** *	8 13 64		
7	285	20.8	06.3	47	04.6	07.5	25	40	45	14	19 48	23 50 42	31 63		
8	300	20.9	07.1	61	30.4	04.9	26	35	38	19 04	36	36 44	46 61		
9	315	21.0	08.0	75	56.2	-23 02.2	27	30	31	18 56	26	23 46	8 59 60		
10	330	21.1	08.8	90	22.0	-22 59.3	29	20	20	43	19 10	23 02 49	9 21 58		
11	345	21.3	+12 09.7	104	48.0	-22 56.3	30	10 N	18 11	18 32	18 57	22 44 51	9 40 57		
12	0	21.4	+12 10.5	119	14.0	-22 53.1	32	0	18 02	18 23	18 48	22 27 53	9 58 55		
13	15	21.5	11.3	133	40.2	49.8	33	10 S	17 53	15	39	22 10 55	10 16 53		
14	30	21.6	12.2	148	06.4	46.4	34	20	44	18 06	32	21 51 58	35 51		
15	45	21.7	13.0	162	32.6	42.9	35	30	34	17 58	26	30 60	10 57 49		
16	60	21.9	13.9	176	59.0	39.2	37	35	28	54	23	18 61	11 09 48		
17	75	22.0	+12 14.7	191	25.5	-22 35.4	38	40	17 21	17 49	18 20	21 04 63	11 24 46		
18	90	22.1	+12 15.5	205	52.0	-22 31.5	39	45	17 13	17 43	18 18	20 47 65	11 41 45		
19	105	22.2	16.4	220	18.6	27.4	41	50	04	37	15	26 68	12 03 42		
20	120	22.4	17.2	234	45.4	23.2	42	52	17 00	35	14	16 69	13 41		
21	135	22.5	18.1	249	12.2	18.9	43	54	16 55	32	13	20 04 72	25 39		
22	150	22.6	18.9	263	39.1	14.5	44	56	50	29	12	19 51 74	38 37		
23	165	22.7	19.7	278	06.0	09.9	46	58	44	25	11	36 77	12 53 35		
24	180	22.8	+12 20.6	292	33.1	-22 05.3	46	60 S	16 38	17 21	18 10	19 18 80	13 11 32		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 9 ^h 59 ^m 5		Mag: -3.9 PMG: 10 ^h 08 ^m		Mag: +1.2 PMG: 10 ^h 58 ^m		Mag: -2.1 PMG: 11 ^h 16 ^m		Mag: +0.5 PMG: 22 ^h 47 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	209	42.6	208 10.6	-1 00.9	195 17.5	+5 18.0	190 40.9	+6 52.8	17 07.9	-2 26.2
1	224	45.1	223 10.3	-0 59.8	210 18.2	18.7	205 42.8	53.1	32 10.5	26.1
2	239	47.5	238 10.0	58.6	225 18.9	19.5	220 44.7	53.3	47 13.1	26.0
3	254	50.0	253 09.6	57.4	240 19.6	20.2	235 46.6	53.5	62 15.8	26.0
4	269	52.5	268 09.3	56.3	255 20.2	21.0	250 48.5	53.7	77 18.4	25.9
5	284	54.9	283 09.0	-0 55.1	270 20.9	+5 21.7	265 50.4	+6 54.0	92 21.0	-2 25.8
6	299	57.4	298 08.7	-0 53.9	285 21.6	+5 22.5	280 52.3	+6 54.2	107 23.7	-2 25.8
7	314	59.8	313 08.3	52.8	300 22.3	23.3	295 54.2	54.4	122 26.3	25.7
8	330	02.3	328 08.0	51.6	315 23.0	24.0	310 56.1	54.6	137 28.9	25.6
9	345	04.8	343 07.7	50.5	330 23.7	24.8	325 58.0	54.9	152 31.5	25.6
10	0	07.2	358 07.3	49.3	345 24.4	25.5	340 59.9	55.1	167 34.2	25.5
11	15	09.7	13 07.0	-0 48.1	0 25.1	+5 26.3	356 01.8	+6 55.3	182 36.8	-2 25.4
12	30	12.2	28 06.7	-0 47.0	15 25.8	+5 27.0	11 03.7	+6 55.5	197 39.4	-2 25.4
13	45	14.6	43 06.4	45.8	30 26.5	27.8	26 05.6	55.8	212 42.1	25.3
14	60	17.1	58 06.0	44.7	45 27.2	28.5	41 07.6	56.0	227 44.7	25.2
15	75	19.6	73 05.7	43.5	60 27.9	29.3	56 09.5	56.2	242 47.3	25.2
16	90	22.0	88 05.4	42.3	75 28.6	30.1	71 11.4	56.4	257 49.9	25.1
17	105	24.5	103 05.0	-0 41.2	90 29.3	+5 30.8	86 13.3	+6 56.7	272 52.6	-2 25.0
18	120	26.9	118 04.7	-0 40.0	105 30.0	+5 31.6	101 15.2	+6 56.9	287 55.2	-2 25.0
19	135	29.4	133 04.4	38.9	120 30.6	32.3	116 17.1	57.1	302 57.8	24.9
20	150	31.9	148 04.1	37.7	135 31.3	33.1	131 19.0	57.3	318 00.5	24.9
21	165	34.3	163 03.7	36.5	150 32.0	33.8	146 20.9	57.5	333 03.1	24.8
22	180	36.8	178 03.4	35.4	165 32.7	34.6	161 22.8	57.8	348 05.7	24.7
23	195	39.3	193 03.1	34.2	180 33.4	35.3	176 24.7	58.0	3 08.3	24.7
24	210	41.7	208 02.8	-0 33.0	195 34.1	+5 36.1	191 26.6	+6 58.2	18 11.0	-2 24.6
Dif	—		-3 +12		+7 +8		+19 +2		+26 +1	

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 15 ^h 9 PMG: 11 ^h 58 ^m 4			Edad: 19 ^d 4 PHE { 4 ^h : 57/2 12 ^h : 56/9 20 ^h : 56/6 SD: 15 ^h 6 PMG: 4 ^h 40 ^m R°: 52 ^m																
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico		Civil	Hora		R°	Hora	R°					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	180	22.8	+12	20.6	292	33.1	-22	05.3	60 N	2 24	3 33	4 21	1 32	24	7 54	83				
1	195	23.0		21.4	307	00.3	82	-22	00.5	58	43	44	29	15	28	8 11	79			
2	210	23.1		22.2	321	27.5	82	-21	55.5	50	56	2 59	3 54	36	1 00	31	25	76		
3	225	23.2		23.1	335	54.8	83		50.5	50	54	3 12	4 02	42	0 48	33	37	74		
4	240	23.3		23.9	350	22.3	85		45.4	51	52	23	10	47	37	35	48	71		
5	255	23.4	+12	24.8	4	49.8	85	-21	40.1	53	50	3 33	4 17	4 52	0 27	37	8 58	69		
6	270	23.6	+12	25.6	19	17.4	86	-21	34.7	54	45	3 53	4 31	5 03	0 07	39	9 17	66		
7	285	23.7		26.4	33	45.1	87		29.2	55	40	4 08	43	11	**	**	*	34	63	
8	300	23.8		27.3	48	12.9	88		23.6	56	35	21	4 52	19	**	**	*	47	61	
9	315	23.9		28.1	62	40.8	89		17.9	57	30	31	5 00	25	**	**	*	9 59	59	
10	330	24.0		28.9	77	08.8	90		12.1	58	20	47	14	36	23	51	43	10 19	56	
11	345	24.2	+12	29.8	91	36.9	91	-21	06.1	60	10 N	4 59	5 25	5 46	23	35	46	10 37	53	
12	0	24.3	+12	30.6	106	05.0	91	-21	00.1	60	0	5 09	5 34	5 55	23	20	49	10 53	51	
13	15	24.4		31.4	120	33.3	93	-20	54.0	61	10 S	18	42	6 04	23	05	51	11 09	48	
14	30	24.5		32.3	135	01.7	94		47.7	63	20	25	51	13	22	49	54	26	46	
15	45	24.6		33.1	149	30.1	94		41.3	64	30	31	5 59	24	30	58		46	42	
16	60	24.7		33.9	163	58.7	96		34.9	64	35	34	6 04	30	19	61		11 57	41	
17	75	24.9	+12	34.8	178	27.3	96	-20	28.3	66	40	5 37	6 09	6 37	22	07	62	12 10	39	
18	90	25.0	+12	35.6	192	56.0	97	-20	21.7	66	45	5 40	6 14	6 44	21	52	66	12 26	36	
19	105	25.1		36.4	207	24.9	99		14.9	68	50	43	21	54	34	69		45	32	
20	120	25.2		37.2	221	53.8	99		08.1	68	52	44	23	6 58	25	72		12 54	30	
21	135	25.3		38.1	236	22.8	100	-20	01.1	70	54	45	26	7 03	16	73		13 04	28	
22	150	25.4		38.9	250	51.9	101	-19	54.1	70	56	46	30	08	21	05	76		15	26
23	165	25.6		39.7	265	21.1	102		46.9	72	58	47	33	14	20	53	78	28	23	
24	180	25.7	+12	40.6	279	50.4	103	-19	39.7	72	60 S	5 48	6 37	7 21	20	38	82	13 43	20	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG 9 ^h 55 ^m 6		Mag: -3.9 PMG: 10 ^h 08 ^m		Mag: +1.2 PMG: 10 ^h 57 ^m		Mag: -2.1 PMG: 11 ^h 13 ^m		Mag: +0.5 PMG: 22 ^h 43 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	210	41.7	208	02.8	-0	33.0	195	34.1	+5	36.1	191	26.6	+6	58.2	18	11.0	-2	24.6
1	225	44.2	223	02.4		31.9	210	34.8		36.9	206	28.5		58.4	33	13.6		24.5
2	240	46.7	238	02.1		30.7	225	35.5		37.6	221	30.4		58.7	48	16.2		24.5
3	255	49.1	253	01.8		29.6	240	36.2		38.4	236	32.3		58.9	63	18.9		24.4
4	270	51.6	268	01.4		28.4	255	36.9		39.1	251	34.2		59.1	78	21.5		24.3
5	285	54.1	283	01.1	-0	27.2	270	37.6	+5	39.9	266	36.1	+6	59.3	93	24.1	-2	24.3
6	300	56.5	298	00.8	-0	26.1	285	38.3	+5	40.6	281	38.1	+6	59.6	108	26.7	-2	24.2
7	315	59.0	313	00.5		24.9	300	39.0		41.4	296	40.0	+6	59.8	123	29.4		24.1
8	331	01.4	328	00.1		23.7	315	39.6		42.1	311	41.9	+7	00.0	138	32.0		24.1
9	346	03.9	342	59.8		22.6	330	40.3		42.9	326	43.8	+7	00.2	153	34.6		24.0
10	1	06.4	357	59.5		21.4	345	41.0		43.6	341	45.7		00.5	168	37.2		23.9
11	16	08.8	12	59.1	-0	20.3	0	41.7	+5	44.4	356	47.6	+7	00.7	183	39.9	-2	23.9
12	31	11.3	27	58.8	-0	19.1	15	42.4	+5	45.1	11	49.5	+7	00.9	198	42.5	-2	23.8
13	46	13.8	42	58.5		17.9	30	43.1		45.9	26	51.4		01.1	213	45.1		23.7
14	61	16.2	57	58.2		16.8	45	43.8		46.6	41	53.3		01.3	228	47.8		23.7
15	76	18.7	72	57.8		15.6	60	44.5		47.4	56	55.2		01.6	243	50.4		23.6
16	91	21.2	87	57.5		14.4	75	45.2		48.2	71	57.1		01.8	258	53.0		23.6
17	106	23.6	102	57.2	-0	13.3	90	45.9	+5	48.9	86	59.0	+7	02.0	273	55.6	-2	23.5
18	121	26.1	117	56.9	-0	12.1	105	46.6	+5	49.7	102	00.9	+7	02.2	288	58.3	-2	23.4
19	136	28.6	132	56.5		10.9	120	47.3		50.4	117	02.8		02.5	304	00.9		23.4
20	151	31.0	147	56.2		09.8	135	48.0		51.2	132	04.7		02.7	319	03.5		23.3
21	166	33.5	162	55.9		08.6	150	48.7		51.9	147	06.7		02.9	334	06.1		23.2
22	181	35.9	177	55.5		07.5	165	49.3		52.7	162	08.6		03.1	349	08.8		23.2
23	196	38.4	192	55.2		06.3	180	50.0		53.4	177	10.5		03.4	4	11.4		23.1
24	211	40.9	207	54.9	-0	05.1	195	50.7	+5	54.2	192	12.4	+7	03.6	19	14.0	-2	23.0
Dif	—		-3		+12		+7		+8		+19		+2		+26		+	

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15°9 PMG: 11 ^h 58 ^m 2			Edad: 20 ^d 4 PHE { 4 ^h : 56/3 12 ^h : 56/0 20 ^h : 55/8 SD: 15°4 PMG: 5 ^h 32 ^m R°: 48 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	°	h m	h m	h m	h m m	h m m	h m m	h m m	
0	180	25.7	+12 40.6	279	50.4	-19 39.7	60 N	19 40	20 29	21 41	1 56 16	9 17 82			
1	195	25.8		294	19.8 ¹⁰⁴	32.4 ⁷³	58	31	17	20	43 19	30 78			
2	210	25.9		308	49.2 ¹⁰⁴	24.9 ⁷⁵	56	24	20 07	21 03	31 23	41 76			
3	225	26.0		323	18.8 ¹⁰⁶	17.4 ⁷⁵	54	18	19 58	20 49	21 25	51 73			
4	240	26.1		337	48.5 ¹⁰⁷	09.8 ⁷⁶	52	12	50	38	12 27	9 59 71			
5	255	26.2	+12 44.7	352	18.2 ¹⁰⁷	-19 02.2 ⁷⁶	50	19 07	19 43	20 27	1 04 28	10 07 69			
6	270	26.4	+12 45.5	6	48.1 ¹⁰⁹	-18 54.4 ⁷⁸	45	18 56	19 28	20 07	0 46 32	10 23 66			
7	285	26.5		21	18.0 ¹⁰⁹	46.5 ⁷⁹	40	47	16	19 51	32 35	37 62			
8	300	26.6		35	48.0 ¹¹⁰	38.6 ⁷⁹	35	39	19 06	38	20 37	48 60			
9	315	26.7		50	18.1 ¹¹¹	30.6 ⁸⁰	30	33	18 58	27	0 09 40	10 58 58			
10	330	26.8		64	48.3 ¹¹²	22.5 ⁸¹	20	21	44	19 11	** ** *	11 15 54			
11	345	26.9	+12 49.7	79	18.6 ¹¹³	-18 14.3 ⁸²	10 N	18 11	18 33	18 58	** ** *	11 30 50			
12	0	27.0	+12 50.5	93	49.0 ¹¹⁴	-18 06.0 ⁸³	0	18 02	18 23	18 47	** ** *	11 44 47			
13	15	27.2		108	19.5 ¹¹⁵	-17 57.7 ⁸³	10 S	17 52	14	39	23 56 49	11 57 45			
14	30	27.3		122	50.1 ¹¹⁶	49.3 ⁸⁴	20	43	18 05	31	43 52	12 12 41			
15	45	27.4		137	20.7 ¹¹⁶	40.8 ⁸⁵	30	32	17 56	24	28 56	28 38			
16	60	27.5		151	51.4 ¹¹⁷	32.2 ⁸⁶	35	25	51	21	20 58	38 35			
17	75	27.6	+12 54.6	166	22.3 ¹¹⁹	-17 23.6 ⁸⁷	40	17 18	17 46	18 18	23 09 62	12 49 32			
18	90	27.7	+12 55.4	180	53.2 ¹¹⁹	-17 14.9 ⁸⁷	45	17 10	17 40	18 15	22 58 64	13 02 29			
19	105	27.8		195	24.2 ¹²⁰	-17 06.1 ⁸⁸	50	17 00	34	12	43 69	17 26			
20	120	27.9		209	55.2 ¹²⁰	-16 57.2 ⁸⁹	52	16 56	31	10	37 70	24 24			
21	135	28.1		224	26.4 ¹²²	48.3 ⁸⁹	54	51	28	09	29 73	32 22			
22	150	28.2		238	57.7 ¹²³	39.3 ⁹⁰	56	45	24	08	21 75	41 20			
23	165	28.3	+12 59.5	253	29.0 ¹²³	30.2 ⁹¹	58	39	20	06	11 78	13 51 17			
24	180	28.4	+13 00.3	268	00.4 ¹²⁴	-16 21.1 ⁹¹	60 S	16 32	17 16	18 05	22 00 81	14 03 14			
UT	ARIES		VENUS		MARTE		JÚPITER			SATURNO					
	PMG: 9 ^h 51 ^m 7		Mag: -3.9 PMG: 10 ^h 09 ^m		Mag: +1.2 PMG: 10 ^h 56 ^m		Mag: -2.1 PMG: 11 ^h 10 ^m			Mag: +0.5 PMG: 22 ^h 39 ^m					
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec		hG ♄	Dec				
h	°	'	°	°	'	°	°	°	'	°	'	°	'		
0	211	40.9	207	54.9	-0 05.1	195	50.7	+5 54.2	192	12.4	+7 03.6	19	14.0		
1	226	43.3	222	54.6	04.0	210	51.4	54.9	207	14.3	03.8	34	16.6		
2	241	45.8	237	54.2	02.8	225	52.1	55.7	222	16.2	04.0	49	19.3		
3	256	48.3	252	53.9	01.6	240	52.8	56.4	237	18.1	04.2	64	21.9		
4	271	50.7	267	53.6	-0 00.5	255	53.5	57.2	252	20.0	04.5	79	24.5		
5	286	53.2	282	53.3	+0 00.7	270	54.2	+5 57.9	267	21.9	+7 04.7	94	27.1		
6	301	55.7	297	52.9	+0 01.9	285	54.9	+5 58.7	282	23.8	+7 04.9	109	29.8		
7	316	58.1	312	52.6	03.0	300	55.6	+5 59.4	297	25.7	05.1	124	32.4		
8	332	00.6	327	52.3	04.2	315	56.3	+6 00.2	312	27.6	05.4	139	35.0		
9	347	03.1	342	51.9	05.4	330	57.0	00.9	327	29.5	05.6	154	37.6		
10	2	05.5	357	51.6	06.5	345	57.7	01.7	342	31.4	05.8	169	40.3		
11	17	08.0	12	51.3	+0 07.7	0	58.3	+6 02.4	357	33.4	+7 06.0	184	42.9		
12	32	10.4	27	51.0	+0 08.9	15	59.0	+6 03.2	12	35.3	+7 06.2	199	45.5		
13	47	12.9	42	50.6	10.0	30	59.7	03.9	27	37.2	06.5	214	48.1		
14	62	15.4	57	50.3	11.2	46	00.4	04.7	42	39.1	06.7	229	50.8		
15	77	17.8	72	50.0	12.3	61	01.1	05.4	57	41.0	06.9	244	53.4		
16	92	20.3	87	49.7	13.5	76	01.8	06.2	72	42.9	07.1	259	56.0		
17	107	22.8	102	49.3	+0 14.7	91	02.5	+6 06.9	87	44.8	+7 07.4	274	58.6		
18	122	25.2	117	49.0	+0 15.8	106	03.2	+6 07.7	102	46.7	+7 07.6	290	01.3		
19	137	27.7	132	48.7	17.0	121	03.9	08.4	117	48.6	07.8	305	03.9		
20	152	30.2	147	48.3	18.2	136	04.6	09.2	132	50.5	08.0	320	06.5		
21	167	32.6	162	48.0	19.3	151	05.3	09.9	147	52.4	08.2	335	09.1		
22	182	35.1	177	47.7	20.5	166	06.0	10.7	162	54.3	08.5	350	11.8		
23	197	37.5	192	47.4	21.7	181	06.6	11.4	177	56.2	08.7	5	14.4		
24	212	40.0	207	47.0	+0 22.8	196	07.3	+6 12.2	192	58.1	+7 08.9	20	17.0		
Dif	—		-3 +12			+7 +7			+19 +2			+26 +1			

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15°9 PMG: 11 ^h 58 ^m 0			Edad: 21 ^d 4 PHE { SD: 15°2 PMG: 6 ^h 20 ^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	180	28.4	+13 00.3	268	00.4	-16 21.1		60 N	2 15	3 26	4 16	2 12	12	10 39 80
1	195	28.5		282	31.9 ¹²⁵	11.9 ⁹²		58	35	38	24	2 02	15	48 77
2	210	28.6	02.0	297	03.5 ¹²⁶	-16 02.6 ⁹³		56	2 52	49	31	1 54	16	10 57 74
3	225	28.7	02.8	311	35.1 ¹²⁶	-15 53.3 ⁹³		54	3 06	3 58	37	46	19	11 04 70
4	240	28.8	03.6	326	06.9 ¹²⁸	43.9 ⁹⁴		52	18	4 06	43	39	21	10 70
5	255	28.9	+13 04.4	340	38.7 ¹²⁸	-15 34.5 ⁹⁴		50	3 28	4 13	4 48	1 32	23	11 16 68
6	270	29.0	+13 05.3	355	10.6 ¹²⁹	-15 25.0 ⁹⁵		45	3 49	4 28	4 59	1 18	27	11 29 63
7	285	29.2	06.1	9	42.5 ¹²⁹	15.4 ⁹⁶		40	4 05	40	5 09	1 07	30	39 60
8	300	29.3	06.9	24	14.6 ¹³¹	-15 05.8 ⁹⁶		35	18	50	16	0 57	33	48 57
9	315	29.4	07.7	38	46.7 ¹³¹	-14 56.1 ⁹⁷		30	29	4 58	23	49	35	11 56 55
10	330	29.5	08.5	53	18.9 ¹³²	46.3 ⁹⁸		20	45	5 12	35	34	39	12 09 51
11	345	29.6	+13 09.3	67	51.2 ¹³³	-14 36.5 ⁹⁸		10 N	4 58	5 24	5 45	0 21	42	12 20 48
12	0	29.7	+13 10.2	82	23.5 ¹³³	-14 26.7 ⁹⁸		0	5 09	5 33	5 55	0 09	45	12 31 44
13	15	29.8	11.0	96	56.0 ¹³⁵	16.8 ⁹⁹		10 S	18	42	6 04	** ** *	**	42 40
14	30	29.9	11.8	111	28.4 ¹³⁴	-14 06.8 ¹⁰⁰		20	25	5 51	14	** ** *	**	12 53 37
15	45	30.0	12.6	126	01.0 ¹³⁶	-13 56.8 ¹⁰⁰		30	32	6 00	25	** ** *	**	13 06 33
16	60	30.1	13.4	140	33.6 ¹³⁶	46.7 ¹⁰¹		35	36	05	31	** ** *	**	13 31
17	75	30.2	+13 14.2	155	06.4 ¹³⁸	-13 36.6 ¹⁰¹		40	5 39	6 11	6 39	** ** *	**	13 21 29
18	90	30.3	+13 15.0	169	39.1 ¹³⁷	-13 26.5 ¹⁰¹		45	5 42	6 17	6 47	** ** *	**	13 31 25
19	105	30.4	15.9	184	12.0 ¹³⁹	16.2 ¹⁰³		50	45	23	6 57	23 52	66	43 21
20	120	30.6	16.7	198	44.9 ¹³⁹	-13 06.0 ¹⁰²		52	47	26	7 02	47	68	48 20
21	135	30.7	17.5	213	17.9 ¹⁴⁰	-12 55.7 ¹⁰³		54	48	30	07	42	70	13 54 18
22	150	30.8	18.3	227	50.9 ¹⁴⁰	45.3 ¹⁰⁴		56	50	33	12	36	73	14 01 15
23	165	30.9	19.1	242	24.0 ¹⁴¹	34.9 ¹⁰⁴		58	51	37	19	29	76	08 13
24	180	31.0	+13 19.9	256	57.2 ¹⁴²	-12 24.5 ¹⁰⁴		60 S	5 52	6 41	7 26	23 21	79	14 17 10

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 9 ^h 47 ^m 7		Mag: -3.9 PMG: 10 ^h 09 ^m		Mag: +1.2 PMG: 10 ^h 55 ^m		Mag: -2.1 PMG: 11 ^h 07 ^m		Mag: +0.5 PMG: 22 ^h 35 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	212	40.0	207 47.0	+0 22.8	196 07.3	+6 12.2	192 58.1	+7 08.9	20 17.0	-2 21.5
1	227	42.5	222 46.7	24.0	211 08.0	12.9	208 00.1	09.1	35 19.6	21.5
2	242	44.9	237 46.4	25.2	226 08.7	13.7	223 02.0	09.4	50 22.3	21.4
3	257	47.4	252 46.0	26.3	241 09.4	14.4	238 03.9	09.6	65 24.9	21.3
4	272	49.9	267 45.7	27.5	256 10.1	15.2	253 05.8	09.8	80 27.5	21.3
5	287	52.3	282 45.4	+0 28.7	271 10.8	+6 15.9	268 07.7	+7 10.0	95 30.1	-2 21.2
6	302	54.8	297 45.1	+0 29.8	286 11.5	+6 16.7	283 09.6	+7 10.2	110 32.8	-2 21.1
7	317	57.3	312 44.7	31.0	301 12.2	17.4	298 11.5	10.5	125 35.4	21.1
8	332	59.7	327 44.4	32.2	316 12.9	18.2	313 13.4	10.7	140 38.0	21.0
9	348	02.2	342 44.1	33.3	331 13.6	18.9	328 15.3	10.9	155 40.6	20.9
10	3	04.7	357 43.8	34.5	346 14.3	19.6	343 17.2	11.1	170 43.3	20.9
11	18	07.1	12 43.4	+0 35.7	1 14.9	+6 20.4	358 19.1	+7 11.4	185 45.9	-2 20.8
12	33	09.6	27 43.1	+0 36.8	16 15.6	+6 21.1	13 21.0	+7 11.6	200 48.5	-2 20.8
13	48	12.0	42 42.8	38.0	31 16.3	21.9	28 22.9	11.8	215 51.1	20.7
14	63	14.5	57 42.4	39.2	46 17.0	22.6	43 24.9	12.0	230 53.8	20.6
15	78	17.0	72 42.1	40.3	61 17.7	23.4	58 26.8	12.2	245 56.4	20.6
16	93	19.4	87 41.8	41.5	76 18.4	24.1	73 28.7	12.5	260 59.0	20.5
17	108	21.9	102 41.5	+0 42.7	91 19.1	+6 24.9	88 30.6	+7 12.7	276 01.6	-2 20.4
18	123	24.4	117 41.1	+0 43.8	106 19.8	+6 25.6	103 32.5	+7 12.9	291 04.2	-2 20.4
19	138	26.8	132 40.8	45.0	121 20.5	26.4	118 34.4	13.1	306 06.9	20.3
20	153	29.3	147 40.5	46.2	136 21.2	27.1	133 36.3	13.3	321 09.5	20.3
21	168	31.8	162 40.1	47.3	151 21.9	27.9	148 38.2	13.6	336 12.1	20.2
22	183	34.2	177 39.8	48.5	166 22.6	28.6	163 40.1	13.8	351 14.7	20.1
23	198	36.7	192 39.5	49.7	181 23.2	29.3	178 42.0	14.0	6 17.4	20.1
24	213	39.2	207 39.2	+0 50.8	196 23.9	+6 30.1	193 43.9	+7 14.2	21 20.0	-2 20.0
Dif	—		-3	+12	+7	+7	+19	+2	+26	+1

UT	SOL				☾ LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna		
	SD: 15'9				Edad: 22 ^d 4	PHE {	4 ^h : 54'9 12 ^h : 54'8 20 ^h : 54'6											
	PMG: 11 ^h 57 ^m 9																	
	hG ☉		Dec		hG ☾		Dif		Dec	Dif		Civil	Náutico	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m
0	180	31.0	+13	19.9	256	57.2	-12	24.5	60 N	19 44	20 35	21 50	2 24	8	11 59	78		
1	195	31.1		20.7	271	30.4 ¹⁴²		14.0 ¹⁰⁵	58	36	23	27	17	11	12 05	75		
2	210	31.2		21.5	286	03.7 ¹⁴³	-12	03.4 ¹⁰⁶	56	28	12	21 09	10	14	11	72		
3	225	31.3		22.3	300	37.1 ¹⁴⁴	-11	52.9 ¹⁰⁵	54	22	20 02	20 55	05	16	16	70		
4	240	31.4		23.2	315	10.5 ¹⁴⁴		42.3 ¹⁰⁶	52	16	19 54	42	2 00	18	20	68		
5	255	31.5	+13	24.0	329	44.0 ¹⁴⁵	-11	31.6 ¹⁰⁷	50	19 10	19 46	20 31	1 55	20	12 24	66		
6	270	31.6	+13	24.8	344	17.5 ¹⁴⁵	-11	20.9 ¹⁰⁷	45	18 59	19 31	20 10	1 45	24	12 32	62		
7	285	31.7		25.6	358	51.1 ¹⁴⁶	-11	10.2 ¹⁰⁷	40	49	18	19 53	37	27	39	59		
8	300	31.8		26.4	13	24.8 ¹⁴⁷	-10	59.4 ¹⁰⁸	35	41	19 08	40	30	29	45	56		
9	315	31.9		27.2	27	58.5 ¹⁴⁷		48.6 ¹⁰⁸	30	34	18 59	29	24	32	12 51	53		
10	330	32.0		28.0	42	32.2 ¹⁴⁷		37.7 ¹⁰⁹	20	22	45	19 11	13	36	13 00	49		
11	345	32.1	+13	28.8	57	06.1 ¹⁴⁹	-10	26.9 ¹⁰⁸	10 N	18 11	18 33	18 58	1 03	40	13 08	45		
12	0	32.2	+13	29.6	71	39.9 ¹⁴⁸	-10	15.9 ¹¹⁰	0	18 01	18 23	18 47	0 54	43	13 15	42		
13	15	32.3		30.4	86	13.9 ¹⁵⁰	-10	05.0 ¹⁰⁹	10 S	17 52	13	38	45	46	22	39		
14	30	32.4		31.2	100	47.8 ¹⁴⁹	-9	54.0 ¹¹⁰	20	41	18 04	30	35	50	30	35		
15	45	32.5		32.0	115	21.9 ¹⁵¹		43.0 ¹¹⁰	30	30	17 54	23	24	55	39	31		
16	60	32.6		32.8	129	55.9 ¹⁵⁰		31.9 ¹¹¹	35	23	49	19	18	57	44	28		
17	75	32.7	+13	33.6	144	30.1 ¹⁵²	-9	20.9 ¹¹⁰	40	17 16	17 44	18 15	0 11	59	13 50	25		
18	90	32.8	+13	34.4	159	04.2 ¹⁵¹	-9	09.8 ¹¹¹	45	17 07	17 37	18 12	0 02	63	13 56	23		
19	105	32.9		35.2	173	38.5 ¹⁵³	-8	58.6 ¹¹²	50	16 57	30	08	** ** *	**	14 04	19		
20	120	33.0		36.1	188	12.7 ¹⁵²		47.5 ¹¹¹	52	52	27	07	** ** *	**	08	17		
21	135	33.1		36.9	202	47.0 ¹⁵³		36.3 ¹¹²	54	46	24	05	** ** *	**	12	15		
22	150	33.2		37.7	217	21.4 ¹⁵⁴		25.0 ¹¹³	56	41	20	03	** ** *	**	16	13		
23	165	33.3		38.5	231	55.8 ¹⁵⁴		13.8 ¹¹²	58	34	16	02	** ** *	**	21	11		
24	180	33.4	+13	39.3	246	30.2 ¹⁵⁴	-8	02.5 ¹¹³	60 S	16 27	17 11	18 00	** ** *	**	14 27	7		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG		Mag: -3.9		Mag: +1.2		Mag: -2.1		Mag: +0.5					
	9 ^h 43 ^m 8		PMG: 10 ^h 10 ^m		PMG: 10 ^h 54 ^m		PMG: 11 ^h 04 ^m		PMG: 22 ^h 31 ^m					
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄					
h	°	'	°	'	°	'	°	'	°	'				
0	213	39.2	207	39.2	+0 50.8	196	23.9	+6 30.1	193	43.9	+7 14.2	21	20.0	-2 20.0
1	228	41.6	222	38.8	52.0	211	24.6	30.8	208	45.8	14.5	36	22.6	19.9
2	243	44.1	237	38.5	53.2	226	25.3	31.6	223	47.8	14.7	51	25.2	19.9
3	258	46.5	252	38.2	54.3	241	26.0	32.3	238	49.7	14.9	66	27.8	19.8
4	273	49.0	267	37.9	55.5	256	26.7	33.1	253	51.6	15.1	81	30.5	19.8
5	288	51.5	282	37.5	+0 56.7	271	27.4	+6 33.8	268	53.5	+7 15.3	96	33.1	-2 19.7
6	303	53.9	297	37.2	+0 57.8	286	28.1	+6 34.6	283	55.4	+7 15.6	111	35.7	-2 19.6
7	318	56.4	312	36.9	+0 59.0	301	28.8	35.3	298	57.3	15.8	126	38.3	19.6
8	333	58.9	327	36.5	+1 00.2	316	29.5	36.0	313	59.2	16.0	141	41.0	19.5
9	349	01.3	342	36.2	01.3	331	30.2	36.8	329	01.1	16.2	156	43.6	19.5
10	4	03.8	357	35.9	02.5	346	30.9	37.5	344	03.0	16.4	171	46.2	19.4
11	19	06.3	12	35.6	+1 03.7	1	31.5	+6 38.3	359	04.9	+7 16.7	186	48.8	-2 19.3
12	34	08.7	27	35.2	+1 04.8	16	32.2	+6 39.0	14	06.8	+7 16.9	201	51.4	-2 19.3
13	49	11.2	42	34.9	06.0	31	32.9	39.8	29	08.7	17.1	216	54.1	19.2
14	64	13.6	57	34.6	07.2	46	33.6	40.5	44	10.7	17.3	231	56.7	19.1
15	79	16.1	72	34.2	08.3	61	34.3	41.3	59	12.6	17.5	246	59.3	19.1
16	94	18.6	87	33.9	09.5	76	35.0	42.0	74	14.5	17.8	262	01.9	19.0
17	109	21.0	102	33.6	+1 10.7	91	35.7	+6 42.7	89	16.4	+7 18.0	277	04.5	-2 19.0
18	124	23.5	117	33.3	+1 11.8	106	36.4	+6 43.5	104	18.3	+7 18.2	292	07.2	-2 18.9
19	139	26.0	132	32.9	13.0	121	37.1	44.2	119	20.2	18.4	307	09.8	18.8
20	154	28.4	147	32.6	14.2	136	37.8	45.0	134	22.1	18.7	322	12.4	18.8
21	169	30.9	162	32.3	15.3	151	38.5	45.7	149	24.0	18.9	337	15.0	18.7
22	184	33.4	177	31.9	16.5	166	39.1	46.5	164	25.9	19.1	352	17.7	18.7
23	199	35.8	192	31.6	17.7	181	39.8	47.2	179	27.8	19.3	7	20.3	18.6
24	214	38.3	207	31.3	+1 18.8	196	40.5	+6 47.9	194	29.7	+7 19.5	22	22.9	-2 18.5
Dif	—		-3		+12	+7		+7	+19		+2	+26		+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 7			Edad: 23 ^d 4 PHE SD: 14 ^h 9 PMG: 7 ^h 47 ^m										
				R°: 41 ^m										
	hG ☉	Dec		hG ☾	Dif			Náutico	Civil		Hora	R°	Hora	R°
h	°	'	°	°	'	°	°	h	m	h	m	h	m	m
0	180	33.4	+13 39.3	246	30.2	-8 02.5	60 N	2 05	3 19	4 10	2 32	8	13 17	76
1	195	33.5	40.1	261	04.7 ¹⁵⁵	-7 51.2 ¹¹³	58	28	32	19	28	10	20	74
2	210	33.6	40.9	275	39.2 ¹⁵⁵	39.9 ¹¹³	56	2 46	43	26	24	13	23	71
3	225	33.7	41.7	290	13.8 ¹⁵⁶	28.5 ¹¹⁴	54	3 00	3 53	33	21	14	26	68
4	240	33.8	42.5	304	48.4 ¹⁵⁶	17.2 ¹¹³	52	13	4 01	39	18	16	28	67
5	255	33.9	+13 43.3	319	23.0 ¹⁵⁶	-7 05.8 ¹¹⁴	50	3 23	4 09	4 44	2 15	18	13 30	65
6	270	34.0	+13 44.1	333	57.7 ¹⁵⁷	-6 54.4 ¹¹⁴	45	3 45	4 24	4 56	2 09	22	13 34	61
7	285	34.1	44.9	348	32.4 ¹⁵⁷	42.9 ¹¹⁵	40	4 02	37	5 06	2 04	25	38	58
8	300	34.2	45.7	3	07.2 ¹⁵⁸	31.5 ¹¹⁴	35	15	47	14	1 59	28	41	55
9	315	34.3	46.5	17	42.0 ¹⁵⁸	20.0 ¹¹⁵	30	26	4 56	21	56	29	44	53
10	330	34.4	47.3	32	16.8 ¹⁵⁸	-6 08.5 ¹¹⁵	20	44	5 11	34	49	34	49	48
11	345	34.5	+13 48.1	46	51.6 ¹⁵⁸	-5 57.0 ¹¹⁵	10 N	4 57	5 23	5 44	1 43	38	13 53	45
12	0	34.6	+13 48.9	61	26.5 ¹⁵⁹	-5 45.4 ¹¹⁶	0	5 08	5 33	5 54	1 37	41	13 57	41
13	15	34.7	49.6	76	01.4 ¹⁵⁹	33.9 ¹¹⁵	10 S	18	43	6 04	31	45	14 01	37
14	30	34.8	50.4	90	36.3 ¹⁵⁹	22.3 ¹¹⁶	20	26	5 52	14	25	49	05	34
15	45	34.9	51.2	105	11.3 ¹⁶⁰	-5 10.8 ¹¹⁵	30	33	6 02	26	19	52	10	29
16	60	35.0	52.0	119	46.3 ¹⁶⁰	-4 59.2 ¹¹⁶	35	37	07	33	15	55	12	27
17	75	35.1	+13 52.8	134	21.3 ¹⁶⁰	-4 47.5 ¹¹⁷	40	5 41	6 13	6 41	1 10	58	14 15	25
18	90	35.2	+13 53.6	148	56.4 ¹⁶¹	-4 35.9 ¹¹⁶	45	5 44	6 19	6 49	1 05	61	14 19	21
19	105	35.3	54.4	163	31.4 ¹⁶⁰	24.3 ¹¹⁶	50	48	26	7 00	0 58	66	23	17
20	120	35.4	55.2	178	06.5 ¹⁶¹	12.6 ¹¹⁷	52	50	30	05	55	68	25	16
21	135	35.5	56.0	192	41.6 ¹⁶¹	-4 01.0 ¹¹⁶	54	51	33	10	52	69	27	14
22	150	35.6	56.8	207	16.8 ¹⁶²	-3 49.3 ¹¹⁷	56	53	37	16	49	71	29	12
23	165	35.7	57.6	221	51.9 ¹⁶¹	37.6 ¹¹⁷	58	55	41	23	45	74	32	9
24	180	35.8	+13 58.4	236	27.1 ¹⁶²	-3 25.9 ¹¹⁷	60 S	5 57	6 46	7 31	0 40	77	14 34	8

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 9 ^h 39 ^m 9		Mag: -3.9 PMG: 10 ^h 10 ^m		Mag: +1.2 PMG: 10 ^h 53 ^m		Mag: -2.1 PMG: 11 ^h 01 ^m		Mag: +0.5 PMG: 22 ^h 27 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	214	38.3	207 31.3	+1 18.8	196 40.5	+6 47.9	194 29.7	+7 19.5	22 22.9	-2 18.5
1	229	40.8	222 31.0	20.0	211 41.2	48.7	209 31.6	19.8	37 25.5	18.5
2	244	43.2	237 30.6	21.2	226 41.9	49.4	224 33.6	20.0	52 28.1	18.4
3	259	45.7	252 30.3	22.3	241 42.6	50.2	239 35.5	20.2	67 30.8	18.3
4	274	48.1	267 30.0	23.5	256 43.3	50.9	254 37.4	20.4	82 33.4	18.3
5	289	50.6	282 29.6	+1 24.7	271 44.0	+6 51.6	269 39.3	+7 20.6	97 36.0	-2 18.2
6	304	53.1	297 29.3	+1 25.8	286 44.7	+6 52.4	284 41.2	+7 20.9	112 38.6	-2 18.2
7	319	55.5	312 29.0	27.0	301 45.4	53.1	299 43.1	21.1	127 41.2	18.1
8	334	58.0	327 28.6	28.2	316 46.1	53.9	314 45.0	21.3	142 43.9	18.0
9	350	00.5	342 28.3	29.3	331 46.7	54.6	329 46.9	21.5	157 46.5	18.0
10	5 02.9	357 28.0	30.5	346 47.4	55.3	344 48.8	21.7	172 49.1	17.9	
11	20 05.4	12 27.7	+1 31.7	1 48.1	+6 56.1	359 50.7	+7 22.0	187 51.7	-2 17.9	
12	35 07.9	27 27.3	+1 32.8	16 48.8	+6 56.8	14 52.6	+7 22.2	202 54.3	-2 17.8	
13	50 10.3	42 27.0	34.0	31 49.5	57.6	29 54.6	22.4	217 57.0	17.7	
14	65 12.8	57 26.7	35.2	46 50.2	58.3	44 56.5	22.6	232 59.6	17.7	
15	80 15.3	72 26.3	36.3	61 50.9	59.0	59 58.4	22.8	248 02.2	17.6	
16	95 17.7	87 26.0	37.5	76 51.6	+6 59.8	75 00.3	23.1	263 04.8	17.6	
17	110 20.2	102 25.7	+1 38.7	91 52.3	+7 00.5	90 02.2	+7 23.3	278 07.4	-2 17.5	
18	125 22.6	117 25.4	+1 39.8	106 53.0	+7 01.3	105 04.1	+7 23.5	293 10.1	-2 17.4	
19	140 25.1	132 25.0	41.0	121 53.6	02.0	120 06.0	23.7	308 12.7	17.4	
20	155 27.6	147 24.7	42.2	136 54.3	02.7	135 07.9	23.9	323 15.3	17.3	
21	170 30.0	162 24.4	43.3	151 55.0	03.5	150 09.8	24.2	338 17.9	17.3	
22	185 32.5	177 24.0	44.5	166 55.7	04.2	165 11.7	24.4	353 20.5	17.2	
23	200 35.0	192 23.7	45.7	181 56.4	05.0	180 13.6	24.6	8 23.1	17.1	
24	215 37.4	207 23.4	+1 46.8	196 57.1	+7 05.7	195 15.6	+7 24.8	23 25.8	-2 17.1	
Dif	—	-3	+12	+7	+7	+19	+2	+26	+1	

UT	SOL		☾ LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15'9		Edad: 24 ^d 4		PHE { 4 ^h : 54'2 12 ^h : 54'1 20 ^h : 54'1									
	PMG: 11 ^h 57 ^m 5		SD: 14'8											
	PMG: 8 ^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		
0	180	35.8	+13	58.4	236	27.1	-3 25.9	60 N	19 49	20 41	21 59	2 40 6	14 33 76	
1	195	35.9	+13	59.2	251	02.3 ¹⁶²	14.2 ¹¹⁷	58	40	28	34	38 9	34 73	
2	210	36.0	+14	00.0	265	37.5 ¹⁶²	-3 02.5 ¹¹⁷	56	33	16	15	37 11	34 71	
3	225	36.1	+14	00.8	280	12.8 ¹⁶³	-2 50.8 ¹¹⁷	54	25	20 06	21 00	35 14	34 69	
4	240	36.2		01.6	294	48.0 ¹⁶²	39.1 ¹¹⁷	52	19	19 57	20 47	34 16	35 66	
5	255	36.2	+14	02.3	309	23.3 ¹⁶³	-2 27.3 ¹¹⁸	50	19 13	19 50	20 36	2 33 17	14 35 64	
6	270	36.3	+14	03.1	323	58.6 ¹⁶³	-2 15.6 ¹¹⁷	45	19 01	19 33	20 13	2 31 21	14 35 61	
7	285	36.4		03.9	338	33.9 ¹⁶³	-2 03.8 ¹¹⁸	40	18 51	20	19 56	29 24	36 57	
8	300	36.5		04.7	353	09.2 ¹⁶³	-1 52.1 ¹¹⁷	35	43	10	42	27 27	36 55	
9	315	36.6		05.5	7	44.5 ¹⁶³	40.3 ¹¹⁸	30	35	19 00	30	25 30	37 52	
10	330	36.7		06.3	22	19.8 ¹⁶³	28.6 ¹¹⁷	20	22	18 45	19 12	23 33	37 48	
11	345	36.8	+14	07.1	36	55.2 ¹⁶⁴	-1 16.8 ¹¹⁸	10 N	18 11	18 33	18 58	2 21 37	14 38 44	
12	0	36.9	+14	07.9	51	30.5 ¹⁶³	-1 05.1 ¹¹⁷	0	18 01	18 22	18 47	2 18 41	14 38 40	
13	15	37.0		08.6	66	05.9 ¹⁶⁴	-0 53.3 ¹¹⁸	10 S	17 51	12	37	16 44	38 37	
14	30	37.1		09.4	80	41.2 ¹⁶³	41.5 ¹¹⁸	20	40	18 03	29	14 48	39 33	
15	45	37.2		10.2	95	16.6 ¹⁶⁴	29.8 ¹¹⁷	30	28	17 53	21	11 52	39 29	
16	60	37.3		11.0	109	52.0 ¹⁶⁴	18.0 ¹¹⁸	35	21	47	17	10 54	39 27	
17	75	37.4	+14	11.8	124	27.4 ¹⁶⁴	-0 06.2 ¹¹⁸	40	17 13	17 41	18 13	2 08 57	14 40 24	
18	90	37.4	+14	12.6	139	02.7 ¹⁶³	+0 05.5 ¹¹⁷	45	17 04	17 34	18 09	2 06 61	14 40 21	
19	105	37.5		13.4	153	38.1 ¹⁶⁴	17.3 ¹¹⁸	50	16 53	27	05	04 64	40 18	
20	120	37.6		14.1	168	13.5 ¹⁶⁴	29.1 ¹¹⁸	52	48	23	03	03 66	41 15	
21	135	37.7		14.9	182	48.9 ¹⁶⁴	40.8 ¹¹⁷	54	42	20	18 01	01 69	41 14	
22	150	37.8		15.7	197	24.3 ¹⁶⁴	+0 52.6 ¹¹⁸	56	36	15	17 59	2 00 71	41 12	
23	165	37.9		16.5	211	59.7 ¹⁶⁴	+1 04.3 ¹¹⁷	58	29	11	57	1 59 73	41 10	
24	180	38.0	+14	17.3	226	35.1 ¹⁶⁴	+1 16.1 ¹¹⁸	60 S	16 21	17 06	17 55	1 57 76	14 42 6	
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 9 ^h 35 ^m 9		Mag: -3.9 PMG: 10 ^h 11 ^m		Mag: +1.2 PMG: 10 ^h 52 ^m		Mag: -2.1 PMG: 10 ^h 58 ^m		Mag: +0.5 PMG: 22 ^h 22 ^m					
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	215	37.4	207	23.4	196	57.1	195	15.6	23	25.8				
1	230	39.9	222	23.0	211	57.8	210	17.5	38	28.4				
2	245	42.4	237	22.7	226	58.5	225	19.4	53	31.0				
3	260	44.8	252	22.4	241	59.2	240	21.3	68	33.6				
4	275	47.3	267	22.1	256	59.9	255	23.2	83	36.2				
5	290	49.7	282	21.7	272	00.5	270	25.1	98	38.9				
6	305	52.2	297	21.4	287	01.2	285	27.0	113	41.5				
7	320	54.7	312	21.1	302	01.9	300	28.9	128	44.1				
8	335	57.1	327	20.7	317	02.6	315	30.8	143	46.7				
9	350	59.6	342	20.4	332	03.3	330	32.7	158	49.3				
10	6	02.1	357	20.1	347	04.0	345	34.7	173	51.9				
11	21	04.5	12	19.7	2	04.7	0	36.6	188	54.6				
12	36	07.0	27	19.4	17	05.4	15	38.5	203	57.2				
13	51	09.5	42	19.1	32	06.1	30	40.4	218	59.8				
14	66	11.9	57	18.8	47	06.8	45	42.3	234	02.4				
15	81	14.4	72	18.4	62	07.4	60	44.2	249	05.0				
16	96	16.9	87	18.1	77	08.1	75	46.1	264	07.6				
17	111	19.3	102	17.8	92	08.8	90	48.0	279	10.3				
18	126	21.8	117	17.4	107	09.5	105	49.9	294	12.9				
19	141	24.2	132	17.1	122	10.2	120	51.8	309	15.5				
20	156	26.7	147	16.8	137	10.9	135	53.8	324	18.1				
21	171	29.2	162	16.4	152	11.6	150	55.7	339	20.7				
22	186	31.6	177	16.1	167	12.3	165	57.6	354	23.3				
23	201	34.1	192	15.8	182	13.0	180	59.5	9	26.0				
24	216	36.6	207	15.4	197	13.7	196	01.4	24	28.6				
Dif	—		-3	+12	+7	+7	+19	+2	+26	+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 4				Edad: 25 ^d 4 PHE { 4 ^h : 54 ^o 0 12 ^h : 54 ^o 0 20 ^h : 54 ^o 0 PMG: 9 ^h 09 ^m R°: 41 ^m																
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°					
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m			
0	180	38.0	+14	17.3	226	35.1	+1	16.1	60 N	1	55	3	13	4	05	2	46	77			
1	195	38.1		18.1	241	10.5 ¹⁶⁴		27.8 ¹¹⁷	58	2	20		26		14	47	10	47	73		
2	210	38.2		18.8	255	45.8 ¹⁶³		39.5 ¹¹⁷	56		39		38		22	48	12	45	71		
3	225	38.2		19.6	270	21.2 ¹⁶⁴	+1	51.3 ¹¹⁸	54	2	54		48		29	49	14	43	66		
4	240	38.3		20.4	284	56.6 ¹⁶⁴	+2	03.0 ¹¹⁷	52	3	07	3	57		35	50	15	41	67		
5	255	38.4	+14	21.2	299	32.0 ¹⁶⁴	+2	14.7 ¹¹⁷	50	3	19	4	05		4	2	50	18	15	39	65
6	270	38.5	+14	22.0	314	07.3 ¹⁶³	+2	26.4 ¹¹⁷	45	3	41	4	21		4	2	52	21	15	36	61
7	285	38.6		22.7	328	42.7 ¹⁶⁴		38.1 ¹¹⁷	40	3	59		34	5	03	53	24	33	58		
8	300	38.7		23.5	343	18.0 ¹⁶³	+2	49.8 ¹¹⁷	35	4	13		45		12	54	27	31	55		
9	315	38.8		24.3	357	53.4 ¹⁶⁴	+3	01.4 ¹¹⁶	30		24	4	54		19	55	29	29	52		
10	330	38.9		25.1	12	28.7 ¹⁶³		13.1 ¹¹⁷	20		42	5	09		32	56	34	25	48		
11	345	38.9	+14	25.9	27	04.0 ¹⁶³	+3	24.7 ¹¹⁶	10 N	4	56	5	22		5	2	58	37	15	22	44
12	0	39.0	+14	26.6	41	39.3 ¹⁶³	+3	36.4 ¹¹⁷	0	5	08	5	33		5	2	59	41	15	18	42
13	15	39.1		27.4	56	14.6 ¹⁶³		48.0 ¹¹⁶	10 S		18		43	6	04	3	00	45	15	38	
14	30	39.2		28.2	70	49.9 ¹⁶³	+3	59.6 ¹¹⁶	20		26	5	52		15	02	48	12	34		
15	45	39.3		29.0	85	25.1 ¹⁶²	+4	11.2 ¹¹⁶	30		34	6	03		27	03	53	08	30		
16	60	39.4		29.7	100	00.4 ¹⁶³		22.8 ¹¹⁶	35		38		08		35	04	55	06	28		
17	75	39.5	+14	30.5	114	35.6 ¹⁶²	+4	34.3 ¹¹⁵	40	5	42	6	14		6	3	05	58	15	04	25
18	90	39.5	+14	31.3	129	10.8 ¹⁶²	+4	45.9 ¹¹⁶	45	5	47	6	21		6	2	07	61	15	01	22
19	105	39.6		32.1	143	46.0 ¹⁶²	+4	57.4 ¹¹⁵	50		51		29	7	03	08	65	14	58	18	
20	120	39.7		32.8	158	21.2 ¹⁶²	+5	08.9 ¹¹⁵	52		53		33		08	09	67	56	17		
21	135	39.8		33.6	172	56.3 ¹⁶¹		20.4 ¹¹⁵	54		55		36		14	10	68	55	14		
22	150	39.9		34.4	187	31.5 ¹⁶²		31.9 ¹¹⁵	56		56		41		20	11	70	53	12		
23	165	40.0		35.2	202	06.6 ¹⁶¹		43.3 ¹¹⁴	58	5	59		45		27	12	73	51	10		
24	180	40.1	+14	35.9	216	41.7 ¹⁶¹	+5	54.8 ¹¹⁵	60 S	6	01	6	50		7	3	13	76	14	48	8

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 9 ^h 32 ^m 0		Mag: -3.9 PMG: 10 ^h 11 ^m		Mag: +1.2 PMG: 10 ^h 51 ^m		Mag: -2.1 PMG: 10 ^h 55 ^m		Mag: +0.5 PMG: 22 ^h 18 ^m	
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄	
h	°	'	°	'	°	'	°	'	°	'
0	216	36.6	207	15.4	+2	14.8	197	13.7	+7	23.4
1	231	39.0	222	15.1		16.0	212	14.3		24.1
2	246	41.5	237	14.8		17.2	227	15.0		24.8
3	261	44.0	252	14.4		18.3	242	15.7		25.6
4	276	46.4	267	14.1		19.5	257	16.4		26.3
5	291	48.9	282	13.8	+2	20.7	272	17.1	+7	27.1
6	306	51.3	297	13.4	+2	21.8	287	17.8	+7	27.8
7	321	53.8	312	13.1		23.0	302	18.5		28.5
8	336	56.3	327	12.8		24.2	317	19.2		29.3
9	351	58.7	342	12.5		25.3	332	19.9		30.0
10	7	01.2	357	12.1		26.5	347	20.5		30.7
11	22	03.7	12	11.8	+2	27.7	2	21.2	+7	31.5
12	37	06.1	27	11.5	+2	28.8	17	21.9	+7	32.2
13	52	08.6	42	11.1		30.0	32	22.6		32.9
14	67	11.1	57	10.8		31.2	47	23.3		33.7
15	82	13.5	72	10.5		32.3	62	24.0		34.4
16	97	16.0	87	10.1		33.5	77	24.7		35.1
17	112	18.5	102	09.8	+2	34.7	92	25.4	+7	35.8
18	127	20.9	117	09.5	+2	35.8	107	26.1	+7	36.6
19	142	23.4	132	09.1		37.0	122	26.7		37.3
20	157	25.8	147	08.8		38.2	137	27.4		38.0
21	172	28.3	162	08.5		39.3	152	28.1		38.8
22	187	30.8	177	08.1		40.5	167	28.8		39.5
23	202	33.2	192	07.8		41.7	182	29.5		40.2
24	217	35.7	207	07.5	+2	42.8	197	30.2	+7	41.0
Dif	—		-3		+12		+7		+7	
							+19		+2	
									+26	
									+1	

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna					
	SD: 15°9			Edad: 26 ^d 4 PHE { 4 ^h : 54'0 12 ^h : 54'0 20 ^h : 54'1														
	PMG: 11 ^h 57 ^m 3			SD: 14'7 PMG: 9 ^h 50 ^m R°: 42 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec			Dif									
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m	m	h m	m			
0	180	40.1	+14	35.9	216	41.7	+5	54.8	60 N	19 54	20 47	22 09	2 53	9	17 06 77			
1	195	40.1		36.7	231	16.8 ¹⁶¹	+6	06.2 ¹¹⁴	58	45	33	21 42	2 57	11	17 00 75			
2	210	40.2		37.5	245	51.8 ¹⁶⁰		17.6 ¹¹⁴	56	37	21	22	3 00	13	16 56 72			
3	225	40.3		38.3	260	26.8 ¹⁶⁰		28.9 ¹¹³	54	29	10	21 05	03	15	52 66			
4	240	40.4		39.0	275	01.8 ¹⁶⁰		40.3 ¹¹⁴	52	23	20 01	20 51	05	18	48 67			
5	255	40.5	+14	39.8	289	36.8 ¹⁶⁰	+6	51.6 ¹¹³	50	19 17	19 53	20 40	3 08	19	16 44 66			
6	270	40.5	+14	40.6	304	11.8 ¹⁶⁰	+7	02.9 ¹¹³	45	19 04	19 36	20 16	3 13	23	16 37 62			
7	285	40.6		41.3	318	46.7 ¹⁵⁹		14.2 ¹¹³	40	18 53	23	19 58	17	26	31 59			
8	300	40.7		42.1	333	21.6 ¹⁵⁹		25.4 ¹¹²	35	44	11	44	21	28	26 56			
9	315	40.8		42.9	347	56.4 ¹⁵⁸		36.6 ¹¹²	30	36	19 02	32	24	31	21 54			
10	330	40.9		43.6	2	31.3 ¹⁵⁹		47.8 ¹¹²	20	23	18 46	19 13	30	35	13 50			
11	345	41.0	+14	44.4	17	06.1 ¹⁵⁸	+7	59.0 ¹¹²	10 N	18 11	18 33	18 59	3 35	38	16 06 46			
12	0	41.0	+14	45.2	31	40.8 ¹⁵⁷	+8	10.1 ¹¹¹	0	18 01	18 22	18 47	3 40	41	16 00 42			
13	15	41.1		45.9	46	15.6 ¹⁵⁸		21.2 ¹¹¹	10 S	17 50	12	37	45	45	15 53 39			
14	30	41.2		46.7	60	50.3 ¹⁵⁷		32.3 ¹¹¹	20	39	18 02	28	50	48	46 36			
15	45	41.3		47.5	75	25.0 ¹⁵⁷		43.4 ¹¹¹	30	26	17 51	19	56	53	38 32			
16	60	41.4		48.2	89	59.6 ¹⁵⁶	+8	54.4 ¹¹⁰	35	19	45	15	3 59	55	34 29			
17	75	41.4	+14	49.0	104	34.2 ¹⁵⁶	+9	05.4 ¹¹⁰	40	17 11	17 39	18 11	4 03	58	15 29 27			
18	90	41.5	+14	49.8	119	08.8 ¹⁵⁶	+9	16.3 ¹⁰⁹	45	17 01	17 32	18 06	4 08	61	15 23 24			
19	105	41.6		50.5	133	43.3 ¹⁵⁵		27.2 ¹⁰⁹	50	16 49	23	02	13	65	16 20			
20	120	41.7		51.3	148	17.8 ¹⁵⁵		38.1 ¹⁰⁹	52	44	20	18 00	16	67	13 18			
21	135	41.8		52.1	162	52.3 ¹⁵⁵		48.9 ¹⁰⁸	54	38	16	17 58	18	70	09 16			
22	150	41.8		52.8	177	26.7 ¹⁵⁴	+9	59.8 ¹⁰⁹	56	32	11	55	21	72	05 14			
23	165	41.9		53.6	192	01.1 ¹⁵⁴	+10	10.5 ¹⁰⁷	58	24	07	53	25	74	15 01 12			
24	180	42.0	+14	54.4	206	35.4 ¹⁵³	+10	21.3 ¹⁰⁸	60 S	16 16	17 01	17 51	4 29	77	14 56 9			
UT	ARIES		VENUS			MARTE			JÚPITER		SATURNO							
	PMG: 9 ^h 28 ^m 1		Mag: -3.8 PMG: 10 ^h 12 ^m			Mag: +1.2 PMG: 10 ^h 49 ^m			Mag: -2.1 PMG: 10 ^h 51 ^m		Mag: +0.5 PMG: 22 ^h 14 ^m							
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	217	35.7	207	07.5	+2	42.8	197	30.2	+7	41.0	196	47.3	+7	35.3	25	31.4	-2	14.2
1	232	38.2	222	07.1		44.0	212	30.9		41.7	211	49.2		35.5	40	34.0		14.2
2	247	40.6	237	06.8		45.2	227	31.6		42.4	226	51.1		35.8	55	36.6		14.1
3	262	43.1	252	06.5		46.3	242	32.3		43.2	241	53.0		36.0	70	39.2		14.1
4	277	45.6	267	06.1		47.5	257	32.9		43.9	256	54.9		36.2	85	41.8		14.0
5	292	48.0	282	05.8	+2	48.7	272	33.6	+7	44.6	271	56.8	+7	36.4	100	44.4	-2	14.0
6	307	50.5	297	05.5	+2	49.8	287	34.3	+7	45.4	286	58.7	+7	36.6	115	47.0	-2	13.9
7	322	53.0	312	05.1		51.0	302	35.0		46.1	302	00.6		36.9	130	49.6		13.8
8	337	55.4	327	04.8		52.2	317	35.7		46.8	317	02.5		37.1	145	52.3		13.8
9	352	57.9	342	04.5		53.3	332	36.4		47.5	332	04.5		37.3	160	54.9		13.7
10	8	00.3	357	04.1		54.5	347	37.1		48.3	347	06.4		37.5	175	57.5		13.7
11	23	02.8	12	03.8	+2	55.7	2	37.8	+7	49.0	2	08.3	+7	37.7	191	00.1	-2	13.6
12	38	05.3	27	03.5	+2	56.8	17	38.4	+7	49.7	17	10.2	+7	37.9	206	02.7	-2	13.6
13	53	07.7	42	03.1		58.0	32	39.1		50.5	32	12.1		38.2	221	05.3		13.5
14	68	10.2	57	02.8	+2	59.1	47	39.8		51.2	47	14.0		38.4	236	07.9		13.4
15	83	12.7	72	02.5	+3	00.3	62	40.5		51.9	62	15.9		38.6	251	10.6		13.4
16	98	15.1	87	02.1		01.5	77	41.2		52.7	77	17.8		38.8	266	13.2		13.3
17	113	17.6	102	01.8	+3	02.6	92	41.9	+7	53.4	92	19.7	+7	39.0	281	15.8	-2	13.3
18	128	20.1	117	01.4	+3	03.8	107	42.6	+7	54.1	107	21.7	+7	39.2	296	18.4	-2	13.2
19	143	22.5	132	01.1		05.0	122	43.3		54.8	122	23.6		39.5	311	21.0		13.2
20	158	25.0	147	00.8		06.1	137	44.0		55.6	137	25.5		39.7	326	23.6		13.1
21	173	27.4	162	00.4		07.3	152	44.6		56.3	152	27.4		39.9	341	26.2		13.0
22	188	29.9	177	00.1		08.5	167	45.3		57.0	167	29.3		40.1	356	28.8		13.0
23	203	32.4	191	59.8		09.6	182	46.0		57.7	182	31.2		40.3	11	31.5		12.9
24	218	34.8	206	59.4	+3	10.8	197	46.7	+7	58.5	197	33.1	+7	40.5	26	34.1	-2	12.9
Dif	—		-3		+12	+7		+7	+19		+2		+26		+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 1				Edad: 27 ^d 4 PHE { 4 ^h : 54 ^m 1 12 ^h : 54 ^m 2 20 ^h : 54 ^m 2 PMG: 10 ^h 32 ^m R ^o : 44 ^m													
	hG ☉		Dec		hG ☾		Dif			Dif			Náutico		Civil		Hora R°	
h	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m
0	180	42.0	+14	54.4	206	35.4	+10	21.3	60 N	1 45	3 06	3 59	3 02	10	18	23	79	
1	195	42.1		55.1	221	09.7 ¹⁵³		32.0 ¹⁰⁷	58	2 12	21	4 09	08	13		15	75	
2	210	42.1		55.9	235	44.0 ¹⁵³		42.6 ¹⁰⁶	56	32	33	17	13	16		08	72	
3	225	42.2		56.6	250	18.2 ¹⁵²	+10	53.2 ¹⁰⁶	54	2 48	43	25	18	18	18	01	70	
4	240	42.3		57.4	264	52.4 ¹⁵²	+11	03.8 ¹⁰⁶	52	3 02	3 52	31	23	20	17	55	69	
5	255	42.4	+14	58.2	279	26.5 ¹⁵¹	+11	14.4 ¹⁰⁶	50	3 14	4 01	4 37	3 27	21	17	50	66	
6	270	42.5	+14	58.9	294	00.6 ¹⁵¹	+11	24.9 ¹⁰⁵	45	3 38	4 18	4 50	3 36	25	17	39	62	
7	285	42.5	+14	59.7	308	34.7 ¹⁵¹		35.3 ¹⁰⁴	40	3 56	31	5 01	43	28		30	59	
8	300	42.6	+15	00.4	323	08.7 ¹⁵⁰		45.7 ¹⁰⁴	35	4 10	43	10	49	31		22	56	
9	315	42.7		01.2	337	42.7 ¹⁵⁰	+11	56.1 ¹⁰⁴	30	22	4 52	18	3 55	33		15	54	
10	330	42.8		02.0	352	16.6 ¹⁴⁹	+12	06.4 ¹⁰³	20	41	5 08	31	4 05	37	17	03	51	
11	345	42.8	+15	02.7	6	50.4 ¹⁴⁸	+12	16.7 ¹⁰³	10 N	4 56	5 21	5 43	4 13	41	16	52	48	
12	0	42.9	+15	03.5	21	24.3 ¹⁴⁹	+12	26.9 ¹⁰²	0	5 07	5 32	5 54	4 21	44	16	42	45	
13	15	43.0		04.2	35	58.0 ¹⁴⁷		37.1 ¹⁰²	10 S	18	43	6 04	30	46		32	42	
14	30	43.1		05.0	50	31.8 ¹⁴⁸		47.2 ¹⁰¹	20	27	5 53	16	38	51		22	39	
15	45	43.1		05.7	65	05.4 ¹⁴⁶	+12	57.3 ¹⁰¹	30	36	6 04	29	49	54		10	35	
16	60	43.2		06.5	79	39.1 ¹⁴⁷	+13	07.4 ¹⁰¹	35	40	10	36	4 54	57	16	03	33	
17	75	43.3	+15	07.3	94	12.6 ¹⁴⁵	+13	17.4 ¹⁰⁰	40	5 44	6 16	6 44	5 01	59	15	56	30	
18	90	43.4	+15	08.0	108	46.2 ¹⁴⁶	+13	27.3 ⁹⁹	45	5 49	6 24	6 54	5 09	62	15	47	27	
19	105	43.4		08.8	123	19.6 ¹⁴⁴		37.2 ⁹⁹	50	54	32	7 06	18	67		36	23	
20	120	43.5		09.5	137	53.1 ¹⁴⁵		47.0 ⁹⁸	52	56	36	11	23	68		31	22	
21	135	43.6		10.3	152	26.4 ¹⁴³	+13	56.8 ⁹⁸	54	5 58	40	17	28	70		25	20	
22	150	43.6		11.0	166	59.8 ¹⁴⁴	+14	06.5 ⁹⁷	56	6 00	44	24	33	73		19	18	
23	165	43.7		11.8	181	33.0 ¹⁴²		16.2 ⁹⁷	58	02	49	32	39	75		13	14	
24	180	43.8	+15	12.5	196	06.2 ¹⁴²	+14	25.8 ⁹⁶	60 S	6 05	6 54	7 40	5 46	78	15	05	12	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 9 ^h 24 ^m 1		Mag: -3.8 PMG: 10 ^h 12 ^m		Mag: +1.2 PMG: 10 ^h 48 ^m		Mag: -2.1 PMG: 10 ^h 48 ^m		Mag: +0.5 PMG: 22 ^h 10 ^m	
	hG ♈		hG ♀ Dec		hG ♂ Dec		hG ♃ Dec		hG ♄ Dec	
h	°	'	°	'	°	'	°	'	°	'
0	218	34.8	206	59.4	+3 10.8	197	46.7	+7 58.5	197	33.1
1	233	37.3	221	59.1	12.0	212	47.4	59.2	212	35.0
2	248	39.8	236	58.8	13.1	227	48.1	+7 59.9	227	37.0
3	263	42.2	251	58.4	14.3	242	48.8	+8 00.7	242	38.9
4	278	44.7	266	58.1	15.5	257	49.5	01.4	257	40.8
5	293	47.2	281	57.8	+3 16.6	272	50.1	+8 02.1	272	42.7
6	308	49.6	296	57.4	+3 17.8	287	50.8	+8 02.8	287	44.6
7	323	52.1	311	57.1	18.9	302	51.5	03.6	302	46.5
8	338	54.6	326	56.7	20.1	317	52.2	04.3	317	48.4
9	353	57.0	341	56.4	21.3	332	52.9	05.0	332	50.3
10	8	59.5	356	56.1	22.4	347	53.6	05.7	347	52.3
11	24	01.9	11	55.7	+3 23.6	2	54.3	+8 06.5	2	54.2
12	39	04.4	26	55.4	+3 24.8	17	55.0	+8 07.2	17	56.1
13	54	06.9	41	55.1	25.9	32	55.6	07.9	32	58.0
14	69	09.3	56	54.7	27.1	47	56.3	08.6	47	59.9
15	84	11.8	71	54.4	28.3	62	57.0	09.4	63	01.8
16	99	14.3	86	54.1	29.4	77	57.7	10.1	78	03.7
17	114	16.7	101	53.7	+3 30.6	92	58.4	+8 10.8	93	05.6
18	129	19.2	116	53.4	+3 31.7	107	59.1	+8 11.5	108	07.6
19	144	21.7	131	53.0	32.9	122	59.8	12.3	123	09.5
20	159	24.1	146	52.7	34.1	138	00.5	13.0	138	11.4
21	174	26.6	161	52.4	35.2	153	01.1	13.7	153	13.3
22	189	29.0	176	52.0	36.4	168	01.8	14.4	168	15.2
23	204	31.5	191	51.7	37.6	183	02.5	15.2	183	17.1
24	219	34.0	206	51.3	+3 38.7	198	03.2	+8 15.9	198	19.0
Dif	—		-3 +12		+7 +7		+19 +2		+26 +1	

UT	SOL		● LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna					
	SD: 15'9 PMG: 11 ^h 57 ^m 0		Edad: 28 ^d 4 PHE { 4 ^h : 54/3 12 ^h : 54/4 20 ^h : 54/5 PMG: 11 ^h 16 ^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	h m	h m					
0	180	43.8	+15	12.5	196	06.2	+14 25.8	60 N	19 59	20 53	22 20	3 12 14	19 42 78					
1	195	43.9		13.3	210	39.4 ¹⁴²	35.4 ⁹⁶	58	49	38	21 50	21 17	30 75					
2	210	43.9		14.0	225	12.5 ¹⁴¹	44.9 ⁹⁵	56	41	26	28	29 20	20 72					
3	225	44.0		14.8	239	45.5 ¹⁴⁰	+14 54.3 ⁹⁴	54	33	15	21 11	36 22	11 70					
4	240	44.1		15.5	254	18.5 ¹⁴⁰	+15 03.7 ⁹⁴	52	26	20 05	20 56	43 24	19 04 67					
5	255	44.2	+15	16.3	268	51.5 ¹⁴⁰	+15 13.0 ⁹³	50	19 20	19 57	20 44	3 48 26	18 56 66					
6	270	44.2	+15	17.0	283	24.4 ¹³⁹	+15 22.3 ⁹³	45	19 06	19 39	20 19	4 01 29	18 41 63					
7	285	44.3		17.8	297	57.2 ¹³⁸	31.5 ⁹²	40	18 55	25	20 01	11 33	29 60					
8	300	44.4		18.5	312	30.0 ¹³⁸	40.6 ⁹¹	35	46	13	19 46	20 35	18 58					
9	315	44.4		19.3	327	02.7 ¹³⁷	49.7 ⁹¹	30	38	19 03	33	28 37	18 09 56					
10	330	44.5		20.0	341	35.3 ¹³⁶	+15 58.7 ⁹⁰	20	24	18 47	19 14	42 40	17 54 52					
11	345	44.6	+15	20.8	356	07.9 ¹³⁶	+16 07.6 ⁸⁹	10 N	18 12	18 34	18 59	4 54 43	17 40 50					
12	0	44.6	+15	21.5	10	40.5 ¹³⁶	+16 16.5 ⁸⁸	0	18 00	18 22	18 47	5 05 46	17 27 47					
13	15	44.7		22.3	25	12.9 ¹³⁴	25.3 ⁸⁸	10 S	17 49	11	36	16 49	14 45					
14	30	44.8		23.0	39	45.4 ¹³⁵	34.1 ⁸⁸	20	38	18 00	27	29 51	17 01 41					
15	45	44.9		23.8	54	17.7 ¹³³	42.8 ⁸⁷	30	24	17 49	18	43 55	16 45 39					
16	60	44.9		24.5	68	50.0 ¹³³	51.4 ⁸⁶	35	17	43	13	5 51 57	36 37					
17	75	45.0	+15	25.3	83	22.3 ¹³³	+16 59.9 ⁸⁵	40	17 08	17 36	18 08	6 00 60	16 26 34					
18	90	45.1	+15	26.0	97	54.5 ¹³²	+17 08.4 ⁸⁵	45	16 58	17 29	18 04	6 11 63	16 14 32					
19	105	45.1		26.7	112	26.6 ¹³¹	16.8 ⁸⁴	50	46	20	17 58	25 66	15 59 29					
20	120	45.2		27.5	126	58.6 ¹³⁰	25.1 ⁸³	52	40	16	56	31 68	53 26					
21	135	45.3		28.2	141	30.7 ¹³¹	33.4 ⁸³	54	34	12	54	38 70	45 25					
22	150	45.3		29.0	156	02.6 ¹²⁹	41.5 ⁸¹	56	27	07	52	46 72	37 22					
23	165	45.4		29.7	170	34.5 ¹²⁹	49.6 ⁸¹	58	20	17 02	49	6 54 76	27 20					
24	180	45.5	+15	30.5	185	06.3 ¹²⁸	+17 57.7 ⁸¹	60 S	16 11	16 57	17 46	7 04 79	15 17 16					
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 9 ^h 20 ^m 2		Mag: -3.8 PMG: 10 ^h 13 ^m		Mag: +1.3 PMG: 10 ^h 47 ^m		Mag: -2.1 PMG: 10 ^h 45 ^m		Mag: +0.5 PMG: 22 ^h 06 ^m									
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄									
h	°	'	°	'	°	'	°	'	°	'								
0	219	34.0	206	51.3	+3	38.7	198	03.2	+8	15.9	198	19.0	+7	45.8	27	36.7	-2	11.5
1	234	36.4	221	51.0		39.9	213	03.9		16.6	213	20.9		46.0	42	39.3		11.5
2	249	38.9	236	50.7		41.0	228	04.6		17.3	228	22.9		46.2	57	41.9		11.4
3	264	41.4	251	50.3		42.2	243	05.3		18.1	243	24.8		46.4	72	44.6		11.4
4	279	43.8	266	50.0		43.4	258	06.0		18.8	258	26.7		46.6	87	47.2		11.3
5	294	46.3	281	49.7	+3	44.5	273	06.6	+8	19.5	273	28.6	+7	46.8	102	49.8	-2	11.2
6	309	48.8	296	49.3	+3	45.7	288	07.3	+8	20.2	288	30.5	+7	47.0	117	52.4	-2	11.2
7	324	51.2	311	49.0		46.9	303	08.0		20.9	303	32.4		47.3	132	55.0		11.1
8	339	53.7	326	48.6		48.0	318	08.7		21.7	318	34.3		47.5	147	57.6		11.1
9	354	56.2	341	48.3		49.2	333	09.4		22.4	333	36.2		47.7	163	00.2		11.0
10	9	58.6	356	48.0		50.3	348	10.1		23.1	348	38.2		47.9	178	02.8		11.0
11	25	01.1	11	47.6	+3	51.5	3	10.8	+8	23.8	3	40.1	+7	48.1	193	05.4	-2	10.9
12	40	03.5	26	47.3	+3	52.7	18	11.4	+8	24.6	18	42.0	+7	48.3	208	08.0	-2	10.9
13	55	06.0	41	46.9		53.8	33	12.1		25.3	33	43.9		48.6	223	10.6		10.8
14	70	08.5	56	46.6		55.0	48	12.8		26.0	48	45.8		48.8	238	13.3		10.7
15	85	10.9	71	46.3		56.1	63	13.5		26.7	63	47.7		49.0	253	15.9		10.7
16	100	13.4	86	45.9		57.3	78	14.2		27.4	78	49.6		49.2	268	18.5		10.6
17	115	15.9	101	45.6	+3	58.5	93	14.9	+8	28.2	93	51.6	+7	49.4	283	21.1	-2	10.6
18	130	18.3	116	45.2	+3	59.6	108	15.6	+8	28.9	108	53.5	+7	49.6	298	23.7	-2	10.5
19	145	20.8	131	44.9	+4	00.8	123	16.3		29.6	123	55.4		49.9	313	26.3		10.5
20	160	23.3	146	44.6		01.9	138	16.9		30.3	138	57.3		50.1	328	28.9		10.4
21	175	25.7	161	44.2		03.1	153	17.6		31.0	153	59.2		50.3	343	31.5		10.4
22	190	28.2	176	43.9		04.3	168	18.3		31.8	169	01.1		50.5	358	34.1		10.3
23	205	30.7	191	43.5		05.4	183	19.0		32.5	184	03.0		50.7	13	36.7		10.3
24	220	33.1	206	43.2	+4	06.6	198	19.7	+8	33.2	199	05.0	+7	50.9	28	39.3	-2	10.2
Dif	—		-3		+12		+7		+7		+19		+2		+26		+1	

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15 ^h 9 PMG: 11 ^h 56 ^m 9			Edad: 29 ^d 4 PHE { SD: 14 ^h 9 PMG: 12 ^h 03 ^m R°: 49 ^m 4 ^h : 54 ^m 6 12 ^h : 54 ^m 7 20 ^h : 54 ^m 8										
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora
h	°	'	°	°	'	°	'	h	m	h	m	h	m	m
0	180	45.5	+15 30.5	185	06.3	+17 57.7	79	60 N	1 33	3 00	3 54	3 26	21	21 00 73
1	195	45.5		199	38.1 ¹²⁸	+18 05.6	79	58	2 03	15	4 04	38 24		20 45 70
2	210	45.6		214	09.8 ¹²⁷		79	56	25	28	13	49 26		32 68
3	225	45.7		228	41.4 ¹²⁶		78	54	43	39	20	3 58 29		21 66
4	240	45.7		243	13.0 ¹²⁶		77	52	2 57	48	27	4 07 30		11 65
5	255	45.8	+15 34.2	257	44.5 ¹²⁵	+18 36.6	76	50	3 10	3 57	4 34	4 14 32		20 02 64
6	270	45.9	+15 34.9	272	15.9 ¹²⁴	+18 44.2	76	45	3 34	4 15	4 47	4 30 35		19 44 61
7	285	45.9		286	47.3 ¹²⁴		74	40	3 53	29	4 58	44 37		29 59
8	300	46.0		301	18.7 ¹²⁴	+18 59.0	74	35	4 08	40	5 08	4 55 39		16 57
9	315	46.1		315	49.9 ¹²²	+19 06.3	73	30	20	4 50	16	5 05 41		19 05 56
10	330	46.1		330	21.1 ¹²²		73	20	40	5 07	30	22 44		18 46 53
11	345	46.2	+15 38.6	344	52.3 ¹²²	+19 20.7	71	10 N	4 55	5 20	5 42	5 37 46		18 30 51
12	0	46.2	+15 39.3	359	23.4 ¹²¹	+19 27.7	70	0	5 07	5 32	5 53	5 51 49		18 14 50
13	15	46.3		13	54.4 ¹²⁰		70	10 S	18	43	6 05	6 05 51		17 59 48
14	30	46.4		28	25.3 ¹¹⁹		69	20	27	5 54	17	20 54		42 46
15	45	46.4		42	56.2 ¹¹⁹		68	30	37	6 05	30	38 56		24 43
16	60	46.5		57	27.1 ¹¹⁹	+19 55.1	67	35	41	11	38	6 48 58		13 42
17	75	46.6	+15 43.0	71	57.8 ¹¹⁷	+20 01.7	66	40	5 46	6 18	6 46	7 00 60		17 00 41
18	90	46.6	+15 43.7	86	28.6 ¹¹⁸	+20 08.2	65	45	5 51	6 26	6 57	7 14 62		16 46 38
19	105	46.7		100	59.2 ¹¹⁶		64	50	56	35	7 09	31 65		28 35
20	120	46.7		115	29.8 ¹¹⁶		63	52	5 58	39	15	39 67		19 34
21	135	46.8		130	00.3 ¹¹⁵		63	54	6 01	43	21	48 68		16 10 32
22	150	46.9		144	30.8 ¹¹⁵		61	56		48	28	7 58 71		15 59 31
23	165	46.9		159	01.2 ¹¹⁴		61	58	06	53	36	8 10 73		47 28
24	180	47.0	+15 48.1	173	31.6 ¹¹⁴	+20 45.3	59	60 S	6 09	6 59	7 45	8 23 77		15 33 25
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG 9 ^h 16 ^m 3		Mag: -3.8 PMG: 10 ^h 13 ^m			Mag: +1.3 PMG: 10 ^h 46 ^m			Mag: -2.1 PMG: 10 ^h 42 ^m			Mag: +0.6 PMG: 22 ^h 02 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'
0	220	33.1	206 43.2	+4 06.6	198 19.7	+8 33.2	199 05.0	+7 50.9	28 39.3	-2 10.2				
1	235	35.6	221 42.9	07.7	213 20.4	33.9	214 06.9	51.1	43 41.9	10.1				
2	250	38.0	236 42.5	08.9	228 21.1	34.6	229 08.8	51.4	58 44.5	10.1				
3	265	40.5	251 42.2	10.1	243 21.7	35.4	244 10.7	51.6	73 47.1	10.0				
4	280	43.0	266 41.8	11.2	258 22.4	36.1	259 12.6	51.8	88 49.8	10.0				
5	295	45.4	281 41.5	+4 12.4	273 23.1	+8 36.8	274 14.5	+7 52.0	103 52.4	-2 09.9				
6	310	47.9	296 41.1	+4 13.5	288 23.8	+8 37.5	289 16.4	+7 52.2	118 55.0	-2 09.9				
7	325	50.4	311 40.8	14.7	303 24.5	38.2	304 18.4	52.4	133 57.6	09.8				
8	340	52.8	326 40.5	15.9	318 25.2	39.0	319 20.3	52.7	149 00.2	09.8				
9	355	55.3	341 40.1	17.0	333 25.9	39.7	334 22.2	52.9	164 02.8	09.7				
10	10	57.8	356 39.8	18.2	348 26.5	40.4	349 24.1	53.1	179 05.4	09.7				
11	26	00.2	11 39.4	+4 19.3	3 27.2	+8 41.1	4 26.0	+7 53.3	194 08.0	-2 09.6				
12	41	02.7	26 39.1	+4 20.5	18 27.9	+8 41.8	19 27.9	+7 53.5	209 10.6	-2 09.6				
13	56	05.1	41 38.8	21.7	33 28.6	42.5	34 29.8	53.7	224 13.2	09.5				
14	71	07.6	56 38.4	22.8	48 29.3	43.3	49 31.8	53.9	239 15.8	09.4				
15	86	10.1	71 38.1	24.0	63 30.0	44.0	64 33.7	54.2	254 18.4	09.4				
16	101	12.5	86 37.7	25.1	78 30.7	44.7	79 35.6	54.4	269 21.0	09.3				
17	116	15.0	101 37.4	+4 26.3	93 31.3	+8 45.4	94 37.5	+7 54.6	284 23.6	-2 09.3				
18	131	17.5	116 37.0	+4 27.5	108 32.0	+8 46.1	109 39.4	+7 54.8	299 26.2	-2 09.2				
19	146	19.9	131 36.7	28.6	123 32.7	46.8	124 41.3	55.0	314 28.8	09.2				
20	161	22.4	146 36.3	29.8	138 33.4	47.6	139 43.2	55.2	329 31.5	09.1				
21	176	24.9	161 36.0	30.9	153 34.1	48.3	154 45.2	55.4	344 34.1	09.1				
22	191	27.3	176 35.7	32.1	168 34.8	49.0	169 47.1	55.7	359 36.7	09.0				
23	206	29.8	191 35.3	33.2	183 35.5	49.7	184 49.0	55.9	14 39.3	09.0				
24	221	32.3	206 35.0	+4 34.4	198 36.1	+8 50.4	199 50.9	+7 56.1	29 41.9	-2 08.9				
Dif	—		-3 +12		+7 +7		+19 +2		+26 +1					

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 15 ^h 9			Edad: 30 ^d 4	PHE { 4 ^h : 55/0 12 ^h : 55/1 20 ^h : 55/2	Final del crepúsculo			Salida de Luna		Puesta de Luna				
	PMG: 11 ^h 56 ^m 8					Civil			Náutico		Hora R°		Hora R°		
	hG ☉	Dec		hG ☾	Dif	Dec	Dif								
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m	h m	h m	h m
0	180	47.0	+15 48.1	173	31.6	+20 45.3	59	60 N	20 04	21 00	22 32	3 47 30	22 13 63		
1	195	47.1	48.8	188	01.9 ¹¹³	51.2	59	58	19 54	20 44	21 58	4 02 33	21 55 62		
2	210	47.1	49.6	202	32.1 ¹¹²	+20 56.9	57	56	45	30	35	15 36	40 60		
3	225	47.2	50.3	217	02.3 ¹¹²	+21 02.6	57	54	36	19	16	27 37	27 60		
4	240	47.2	51.0	231	32.4 ¹¹¹	08.2	56	52	29	09	21 01	37 38	16 59		
5	255	47.3	+15 51.8	246	02.4 ¹¹⁰	+21 13.6	54	50	19 23	20 00	20 48	4 46 40	21 06 58		
6	270	47.4	+15 52.5	260	32.4 ¹¹⁰	+21 19.0	53	45	19 09	19 42	20 22	5 05 42	20 45 57		
7	285	47.4	53.2	275	02.4 ¹¹⁰	24.3	53	40	18 57	27	20 03	21 44	28 56		
8	300	47.5	53.9	289	32.3 ¹⁰⁹	29.4	51	35	48	15	19 48	34 45	13 56		
9	315	47.5	54.7	304	02.1 ¹⁰⁸	34.5	51	30	39	19 05	35	5 46 46	20 01 55		
10	330	47.6	55.4	318	31.9 ¹⁰⁸	39.4	49	20	25	18 48	15	6 06 48	19 39 54		
11	345	47.6	+15 56.1	333	01.6 ¹⁰⁷	+21 44.3	49	10 N	18 12	18 34	19 00	6 23 50	19 21 53		
12	0	47.7	+15 56.9	347	31.3 ¹⁰⁷	+21 49.0	47	0	18 00	18 22	18 47	6 40 51	19 04 52		
13	15	47.8	57.6	2	00.9 ¹⁰⁶	53.6	46	10 S	17 49	18 11	36	6 56 52	18 47 51		
14	30	47.8	58.3	16	30.4 ¹⁰⁵	+21 58.2	46	20	37	17 59	26	7 14 53	28 50		
15	45	47.9	59.0	30	59.9 ¹⁰⁵	+22 02.6	44	30	23	48	16	34 55	18 07 49		
16	60	47.9	+15 59.7	45	29.4 ¹⁰⁵	06.9	43	35	15	41	11	7 46 56	17 55 48		
17	75	48.0	+16 00.5	59	58.8 ¹⁰⁴	+22 11.1	42	40	17 06	17 34	18 06	8 00 57	17 41 47		
18	90	48.0	+16 01.2	74	28.1 ¹⁰³	+22 15.2	41	45	16 55	17 26	18 01	8 16 59	17 24 46		
19	105	48.1	01.9	88	57.4 ¹⁰³	19.2	40	50	43	17	17 56	36 61	17 03 44		
20	120	48.2	02.6	103	26.6 ¹⁰²	23.1	39	52	37	13	53	46 62	16 53 43		
21	135	48.2	03.4	117	55.8 ¹⁰²	26.8	37	54	30	08	51	8 56 64	42 42		
22	150	48.3	04.1	132	25.0 ¹⁰²	30.5	37	56	23	17 03	48	9 09 65	30 41		
23	165	48.3	04.8	146	54.0 ¹⁰⁰	34.0	35	58	15	16 58	45	23 67	16 15 39		
24	180	48.4	+16 05.5	161	23.1 ¹⁰¹	+22 37.5	35	60 S	16 06	16 52	17 42	9 40 69	15 58 37		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG		Mag: -3.8			Mag: +1.3			Mag: -2.1			Mag: +0.6			
	9 ^h 12 ^m 3		PMG: 10 ^h 14 ^m			PMG: 10 ^h 45 ^m			PMG: 10 ^h 39 ^m			PMG: 21 ^h 57 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	'	°	°	'	°	°	'	°	°	'	°	'
0	221	32.3	206	35.0	+4 34.4	198	36.1	+8 50.4	199	50.9	+7 56.1	29	41.9	-2 08.9	
1	236	34.7	221	34.6	35.6	213	36.8	51.1	214	52.8	56.3	44	44.5	08.9	
2	251	37.2	236	34.3	36.7	228	37.5	51.9	229	54.7	56.5	59	47.1	08.8	
3	266	39.6	251	33.9	37.9	243	38.2	52.6	244	56.6	56.7	74	49.7	08.8	
4	281	42.1	266	33.6	39.0	258	38.9	53.3	259	58.6	56.9	89	52.3	08.7	
5	296	44.6	281	33.2	+4 40.2	273	39.6	+8 54.0	275	00.5	+7 57.2	104	54.9	-2 08.6	
6	311	47.0	296	32.9	+4 41.3	288	40.3	+8 54.7	290	02.4	+7 57.4	119	57.5	-2 08.6	
7	326	49.5	311	32.6	42.5	303	40.9	55.4	305	04.3	57.6	135	00.1	08.5	
8	341	52.0	326	32.2	43.7	318	41.6	56.1	320	06.2	57.8	150	02.7	08.5	
9	356	54.4	341	31.9	44.8	333	42.3	56.9	335	08.1	58.0	165	05.3	08.4	
10	11	56.9	356	31.5	46.0	348	43.0	57.6	350	10.1	58.2	180	07.9	08.4	
11	26	59.4	11	31.2	+4 47.1	3	43.7	+8 58.3	5	12.0	+7 58.4	195	10.5	-2 08.3	
12	42	01.8	26	30.8	+4 48.3	18	44.4	+8 59.0	20	13.9	+7 58.7	210	13.1	-2 08.3	
13	57	04.3	41	30.5	49.4	33	45.0	+8 59.7	35	15.8	58.9	225	15.7	08.2	
14	72	06.8	56	30.1	50.6	48	45.7	+9 00.4	50	17.7	59.1	240	18.3	08.2	
15	87	09.2	71	29.8	51.7	63	46.4	01.1	65	19.6	59.3	255	20.9	08.1	
16	102	11.7	86	29.4	52.9	78	47.1	01.8	80	21.5	59.5	270	23.5	08.1	
17	117	14.1	101	29.1	+4 54.1	93	47.8	+9 02.6	95	23.5	+7 59.7	285	26.1	-2 08.0	
18	132	16.6	116	28.8	+4 55.2	108	48.5	+9 03.3	110	25.4	+7 59.9	300	28.7	-2 08.0	
19	147	19.1	131	28.4	56.4	123	49.2	04.0	125	27.3	+8 00.2	315	31.3	07.9	
20	162	21.5	146	28.1	57.5	138	49.8	04.7	140	29.2	00.4	330	33.9	07.9	
21	177	24.0	161	27.7	58.7	153	50.5	05.4	155	31.1	00.6	345	36.6	07.8	
22	192	26.5	176	27.4	+4 59.8	168	51.2	06.1	170	33.0	00.8	0	39.2	07.8	
23	207	28.9	191	27.0	+5 01.0	183	51.9	06.8	185	35.0	01.0	15	41.8	07.7	
24	222	31.4	206	26.7	+5 02.1	198	52.6	+9 07.5	200	36.9	+8 01.2	30	44.4	-2 07.7	
Dif	—		-3 +12			+7 +7			+19 +2			+26 +1			

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: 1 ^d 7 PHE { 4 ^h : 55 ^h 4 12 ^h : 55 ^h 5 20 ^h : 55 ^h 7 PMG: 13 ^h 43 ^m R ^o : 53 ^m										
	hG ☉	Dec		hG ☾	Dif Dec Dif			Náutico	Civil		Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	
0	180	48.4	+16	05.5	161	23.1	+22 37.5	60 N	1 21	2 53	3 48	4 17 46	23 16 48	
1	195	48.4		06.2	175	52.1	40.8 33	58	1 55	3 09	3 59	35 47	22 57 49	
2	210	48.5		07.0	190	21.0	44.0 32	56	2 18	22	4 08	4 51 47	40 50	
3	225	48.5		07.7	204	49.9	47.1 31	54	37	34	16	5 04 48	27 50	
4	240	48.6		08.4	219	18.8	50.0 29	52	2 52	44	24	15 49	15 50	
5	255	48.7	+16	09.1	233	47.6	+22 52.9 29	50	3 05	3 53	4 30	5 26 49	22 04 51	
6	270	48.7	+16	09.8	248	16.4	+22 55.6 27	45	3 31	4 11	4 44	5 47 50	21 42 51	
7	285	48.8		10.5	262	45.1	+22 58.2 26	40	3 50	26	4 56	6 05 50	24 51	
8	300	48.8		11.3	277	13.8	+23 00.7 25	35	4 05	38	5 06	19 51	21 09 52	
9	315	48.9		12.0	291	42.4	03.1 24	30	18	4 49	14	32 51	20 56 52	
10	330	48.9		12.7	306	11.0	05.4 23	20	38	5 06	29	6 54 52	33 53	
11	345	49.0	+16	13.4	320	39.6	+23 07.5 21	10 N	4 54	5 20	5 42	7 13 52	20 14 53	
12	0	49.0	+16	14.1	335	08.1	+23 09.6 21	0	5 07	5 32	5 53	7 31 52	19 56 53	
13	15	49.1		14.8	349	36.6	11.5 19	10 S	18	43	6 05	7 48 53	38 53	
14	30	49.1		15.5	4	05.1	13.2 17	20	28	5 54	17	8 07 54	19 18 54	
15	45	49.2		16.3	18	33.5	14.9 17	30	38	6 06	31	29 54	18 56 53	
16	60	49.2		17.0	33	01.9	16.4 15	35	43	13	39	42 54	43 53	
17	75	49.3	+16	17.7	47	30.2	+23 17.9 15	40	5 48	6 20	6 48	8 57 55	18 28 53	
18	90	49.3	+16	18.4	61	58.5	+23 19.2 13	45	5 53	6 28	6 59	9 15 55	18 10 53	
19	105	49.4		19.1	76	26.8	20.3 11	50	5 59	37	7 12	37 55	17 47 54	
20	120	49.4		19.8	90	55.1	21.4 11	52	6 01	42	18	9 48 55	36 54	
21	135	49.5		20.5	105	23.3	22.3 9	54	04	46	25	10 00 55	24 54	
22	150	49.5		21.2	119	51.5	23.1 8	56	07	51	32	14 55	17 11 53	
23	165	49.6		21.9	134	19.6	23.8 7	58	09	6 57	40	30 55	16 54 54	
24	180	49.6	+16	22.7	148	47.8	+23 24.3 5	60 S	6 13	7 03	7 50	10 49 56	16 35 54	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG 9 ^h 08 ^m 4		Mag: -3.8 PMG: 10 ^h 14 ^m		Mag: +1.3 PMG: 10 ^h 44 ^m		Mag: -2.1 PMG: 10 ^h 36 ^m		Mag: +0.6 PMG: 21 ^h 53 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	222	31.4	206	26.7	+5 02.1	198	52.6	+9 07.5	200	36.9	+8 01.2	30	44.4	-2 07.7
1	237	33.9	221	26.3	03.3	213	53.3	08.3	215	38.8	01.4	45	47.0	07.6
2	252	36.3	236	26.0	04.4	228	53.9	09.0	230	40.7	01.7	60	49.6	07.5
3	267	38.8	251	25.6	05.6	243	54.6	09.7	245	42.6	01.9	75	52.2	07.5
4	282	41.2	266	25.3	06.7	258	55.3	10.4	260	44.5	02.1	90	54.8	07.4
5	297	43.7	281	24.9	+5 07.9	273	56.0	+9 11.1	275	46.5	+8 02.3	105	57.4	-2 07.4
6	312	46.2	296	24.6	+5 09.1	288	56.7	+9 11.8	290	48.4	+8 02.5	121	00.0	-2 07.3
7	327	48.6	311	24.2	10.2	303	57.4	12.5	305	50.3	02.7	136	02.6	07.3
8	342	51.1	326	23.9	11.4	318	58.0	13.2	320	52.2	02.9	151	05.2	07.2
9	357	53.6	341	23.5	12.5	333	58.7	13.9	335	54.1	03.1	166	07.8	07.2
10	12	56.0	356	23.2	13.7	348	59.4	14.6	350	56.0	03.4	181	10.4	07.1
11	27	58.5	11	22.8	+5 14.8	4	00.1	+9 15.4	5	58.0	+8 03.6	196	13.0	-2 07.1
12	43	01.0	26	22.5	+5 16.0	19	00.8	+9 16.1	20	59.9	+8 03.8	211	15.6	-2 07.0
13	58	03.4	41	22.1	17.1	34	01.5	16.8	36	01.8	04.0	226	18.2	07.0
14	73	05.9	56	21.8	18.3	49	02.1	17.5	51	03.7	04.2	241	20.8	06.9
15	88	08.4	71	21.4	19.4	64	02.8	18.2	66	05.6	04.4	256	23.4	06.9
16	103	10.8	86	21.1	20.6	79	03.5	18.9	81	07.5	04.6	271	26.0	06.8
17	118	13.3	101	20.7	+5 21.7	94	04.2	+9 19.6	96	09.5	+8 04.9	286	28.6	-2 06.8
18	133	15.7	116	20.4	+5 22.9	109	04.9	+9 20.3	111	11.4	+8 05.1	301	31.2	-2 06.7
19	148	18.2	131	20.0	24.0	124	05.6	21.0	126	13.3	05.3	316	33.8	06.7
20	163	20.7	146	19.7	25.2	139	06.2	21.7	141	15.2	05.5	331	36.4	06.6
21	178	23.1	161	19.3	26.3	154	06.9	22.4	156	17.1	05.7	346	39.0	06.6
22	193	25.6	176	19.0	27.5	169	07.6	23.1	171	19.0	05.9	1	41.6	06.5
23	208	28.1	191	18.6	28.6	184	08.3	23.9	186	21.0	06.1	16	44.2	06.5
24	223	30.5	206	18.3	+5 29.8	199	09.0	+9 24.6	201	22.9	+8 06.3	31	46.8	-2 06.4
Dif	—		-3 +12		+7 +7		+19 +2		+26 +1					

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15°9			Edad: 2 ^d 7 PHE { 4 ^h : 55/8 12 ^h : 56/0 20 ^h : 56/2 R°: 53 ^m										
	PMG: 11 ^h 56 ^m 7			SD: 15°2 PMG: 14 ^h 36 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m
0	180	49.6	+16 22.7	148	47.8	+23 24.3	5	60 N	20 09	21 06	22 45	5 03 62	*** ** *	*** ** *
1	195	49.7	23.4	163	15.9	24.8	3	58	19 58	20 49	22 07	22 61	23 46	36
2	210	49.7	24.1	177	43.9	25.1	1	56	49	35	21 41	38 61	30 38	
3	225	49.8	24.8	192	12.0	25.2	1	54	40	23	22	5 52 60	17 40	
4	240	49.8	25.5	206	40.0	25.3	1	52	33	13	21 06	6 04 59	23 05 41	
5	255	49.9	+16 26.2	221	08.0	25.2	1	50	19 26	20 03	20 52	6 15 58	22 55 42	
6	270	49.9	+16 26.9	235	36.0	25.0	2	45	19 11	19 44	20 26	6 37 58	22 33 45	
7	285	50.0	27.6	250	04.0	24.7	3	40	18 59	29	20 06	6 55 57	15 47	
8	300	50.0	28.3	264	31.9	24.2	5	35	49	17	19 50	7 10 57	22 01 47	
9	315	50.1	29.0	278	59.9	23.7	5	30	40	19 06	37	23 56	21 48 49	
10	330	50.1	29.7	293	27.8	22.9	8	20	25	18 49	16	7 46 55	26 50	
11	345	50.2	+16 30.4	307	55.7	22.1	8	10 N	18 12	18 34	19 00	8 05 54	21 07 52	
12	0	50.2	+16 31.1	322	23.6	21.1	10	0	18 00	18 22	18 47	8 23 54	20 49 53	
13	15	50.3	31.8	336	51.4	20.1	10	10 S	17 48	18 10	35	8 41 53	31 55	
14	30	50.3	32.5	351	19.3	18.8	13	20	35	17 58	25	9 01 52	20 12 56	
15	45	50.4	33.2	5	47.1	17.5	13	30	21	46	15	23 51	19 49 58	
16	60	50.4	33.9	20	15.0	16.0	15	35	13	39	10	36 50	36 59	
17	75	50.4	+16 34.6	34	42.8	14.4	16	40	17 03	17 32	18 04	9 52 49	19 21 60	
18	90	50.5	+16 35.3	49	10.6	12.7	17	45	16 53	17 24	17 59	10 10 48	19 03 62	
19	105	50.5	36.0	63	38.4	10.8	19	50	39	14	53	32 47	18 41 63	
20	120	50.6	36.7	78	06.2	08.8	20	52	33	10	50	43 46	30 64	
21	135	50.6	37.4	92	34.0	06.7	21	54	26	05	47	10 55 45	18 65	
22	150	50.7	38.1	107	01.7	04.5	22	56	19	17 00	44	11 09 44	18 04 67	
23	165	50.7	38.8	121	29.5	02.1	24	58	10	16 54	41	25 43	17 48 68	
24	180	50.8	+16 39.5	135	57.3	59.6	25	60 S	16 01	16 47	17 38	11 45 40	17 29 70	
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 9 ^h 04 ^m 5		Mag: -3.8 PMG: 10 ^h 15 ^m		Mag: +1.3 PMG: 10 ^h 43 ^m		Mag: -2.1 PMG: 10 ^h 33 ^m		Mag: +0.6 PMG: 21 ^h 49 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	223	30.5	206 18.3	+5 29.8	199 09.0	+9 24.6	201 22.9	+8 06.3	31 46.8	-2 06.4				
1	238	33.0	221 17.9	30.9	214 09.7	25.3	216 24.8	06.6	46 49.4	06.4				
2	253	35.5	236 17.6	32.1	229 10.3	26.0	231 26.7	06.8	61 52.0	06.3				
3	268	37.9	251 17.2	33.2	244 11.0	26.7	246 28.6	07.0	76 54.6	06.3				
4	283	40.4	266 16.9	34.4	259 11.7	27.4	261 30.5	07.2	91 57.2	06.2				
5	298	42.9	281 16.5	+5 35.5	274 12.4	+9 28.1	276 32.5	+8 07.4	106 59.8	-2 06.2				
6	313	45.3	296 16.2	+5 36.7	289 13.1	+9 28.8	291 34.4	+8 07.6	122 02.4	-2 06.1				
7	328	47.8	311 15.8	37.8	304 13.8	29.5	306 36.3	07.8	137 05.0	06.1				
8	343	50.2	326 15.4	39.0	319 14.4	30.2	321 38.2	08.0	152 07.6	06.0				
9	358	52.7	341 15.1	40.1	334 15.1	30.9	336 40.1	08.3	167 10.2	06.0				
10	13	55.2	356 14.7	41.3	349 15.8	31.6	351 42.0	08.5	182 12.8	05.9				
11	28	57.6	11 14.4	+5 42.4	4 16.5	+9 32.3	6 44.0	+8 08.7	197 15.4	-2 05.9				
12	44	00.1	26 14.0	+5 43.6	19 17.2	+9 33.0	21 45.9	+8 08.9	212 18.0	-2 05.8				
13	59	02.6	41 13.7	44.7	34 17.9	33.7	36 47.8	09.1	227 20.6	05.8				
14	74	05.0	56 13.3	45.9	49 18.5	34.4	51 49.7	09.3	242 23.2	05.7				
15	89	07.5	71 13.0	47.0	64 19.2	35.1	66 51.6	09.5	257 25.8	05.7				
16	104	10.0	86 12.6	48.2	79 19.9	35.8	81 53.6	09.7	272 28.4	05.6				
17	119	12.4	101 12.3	+5 49.3	94 20.6	+9 36.6	96 55.5	+8 10.0	287 31.0	-2 05.6				
18	134	14.9	116 11.9	+5 50.5	109 21.3	+9 37.3	111 57.4	+8 10.2	302 33.6	-2 05.5				
19	149	17.4	131 11.5	51.6	124 22.0	38.0	126 59.3	10.4	317 36.2	05.5				
20	164	19.8	146 11.2	52.8	139 22.6	38.7	142 01.2	10.6	332 38.8	05.4				
21	179	22.3	161 10.8	53.9	154 23.3	39.4	157 03.1	10.8	347 41.3	05.4				
22	194	24.7	176 10.5	55.0	169 24.0	40.1	172 05.1	11.0	2 43.9	05.3				
23	209	27.2	191 10.1	56.2	184 24.7	40.8	187 07.0	11.2	17 46.5	05.3				
24	224	29.7	206 09.8	+5 57.3	199 25.4	+9 41.5	202 08.9	+8 11.4	32 49.1	-2 05.2				
Dif	—		-4	+11	+7	+7	+19	+2	+26					

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna						
	SD: 15°9 PMG: 11 ^h 56 ^m 6			Edad: 3 ^d 7 PHE { 4 ^h : 56'4 12 ^h : 56'5 20 ^h : 56'7 PMG: 15 ^h 29 ^m R°: 53 ^m															
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°				
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m				
0	180	50.8	+16	39.5	135	57.3	+22 59.6	60 N	1 07	2 47	3 43	6 05	77	0 04	33				
1	195	50.8		40.2	150	25.1 88	57.0 26	58	1 46	3 03	3 54	23	74	** ** *	**				
2	210	50.8		40.9	164	52.8 87	54.2 28	56	2 11	17	4 04	39	71	** ** *	**				
3	225	50.9		41.6	179	20.6 88	51.3 29	54	31	30	12	6 52	70	23 57	31				
4	240	50.9		42.3	193	48.4 88	48.3 30	52	2 47	40	20	7 03	69	46	34				
5	255	51.0	+16	43.0	208	16.1 87	+22 45.2 31	50	3 00	3 49	4 27	7 13	67	23 37	35				
6	270	51.0	+16	43.7	222	43.9 88	+22 41.9 33	45	3 27	4 08	4 42	7 35	64	23 18	38				
7	285	51.1		44.4	237	11.7 88	38.5 34	40	3 47	24	4 54	7 52	62	23 02	41				
8	300	51.1		45.1	251	39.5 88	35.0 35	35	4 03	36	5 04	8 07	60	22 48	43				
9	315	51.1		45.8	266	07.2 87	31.4 36	30	16	4 47	13	19	60	37	44				
10	330	51.2		46.5	280	35.0 88	27.6 38	20	37	5 04	28	41	57	22 16	48				
11	345	51.2	+16	47.2	295	02.8 88	+22 23.7 39	10 N	4 53	5 19	5 41	8 59	55	21 59	50				
12	0	51.3	+16	47.8	309	30.6 88	+22 19.7 40	0	5 06	5 32	5 53	9 17	53	21 42	53				
13	15	51.3		48.5	323	58.4 88	15.5 42	10 S	18	43	6 05	34	51	26	55				
14	30	51.3		49.2	338	26.2 88	11.2 43	20	29	5 55	18	9 53	49	21 08	57				
15	45	51.4		49.9	352	54.1 89	06.8 44	30	39	6 07	33	10 14	47	20 47	61				
16	60	51.4		50.6	7	21.9 88	+22 02.3 45	35	44	14	41	26	46	35	62				
17	75	51.5	+16	51.3	21	49.8 89	+21 57.7 46	40	5 49	6 22	6 50	10 41	43	20 21	65				
18	90	51.5	+16	52.0	36	17.6 88	+21 52.9 48	45	5 55	6 30	7 01	10 58	41	20 05	66				
19	105	51.5		52.7	50	45.5 89	48.0 49	50	6 01	40	15	11 19	38	19 44	70				
20	120	51.6		53.4	65	13.4 89	43.0 50	52	04	45	21	29	37	34	72				
21	135	51.6		54.0	79	41.3 89	37.8 52	54	07	49	28	40	36	23	74				
22	150	51.7		54.7	94	09.2 89	32.5 53	56	10	6 55	36	11 53	33	19 11	76				
23	165	51.7		55.4	108	37.2 90	27.1 54	58	13	7 01	44	12 08	31	18 56	79				
24	180	51.7	+16	56.1	123	05.1 89	+21 21.6 55	60 S	6 16	7 07	7 54	12 25	28	18 39	82				
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO							
	PMG 9 ^h 00 ^m 5		Mag: -3.8 PMG: 10 ^h 16 ^m			Mag: +1.3 PMG: 10 ^h 42 ^m			Mag: -2.1 PMG: 10 ^h 30 ^m			Mag: +0.6 PMG: 21 ^h 45 ^m							
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec						
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'					
0	224	29.7	206	09.8	+5	57.3	199	25.4	+9	41.5	202	08.9	+8	11.4	32	49.1	-2	05.2	
1	239	32.1	221	09.4		58.5	214	26.1		42.2	217	10.8		11.6	47	51.7		05.2	
2	254	34.6	236	09.1	+5	59.6	229	26.7		42.9	232	12.7		11.9	62	54.3		05.1	
3	269	37.1	251	08.7	+6	00.8	244	27.4		43.6	247	14.7		12.1	77	56.9		05.1	
4	284	39.5	266	08.3		01.9	259	28.1		44.3	262	16.6		12.3	92	59.5		05.0	
5	299	42.0	281	08.0	+6	03.1	274	28.8	+9	45.0	277	18.5	+8	12.5	108	02.1	-2	05.0	
6	314	44.5	296	07.6	+6	04.2	289	29.5	+9	45.7	292	20.4	+8	12.7	123	04.7	-2	04.9	
7	329	46.9	311	07.3		05.4	304	30.1		46.4	307	22.3		12.9	138	07.3		04.9	
8	344	49.4	326	06.9		06.5	319	30.8		47.1	322	24.2		13.1	153	09.9		04.8	
9	359	51.9	341	06.6		07.6	334	31.5		47.8	337	26.2		13.3	168	12.5		04.8	
10	14	54.3	356	06.2		08.8	349	32.2		48.5	352	28.1		13.5	183	15.1		04.7	
11	29	56.8	11	05.8	+6	09.9	4	32.9	+9	49.2	7	30.0	+8	13.8	198	17.7	-2	04.7	
12	44	59.2	26	05.5	+6	11.1	19	33.6	+9	49.9	22	31.9	+8	14.0	213	20.3	-2	04.6	
13	60	01.7	41	05.1		12.2	34	34.2		50.6	37	33.8		14.2	228	22.9		04.6	
14	75	04.2	56	04.8		13.4	49	34.9		51.3	52	35.8		14.4	243	25.5		04.5	
15	90	06.6	71	04.4		14.5	64	35.6		52.0	67	37.7		14.6	258	28.1		04.5	
16	105	09.1	86	04.0		15.7	79	36.3		52.7	82	39.6		14.8	273	30.7		04.4	
17	120	11.6	101	03.7	+6	16.8	94	37.0	+9	53.4	97	41.5	+8	15.0	288	33.3	-2	04.4	
18	135	14.0	116	03.3	+6	17.9	109	37.6	+9	54.1	112	43.4	+8	15.2	303	35.9	-2	04.4	
19	150	16.5	131	03.0		19.1	124	38.3		54.8	127	45.4		15.4	318	38.5		04.3	
20	165	19.0	146	02.6		20.2	139	39.0		55.5	142	47.3		15.7	333	41.1		04.3	
21	180	21.4	161	02.2		21.4	154	39.7		56.2	157	49.2		15.9	348	43.7		04.2	
22	195	23.9	176	01.9		22.5	169	40.4		56.9	172	51.1		16.1	3	46.2		04.2	
23	210	26.3	191	01.5		23.6	184	41.0		57.6	187	53.0		16.3	18	48.8		04.1	
24	225	28.8	206	01.2	+6	24.8	199	41.7	+9	58.3	202	55.0	+8	16.5	33	51.4	-2	04.1	
Dif	—		-4		+11		+7		+7		+19		+2		+26			0	

UT	SOL		☾ LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 15 ^h 8		Edad: 4 ^d 7	PHE { 4 ^h : 56'9 12 ^h : 57'1 20 ^h : 57'3	SD: 15 ^h 5				R°: 52 ^m	Civil		Náutico	Hora R°		Hora R°	
	hG ☉	Dec			hG ☾	Dif				Dec	Dif					
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	
0	180	51.7	+16	56.1	123	05.1	+21	21.6	60 N	20	14	21	12	23	01	
1	195	51.8		56.8	137	33.1	90	16.0	58	20	03	20	55	22	16	
2	210	51.8		57.5	152	01.1	90	10.2	58	19	53	40	21	48	7	
3	225	51.8		58.2	166	29.1	90	+21	04.3	59	44	27	27	8	02	
4	240	51.9		58.8	180	57.1	90	+20	58.3	60	36	16	21	11	12	
5	255	51.9	+16	59.5	195	25.1	90	+20	52.2	61	19	29	20	07	20	
6	270	52.0	+17	00.2	209	53.2	91	+20	46.0	62	19	14	19	47	20	
7	285	52.0		00.9	224	21.3	91	39.6	64	40	19	01	31	20	08	
8	300	52.0		01.6	238	49.4	91	33.1	65	35	18	51	18	19	52	
9	315	52.1		02.2	253	17.5	91	26.5	66	30	42	19	07	38	19	
10	330	52.1		02.9	267	45.7	92	19.8	67	20	26	18	49	17	38	
11	345	52.1	+17	03.6	282	13.8	91	+20	13.0	68	18	13	18	35	19	
12	0	52.2	+17	04.3	296	42.0	92	+20	06.0	70	18	00	18	22	18	
13	15	52.2		05.0	311	10.2	92	+19	59.0	70	17	48	18	10	35	
14	30	52.2		05.6	325	38.5	93	51.8	72	20	34	17	57	24	25	
15	45	52.3		06.3	340	06.7	92	44.5	73	30	20	45	13	11	01	
16	60	52.3		07.0	354	35.0	93	37.1	74	35	11	38	08	12	41	
17	75	52.3	+17	07.7	9	03.4	94	+19	29.5	76	17	01	17	30	18	
18	90	52.4	+17	08.4	23	31.7	93	+19	21.9	76	16	50	17	21	17	
19	105	52.4		09.0	38	00.1	94	14.2	77	50	36	11	50	11	57	
20	120	52.4		09.7	52	28.5	94	+19	06.3	79	30	06	47	12	06	
21	135	52.5		10.4	66	56.9	94	+18	58.3	80	54	23	17	01	44	
22	150	52.5		11.1	81	25.3	94	50.2	81	56	15	16	56	41	26	
23	165	52.5		11.7	95	53.8	95	42.1	81	58	16	06	50	38	39	
24	180	52.6	+17	12.4	110	22.3	95	+18	33.8	83	15	56	16	43	17	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG: 8 ^h 56 ^m 6		Mag: -3.8 PMG: 10 ^h 16 ^m		Mag: +1.3 PMG: 10 ^h 41 ^m		Mag: -2.1 PMG: 10 ^h 27 ^m		Mag: +0.6 PMG: 21 ^h 41 ^m						
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'					
0	225	28.8	206	01.2	199	41.7	+9	58.3	202	55.0					
1	240	31.3	221	00.8	214	42.4		59.0	217	56.9					
2	255	33.7	236	00.4	221	43.1	+9	59.7	232	58.8					
3	270	36.2	251	00.1	28.2	244	43.8	+10	00.4	248	00.7				
4	285	38.7	265	59.7	29.4	259	44.5		01.1	263	02.6				
5	300	41.1	280	59.4	+6	30.5	274	45.1	+10	01.8	278	04.6			
6	315	43.6	295	59.0	+6	31.6	289	45.8	+10	02.5	293	06.5			
7	330	46.1	310	58.6		32.8	304	46.5		03.2	308	08.4			
8	345	48.5	325	58.3		33.9	319	47.2		03.9	323	10.3			
9	0	51.0	340	57.9		35.1	334	47.9		04.5	338	12.2			
10	15	53.5	355	57.5		36.2	349	48.5		05.2	353	14.2			
11	30	55.9	10	57.2	+6	37.3	4	49.2	+10	05.9	8	16.1			
12	45	58.4	25	56.8	+6	38.5	19	49.9	+10	06.6	23	18.0			
13	61	00.8	40	56.4		39.6	34	50.6		07.3	38	19.9			
14	76	03.3	55	56.1		40.7	49	51.3		08.0	53	21.8			
15	91	05.8	70	55.7		41.9	64	51.9		08.7	68	23.8			
16	106	08.2	85	55.4		43.0	79	52.6		09.4	83	25.7			
17	121	10.7	100	55.0	+6	44.2	94	53.3	+10	10.1	98	27.6			
18	136	13.2	115	54.6	+6	45.3	109	54.0	+10	10.8	113	29.5			
19	151	15.6	130	54.3		46.4	124	54.7		11.5	128	31.4			
20	166	18.1	145	53.9		47.6	139	55.3		12.2	143	33.4			
21	181	20.6	160	53.5		48.7	154	56.0		12.9	158	35.3			
22	196	23.0	175	53.2		49.8	169	56.7		13.6	173	37.2			
23	211	25.5	190	52.8		51.0	184	57.4		14.3	188	39.1			
24	226	28.0	205	52.4	+6	52.1	199	58.1	+10	15.0	203	41.0			
Dif	—		-4	+11		+7	+7		+19	+2		+26		0	

UT	SOL				LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15/8 PMG: 11 ^h 56 ^m 5				Edad: 5 ^d 7 PHE { SD: 15/6 PMG: 17 ^h 14 ^m 4 ^h : 57/5 12 ^h : 57/7 20 ^h : 58/0 R°: 51 ^m															
	hG ☉		Dec		hG ☾		Dif		Dec			Dif			Náutico	Civil	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m
0	180	52.6	+17	12.4	110	22.3	+18	33.8	85	58	60 N	0 51	2 40	3 38	8 48	90	1 00	16		
1	195	52.6		13.1	124	50.8	95	25.3	85	58		1 36	2 58	3 50	8 59	87	0 48	20		
2	210	52.6		13.7	139	19.4	96	16.8	85	56		2 04	3 13	4 00	9 09	84	37	23		
3	225	52.7		14.4	153	47.9	95	+18	08.2	86	54	25	25	09	18	81	28	25		
4	240	52.7		15.1	168	16.5	96	+17	59.5	87	52	42	36	17	26	78	20	27		
5	255	52.7	+17	15.8	182	45.2	97	+17	50.6	89	50	2 56	3 46	4 24	9 33	76	0 12	29		
6	270	52.8	+17	16.4	197	13.8	96	+17	41.7	89	45	3 24	4 06	4 39	9 48	72	**	**	**	
7	285	52.8		17.1	211	42.5	97		32.6	91	40	3 44	21	4 51	10 00	69	**	**	**	
8	300	52.8		17.8	226	11.2	97		23.5	91	35	4 01	34	5 02	11	65	**	**	**	
9	315	52.9		18.4	240	40.0	98		14.3	92	30	14	4 45	11	20	63	**	**	**	
10	330	52.9		19.1	255	08.7	97	+17	04.9	94	20	36	5 03	27	36	58	23	49	43	
11	345	52.9	+17	19.8	269	37.5	98	+16	55.4	95	10 N	4 52	5 18	5 40	10 49	55	23	38	47	
12	0	52.9	+17	20.4	284	06.4	99	+16	45.9	95	0	5 06	5 31	5 53	11 02	51	23	27	50	
13	15	53.0		21.1	298	35.2	98		36.2	97	10 S	18	44	6 06	15	48	16	54		
14	30	53.0		21.8	313	04.1	99		26.5	97	20	29	5 56	19	28	44	23	04	58	
15	45	53.0		22.4	327	33.0	99		16.6	99	30	40	6 09	34	44	40	22	50	63	
16	60	53.1		23.1	342	01.9	99	+16	06.7	99	35	45	16	42	11 53	37	42	66		
17	75	53.1	+17	23.8	356	30.9	100	+15	56.7	100	40	5 51	6 24	6 52	12 03	34	22	33	69	
18	90	53.1	+17	24.4	10	59.9	100	+15	46.5	102	45	5 57	6 32	7 04	12 15	31	22	22	72	
19	105	53.1		25.1	25	28.9	100		36.3	102	50	6 04	43	18	29	27	09	77		
20	120	53.2		25.8	39	57.9	100		26.0	103	52	07	47	24	36	25	22	03	79	
21	135	53.2		26.4	54	27.0	101		15.5	105	54	10	53	31	43	23	21	56	82	
22	150	53.2		27.1	68	56.1	101	+15	05.0	105	56	13	6 58	39	12 52	20	48	85		
23	165	53.2		27.7	83	25.2	101	+14	54.4	106	58	16	7 04	48	13 01	17	40	87		
24	180	53.3	+17	28.4	97	54.3	101	+14	43.7	107	60 S	6 20	7 11	7 59	13 11	14	21	30	91	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 8 ^h 52 ^m 7		Mag: -3.8 PMG: 10 ^h 17 ^m		Mag: +1.3 PMG: 10 ^h 40 ^m		Mag: -2.1 PMG: 10 ^h 24 ^m		Mag: +0.6 PMG: 21 ^h 37 ^m	
	hG ♈		hG ♀ Dec		hG ♂ Dec		hG ♃ Dec		hG ♄ Dec	
h	°	'	°	'	°	'	°	'	°	'
0	226	28.0	205	52.4	+6	52.1	199	58.1	+10	15.0
1	241	30.4	220	52.1		53.3	214	58.7		15.7
2	256	32.9	235	51.7		54.4	229	59.4		16.4
3	271	35.3	250	51.3		55.5	245	00.1		17.0
4	286	37.8	265	51.0		56.7	260	00.8		17.7
5	301	40.3	280	50.6	+6	57.8	275	01.5	+10	18.4
6	316	42.7	295	50.2	+6	58.9	290	02.1	+10	19.1
7	331	45.2	310	49.9	+7	00.1	305	02.8		19.8
8	346	47.7	325	49.5		01.2	320	03.5		20.5
9	1	50.1	340	49.1		02.3	335	04.2		21.2
10	16	52.6	355	48.8		03.5	350	04.9		21.9
11	31	55.1	10	48.4	+7	04.6	5	05.5	+10	22.6
12	46	57.5	25	48.0	+7	05.7	20	06.2	+10	23.3
13	62	00.0	40	47.7		06.9	35	06.9		24.0
14	77	02.5	55	47.3		08.0	50	07.6		24.7
15	92	04.9	70	46.9		09.1	65	08.3		25.3
16	107	07.4	85	46.6		10.3	80	08.9		26.0
17	122	09.8	100	46.2	+7	11.4	95	09.6	+10	26.7
18	137	12.3	115	45.8	+7	12.5	110	10.3	+10	27.4
19	152	14.8	130	45.4		13.7	125	11.0		28.1
20	167	17.2	145	45.1		14.8	140	11.7		28.8
21	182	19.7	160	44.7		15.9	155	12.3		29.5
22	197	22.2	175	44.3		17.1	170	13.0		30.2
23	212	24.6	190	44.0		18.2	185	13.7		30.9
24	227	27.1	205	43.6	+7	19.3	200	14.4	+10	31.5
Dif	—		-4 +11		+7 +7		+19 +2		+26 0	

UT	SOL			 LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna			
	SD: 15 ^h 8			Edad: 6 ^d 7	PHE {	4 ^h : 58 ^h /2 12 ^h : 58 ^h /4 20 ^h : 58 ^h /6 R°: 51 ^m			Final del crepúsculo			Salida de Luna		Puesta de Luna			
	PMG: 11 ^h 56 ^m 4								SD: 15 ^h 8 PMG: 18 ^h 05 ^m			Civil			Náutico		Hora
	hG ☉	Dec		hG ☾	Dif	Dec	Dif										
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m	h m m	h m m
0	180	53.3	+17 28.4	97	54.3	+14 43.7		60 N	20 19	21 19	23 24	10 18 92	1 16 12				
1	195	53.3	29.1	112	23.5 ¹⁰²	33.0 ¹⁰⁷		58	20 07	21 00	22 26	26 88	08 15				
2	210	53.3	29.7	126	52.7 ¹⁰²	22.1 ¹⁰⁹		56	19 56	20 44	21 55	33 85	1 00 18				
3	225	53.4	30.4	141	21.9 ¹⁰²	11.1 ¹¹⁰		54	47	31	33	39 82	0 53 21				
4	240	53.4	31.0	155	51.1 ¹⁰²	+14 00.1 ¹¹⁰		52	39	20	15	44 80	47 23				
5	255	53.4	+17 31.7	170	20.4 ¹⁰³	+13 49.0 ¹¹¹		50	19 32	20 10	21 01	10 49 78	0 41 25				
6	270	53.4	+17 32.4	184	49.7 ¹⁰³	+13 37.8 ¹¹²		45	19 16	19 50	20 32	11 00 73	0 29 29				
7	285	53.5	33.0	199	19.0 ¹⁰³	26.5 ¹¹³		40	19 03	33	20 11	09 69	19 33				
8	300	53.5	33.7	213	48.3 ¹⁰³	15.1 ¹¹⁴		35	18 52	20	19 54	16 66	10 36				
9	315	53.5	34.3	228	17.7 ¹⁰⁴	+13 03.6 ¹¹⁵		30	43	19 09	40	23 63	0 03 38				
10	330	53.5	35.0	242	47.0 ¹⁰³	+12 52.1 ¹¹⁵		20	27	18 50	18	34 59	** ** *	** ** *			
11	345	53.6	+17 35.6	257	16.4 ¹⁰⁴	+12 40.5 ¹¹⁶		10 N	18 13	18 35	19 01	11 44 54	** ** *	** ** *			
12	0	53.6	+17 36.3	271	45.8 ¹⁰⁴	+12 28.8 ¹¹⁷		0	18 00	18 22	18 47	11 53 51	** ** *	** ** *			
13	15	53.6	37.0	286	15.3 ¹⁰⁵	17.0 ¹¹⁸		10 S	17 47	18 09	34	12 03 46	** ** *	** ** *			
14	30	53.6	37.6	300	44.7 ¹⁰⁴	+12 05.2 ¹¹⁸		20	34	17 57	23	12 43	** ** *	** ** *			
15	45	53.6	38.3	315	14.2 ¹⁰⁵	+11 53.2 ¹²⁰		30	18	43	12	24 37	23 53 64				
16	60	53.7	38.9	329	43.7 ¹⁰⁵	41.2 ¹²⁰		35	17 09	36	06	30 35	48 66				
17	75	53.7	+17 39.6	344	13.2 ¹⁰⁵	+11 29.2 ¹²⁰		40	16 59	17 28	18 00	12 37 32	23 42 69				
18	90	53.7	+17 40.2	358	42.7 ¹⁰⁵	+11 17.0 ¹²²		45	16 47	17 19	17 54	12 46 28	23 34 74				
19	105	53.7	40.9	13	12.3 ¹⁰⁶	+11 04.8 ¹²²		50	33	08	47	12 56 24	26 79				
20	120	53.8	41.5	27	41.8 ¹⁰⁵	+10 52.5 ¹²³		52	26	17 03	44	13 01 21	22 81				
21	135	53.8	42.2	42	11.4 ¹⁰⁶	40.1 ¹²⁴		54	19	16 58	41	06 19	18 83				
22	150	53.8	42.8	56	41.0 ¹⁰⁶	27.7 ¹²⁴		56	11	52	38	12 16	13 86				
23	165	53.8	43.5	71	10.6 ¹⁰⁶	15.2 ¹²⁵		58	16 02	46	34	18 14	07 89				
24	180	53.8	+17 44.1	85	40.2 ¹⁰⁶	+10 02.7 ¹²⁵		60 S	15 51	16 39	17 30	13 25 11	23 01 93				

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG 8 ^h 48 ^m 7		Mag: -3.8 PMG: 10 ^h 17 ^m		Mag: +1.3 PMG: 10 ^h 39 ^m		Mag: -2.1 PMG: 10 ^h 21 ^m		Mag: +0.6 PMG: 21 ^h 33 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	227	27.1	205	43.6	+7 19.3	200	14.4	+10 31.5	204	27.2	+8 26.6	35	55.8	-2 01.8
1	242	29.6	220	43.2	20.4	215	15.0	32.2	219	29.1	26.8	50	58.4	01.8
2	257	32.0	235	42.8	21.6	230	15.7	32.9	234	31.0	27.0	66	01.0	01.7
3	272	34.5	250	42.5	22.7	245	16.4	33.6	249	32.9	27.2	81	03.6	01.7
4	287	36.9	265	42.1	23.8	260	17.1	34.3	264	34.9	27.4	96	06.2	01.7
5	302	39.4	280	41.7	+7 25.0	275	17.8	+10 35.0	279	36.8	+8 27.6	111	08.8	-2 01.6
6	317	41.9	295	41.4	+7 26.1	290	18.4	+10 35.7	294	38.7	+8 27.8	126	11.3	-2 01.6
7	332	44.3	310	41.0	27.2	305	19.1	36.4	309	40.6	28.0	141	13.9	01.5
8	347	46.8	325	40.6	28.4	320	19.8	37.0	324	42.5	28.2	156	16.5	01.5
9	2	49.3	340	40.2	29.5	335	20.5	37.7	339	44.5	28.4	171	19.1	01.4
10	17	51.7	355	39.9	30.6	350	21.2	38.4	354	46.4	28.6	186	21.7	01.4
11	32	54.2	10	39.5	+7 31.7	5	21.8	+10 39.1	9	48.3	+8 28.9	201	24.3	-2 01.3
12	47	56.7	25	39.1	+7 32.9	20	22.5	+10 39.8	24	50.2	+8 29.1	216	26.9	-2 01.3
13	62	59.1	40	38.7	34.0	35	23.2	40.5	39	52.2	29.3	231	29.5	01.3
14	78	01.6	55	38.4	35.1	50	23.9	41.2	54	54.1	29.5	246	32.0	01.2
15	93	04.1	70	38.0	36.2	65	24.5	41.8	69	56.0	29.7	261	34.6	01.2
16	108	06.5	85	37.6	37.4	80	25.2	42.5	84	57.9	29.9	276	37.2	01.1
17	123	09.0	100	37.2	+7 38.5	95	25.9	+10 43.2	99	59.9	+8 30.1	291	39.8	-2 01.1
18	138	11.4	115	36.9	+7 39.6	110	26.6	+10 43.9	115	01.8	+8 30.3	306	42.4	-2 01.0
19	153	13.9	130	36.5	40.7	125	27.3	44.6	130	03.7	30.5	321	45.0	01.0
20	168	16.4	145	36.1	41.9	140	27.9	45.3	145	05.6	30.7	336	47.6	00.9
21	183	18.8	160	35.7	43.0	155	28.6	46.0	160	07.5	30.9	351	50.2	00.9
22	198	21.3	175	35.4	44.1	170	29.3	46.6	175	09.5	31.1	6	52.7	00.9
23	213	23.8	190	35.0	45.2	185	30.0	47.3	190	11.4	31.3	21	55.3	00.8
24	228	26.2	205	34.6	+7 46.4	200	30.6	+10 48.0	205	13.3	+8 31.6	36	57.9	-2 00.8
Dif	—		-4 +11		+7 +7		+19 +2		+26					

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8 PMG: 11 ^h 56 ^m 4			Edad: 7 ^d 7 PHE { 4 ^h : 58 ^m 8 12 ^h : 59 ^m 0 20 ^h : 59 ^m 2 PMG: 18 ^h 56 ^m R ^o : 50 ^m										
	hG ☉	Dec		hG ☾	Dif Dec Dif			Náutico	Civil		Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	h	m	h	m	h	m	m
0	180	53.8	+17	44.1	85	40.2	+10 02.7	60 N	0 28	2 33	3 33	11 50	93	1 28 10
1	195	53.9		44.8	100	09.8 ¹⁰⁶	+9 50.0 ¹²⁷	58	1 26	2 52	45	54	90	23 13
2	210	53.9		45.4	114	39.5 ¹⁰⁷	37.3 ¹²⁷	56	1 57	3 08	3 56	11 58	87	18 16
3	225	53.9		46.1	129	09.1 ¹⁰⁶	24.6 ¹²⁷	54	2 19	21	4 05	12 01	84	14 18
4	240	53.9		46.7	143	38.8 ¹⁰⁷	+9 11.8 ¹²⁸	52	37	32	13	04	82	10 20
5	255	53.9	+17	47.4	158	08.4 ¹⁰⁶	+8 58.9 ¹²⁹	50	2 52	3 42	4 21	12 07	79	1 06 23
6	270	54.0	+17	48.0	172	38.1 ¹⁰⁷	+8 45.9 ¹³⁰	45	3 20	4 03	4 36	12 13	75	0 58 27
7	285	54.0		48.7	187	07.8 ¹⁰⁷	32.9 ¹³⁰	40	42	19	4 49	18	71	52 31
8	300	54.0		49.3	201	37.5 ¹⁰⁷	19.9 ¹³⁰	35	3 59	32	5 00	22	67	46 34
9	315	54.0		49.9	216	07.2 ¹⁰⁷	+8 06.8 ¹³¹	30	4 13	4 44	10	26	64	41 37
10	330	54.0		50.6	230	36.9 ¹⁰⁷	+7 53.6 ¹³²	20	35	5 02	26	33	59	32 42
11	345	54.1	+17	51.2	245	06.6 ¹⁰⁷	+7 40.4 ¹³²	10 N	4 52	5 18	5 40	12 38	55	0 25 46
12	0	54.1	+17	51.9	259	36.3 ¹⁰⁷	+7 27.1 ¹³³	0	5 06	5 31	5 53	12 44	50	0 17 50
13	15	54.1		52.5	274	06.0 ¹⁰⁷	13.8 ¹³³	10 S	18	44	6 06	49	46	10 54
14	30	54.1		53.2	288	35.8 ¹⁰⁸	+7 00.4 ¹³⁴	20	30	5 56	20	12 55	41	0 02 59
15	45	54.1		53.8	303	05.5 ¹⁰⁷	+6 47.0 ¹³⁴	30	41	6 10	35	13 01	37	** ** *
16	60	54.1		54.4	317	35.2 ¹⁰⁷	33.5 ¹³⁵	35	47	17	44	05	34	** ** *
17	75	54.2	+17	55.1	332	04.9 ¹⁰⁷	+6 20.0 ¹³⁵	40	5 53	6 25	6 54	13 09	30	** ** *
18	90	54.2	+17	55.7	346	34.7 ¹⁰⁸	+6 06.4 ¹³⁶	45	5 59	6 35	7 06	13 14	27	** ** *
19	105	54.2		56.4	1	04.4 ¹⁰⁷	+5 52.8 ¹³⁶	50	6 06	45	21	20	22	** ** *
20	120	54.2		57.0	15	34.1 ¹⁰⁷	39.1 ¹³⁷	52	09	50	27	22	20	** ** *
21	135	54.2		57.6	30	03.8 ¹⁰⁷	25.4 ¹³⁷	54	13	6 56	35	25	18	** ** *
22	150	54.2		58.3	44	33.5 ¹⁰⁷	+5 11.7 ¹³⁷	56	16	7 01	43	28	16	** ** *
23	165	54.3		58.9	59	03.3 ¹⁰⁸	+4 57.9 ¹³⁸	58	20	08	7 53	32	13	** ** *
24	180	54.3	+17	59.5	73	33.0 ¹⁰⁷	+4 44.1 ¹³⁸	60 S	6 24	7 15	8 03	13 36	9	** ** *
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG 8 ^h 44 ^m 8		Mag: -3.8 PMG: 10 ^h 18 ^m			Mag: +1.3 PMG: 10 ^h 37 ^m			Mag: -2.1 PMG: 10 ^h 18 ^m			Mag: +0.6 PMG: 21 ^h 28 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	228	26.2	205	34.6	+7	46.4	200	30.6	+10	48.0	205	13.3	+8	31.6
1	243	28.7	220	34.2		47.5	215	31.3		48.7	220	15.2		31.8
2	258	31.2	235	33.9		48.6	230	32.0		49.4	235	17.2		32.0
3	273	33.6	250	33.5		49.7	245	32.7		50.1	250	19.1		32.2
4	288	36.1	265	33.1		50.9	260	33.4		50.7	265	21.0		32.4
5	303	38.6	280	32.7	+7	52.0	275	34.0	+10	51.4	280	22.9	+8	32.6
6	318	41.0	295	32.3	+7	53.1	290	34.7	+10	52.1	295	24.9	+8	32.8
7	333	43.5	310	32.0		54.2	305	35.4		52.8	310	26.8		33.0
8	348	45.9	325	31.6		55.4	320	36.1		53.5	325	28.7		33.2
9	3	48.4	340	31.2		56.5	335	36.7		54.1	340	30.6		33.4
10	18	50.9	355	30.8		57.6	350	37.4		54.8	355	32.6		33.6
11	33	53.3	10	30.4	+7	58.7	5	38.1	+10	55.5	10	34.5	+8	33.8
12	48	55.8	25	30.1	+7	59.8	20	38.8	+10	56.2	25	36.4	+8	34.0
13	63	58.3	40	29.7	+8	01.0	35	39.4		56.9	40	38.3		34.2
14	79	00.7	55	29.3		02.1	50	40.1		57.6	55	40.3		34.5
15	94	03.2	70	28.9		03.2	65	40.8		58.2	70	42.2		34.7
16	109	05.7	85	28.5		04.3	80	41.5		58.9	85	44.1		34.9
17	124	08.1	100	28.2	+8	05.4	95	42.2	+10	59.6	100	46.0	+8	35.1
18	139	10.6	115	27.8	+8	06.6	110	42.8	+11	00.3	115	48.0	+8	35.3
19	154	13.0	130	27.4		07.7	125	43.5		01.0	130	49.9		35.5
20	169	15.5	145	27.0		08.8	140	44.2		01.6	145	51.8		35.7
21	184	18.0	160	26.6		09.9	155	44.9		02.3	160	53.7		35.9
22	199	20.4	175	26.2		11.0	170	45.5		03.0	175	55.7		36.1
23	214	22.9	190	25.9		12.2	185	46.2		03.7	190	57.6		36.3
24	229	25.4	205	25.5	+8	13.3	200	46.9	+11	04.3	205	59.5	+8	36.5
Dif	—		-4		+11		+7		+7		+19		+2	
0														

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 15'8 PMG: 11 ^h 56 ^m 4			Edad: 8 ^d 7 PHE { SD: 16'2 PMG: 19 ^h 46 ^m 4 ^h : 59'4 12 ^h : 59'6 20 ^h : 59'8 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	54.3	+17	59.5	73	33.0	+4 44.1	60 N	20 24	21 25	** **	13 23	95	1 38	10
1	195	54.3	+18	00.2	88	02.7 ¹⁰⁷	30.2 ¹³⁹	58	11	21 05	22 37	24	92	36	12
2	210	54.3		00.8	102	32.3 ¹⁰⁶	16.3 ¹³⁹	56	20 00	20 49	22 03	25	88	34	15
3	225	54.3		01.5	117	02.0 ¹⁰⁷	+4 02.4 ¹³⁹	54	19 51	36	21 39	25	86	32	18
4	240	54.3		02.1	131	31.7 ¹⁰⁷	+3 48.4 ¹⁴⁰	52	42	24	20	26	83	30	20
5	255	54.3	+18	02.7	146	01.4 ¹⁰⁷	+3 34.4 ¹⁴⁰	50	19 35	20 13	21 05	13 26	82	1 29	22
6	270	54.4	+18	03.4	160	31.0 ¹⁰⁶	+3 20.4 ¹⁴⁰	45	19 18	19 52	20 35	13 28	76	1 25	27
7	285	54.4		04.0	175	00.7 ¹⁰⁷	+3 06.4 ¹⁴⁰	40	19 05	36	20 13	29	72	23	30
8	300	54.4		04.6	189	30.3 ¹⁰⁶	+2 52.3 ¹⁴¹	35	18 54	22	19 56	29	69	20	34
9	315	54.4		05.2	203	59.9 ¹⁰⁶	38.1 ¹⁴²	30	44	19 10	41	30	66	18	37
10	330	54.4		05.9	218	29.5 ¹⁰⁶	24.0 ¹⁴¹	20	28	18 51	19	32	60	14	42
11	345	54.4	+18	06.5	232	59.1 ¹⁰⁶	+2 09.8 ¹⁴²	10 N	18 13	18 35	19 01	13 33	55	1 11	46
12	0	54.4	+18	07.1	247	28.6 ¹⁰⁵	+1 55.7 ¹⁴¹	0	18 00	18 22	18 47	13 34	51	1 07	51
13	15	54.4		07.8	261	58.2 ¹⁰⁶	41.4 ¹⁴³	10 S	17 47	18 09	34	35	47	04	55
14	30	54.5		08.4	276	27.7 ¹⁰⁵	27.2 ¹⁴²	20	33	17 56	22	36	42	1 01	59
15	45	54.5		09.0	290	57.2 ¹⁰⁵	+1 13.0 ¹⁴²	30	17	42	11	38	37	0 57	64
16	60	54.5		09.7	305	26.7 ¹⁰⁵	+0 58.7 ¹⁴³	35	17 08	34	18 05	39	34	54	68
17	75	54.5	+18	10.3	319	56.1 ¹⁰⁴	+0 44.4 ¹⁴³	40	16 57	17 26	17 59	13 39	31	0 51	72
18	90	54.5	+18	10.9	334	25.6 ¹⁰⁵	+0 30.1 ¹⁴³	45	16 45	17 17	17 52	13 41	26	0 48	76
19	105	54.5		11.5	348	55.0 ¹⁰⁴	15.8 ¹⁴³	50	30	06	45	42	22	45	80
20	120	54.5		12.2	3	24.4 ¹⁰⁴	+0 01.4 ¹⁴⁴	52	23	17 00	41	42	21	43	82
21	135	54.5		12.8	17	53.8 ¹⁰⁴	-0 12.9 ¹⁴³	54	16	16 55	38	43	18	41	85
22	150	54.5		13.4	32	23.1 ¹⁰³	27.2 ¹⁴³	56	16 07	49	34	44	15	39	87
23	165	54.5		14.0	46	52.4 ¹⁰³	41.6 ¹⁴⁴	58	15 57	42	31	45	12	36	91
24	180	54.6	+18	14.7	61	21.7 ¹⁰³	-0 56.0 ¹⁴⁴	60 S	15 46	16 35	17 26	13 45	10	0 34	94

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 8 ^h 40 ^m 9		Mag: -3.8 PMG: 10 ^h 19 ^m		Mag: +1.3 PMG: 10 ^h 36 ^m		Mag: -2.1 PMG: 10 ^h 15 ^m		Mag: +0.6 PMG: 21 ^h 24 ^m									
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	229	25.4	205	25.5	+8	13.3	200	46.9	+11	04.3	205	59.5	+8	36.5	37	59.9	-1	59.7
1	244	27.8	220	25.1		14.4	215	47.6		05.0	221	01.4		36.7	53	02.5		59.7
2	259	30.3	235	24.7		15.5	230	48.2		05.7	236	03.4		36.9	68	05.1		59.6
3	274	32.8	250	24.3		16.6	245	48.9		06.4	251	05.3		37.1	83	07.7		59.6
4	289	35.2	265	23.9		17.7	260	49.6		07.1	266	07.2		37.3	98	10.3		59.6
5	304	37.7	280	23.6	+8	18.9	275	50.3	+11	07.7	281	09.1	+8	37.5	113	12.8	-1	59.5
6	319	40.2	295	23.2	+8	20.0	290	50.9	+11	08.4	296	11.1	+8	37.8	128	15.4	-1	59.5
7	334	42.6	310	22.8		21.1	305	51.6		09.1	311	13.0		38.0	143	18.0		59.4
8	349	45.1	325	22.4		22.2	320	52.3		09.8	326	14.9		38.2	158	20.6		59.4
9	4	47.5	340	22.0		23.3	335	53.0		10.4	341	16.8		38.4	173	23.2		59.4
10	19	50.0	355	21.6		24.4	350	53.6		11.1	356	18.8		38.6	188	25.7		59.3
11	34	52.5	10	21.2	+8	25.5	5	54.3	+11	11.8	11	20.7	+8	38.8	203	28.3	-1	59.3
12	49	54.9	25	20.9	+8	26.7	20	55.0	+11	12.5	26	22.6	+8	39.0	218	30.9	-1	59.2
13	64	57.4	40	20.5		27.8	35	55.7		13.2	41	24.5		39.2	233	33.5		59.2
14	79	59.9	55	20.1		28.9	50	56.4		13.8	56	26.5		39.4	248	36.1		59.1
15	95	02.3	70	19.7		30.0	65	57.0		14.5	71	28.4		39.6	263	38.7		59.1
16	110	04.8	85	19.3		31.1	80	57.7		15.2	86	30.3		39.8	278	41.2		59.1
17	125	07.3	100	18.9	+8	32.2	95	58.4	+11	15.9	101	32.2	+8	40.0	293	43.8	-1	59.0
18	140	09.7	115	18.5	+8	33.3	110	59.1	+11	16.5	116	34.2	+8	40.2	308	46.4	-1	59.0
19	155	12.2	130	18.2		34.5	125	59.7		17.2	131	36.1		40.4	323	49.0		58.9
20	170	14.7	145	17.8		35.6	141	00.4		17.9	146	38.0		40.6	338	51.6		58.9
21	185	17.1	160	17.4		36.7	156	01.1		18.5	161	39.9		40.8	353	54.1		58.9
22	200	19.6	175	17.0		37.8	171	01.8		19.2	176	41.9		41.0	8	56.7		58.8
23	215	22.0	190	16.6		38.9	186	02.4		19.9	191	43.8		41.3	23	59.3		58.8
24	230	24.5	205	16.2	+8	40.0	201	03.1	+11	20.6	206	45.7	+8	41.5	39	01.9	-1	58.7
Dif	—		-4		+11		+7		+7		+19		+2		+26			

UT	SOL				LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna						
	SD: 15/8 PMG: 11 ^h 56 ^m 4				Edad: 9 ^d 7 PHE SD: 16/3 PMG: 20 ^h 37 ^m																
					R ^e : 54 ^m																
	hG ☉	Dec			hG ☾	Dif				Náutico	Civil		Hora	R°	Hora	R°					
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	m					
0	180	54.6	+18	14.7	61	21.7	-0	56.0	60 N	**	**	2	27	3	28	14	58	98	1	48	9
1	195	54.6		15.3	75	51.0 ¹⁰³	-1	10.3 ¹⁴³	58	1	15	2	47	41	56	94	48	13			
2	210	54.6		15.9	90	20.2 ¹⁰²		24.7 ¹⁴⁴	56	1	49	3	03	3	52	53	91	49	16		
3	225	54.6		16.5	104	49.4 ¹⁰²		39.1 ¹⁴⁴	54	2	13	17	4	01	51	88	50	18			
4	240	54.6		17.1	119	18.5 ¹⁰¹	-1	53.5 ¹⁴⁴	52		32	28	10	49	86	50	21				
5	255	54.6	+18	17.8	133	47.7 ¹⁰²	-2	07.8 ¹⁴³	50	2	47	3	39	4	18	14	48	82	1	51	23
6	270	54.6	+18	18.4	148	16.8 ¹⁰¹	-2	22.2 ¹⁴⁴	45	3	17	4	00	4	34	14	44	78	1	52	27
7	285	54.6		19.0	162	45.8 ¹⁰⁰		36.6 ¹⁴⁴	40		39	17	47	41	73	53	31				
8	300	54.6		19.6	177	14.9 ¹⁰¹	-2	51.0 ¹⁴⁴	35	3	57	31	4	58	38	70	54	34			
9	315	54.6		20.2	191	43.8 ⁹⁹	-3	05.3 ¹⁴³	30	4	11	4	42	5	08	36	67	55	37		
10	330	54.6		20.9	206	12.8 ¹⁰⁰		19.7 ¹⁴⁴	20		34	5	01	25	32	62	56	43			
11	345	54.6	+18	21.5	220	41.7 ⁹⁹	-3	34.0 ¹⁴³	10 N	4	51	5	17	5	39	14	28	57	1	57	47
12	0	54.7	+18	22.1	235	10.6 ⁹⁹	-3	48.3 ¹⁴³	0	5	06	5	31	5	53	14	25	53	1	58	52
13	15	54.7		22.7	249	39.4 ⁹⁸	-4	02.7 ¹⁴⁴	10 S		19	44	6	06	22	48	1	59	56		
14	30	54.7		23.3	264	08.2 ⁹⁸		17.0 ¹⁴³	20		30	5	57	20	18	44	2	00	61		
15	45	54.7		24.0	278	36.9 ⁹⁷		31.3 ¹⁴³	30		42	6	11	36	15	39	01	66			
16	60	54.7		24.6	293	05.6 ⁹⁷		45.5 ¹⁴²	35		48	19	46	13	35	02	69				
17	75	54.7	+18	25.2	307	34.3 ⁹⁷	-4	59.8 ¹⁴³	40	5	54	6	27	6	56	14	10	33	2	03	73
18	90	54.7	+18	25.8	322	02.9 ⁹⁶	-5	14.0 ¹⁴²	45	6	01	6	37	7	08	14	07	29	2	04	77
19	105	54.7		26.4	336	31.5 ⁹⁶		28.2 ¹⁴²	50		09	48	23	04	24	05	82				
20	120	54.7		27.0	351	00.0 ⁹⁵		42.4 ¹⁴²	52		12	53	30	03	21	05	84				
21	135	54.7		27.6	5	28.5 ⁹⁵	-5	56.6 ¹⁴²	54		15	6	59	38	14	01	19	06	86		
22	150	54.7		28.2	19	56.9 ⁹⁴	-6	10.7 ¹⁴¹	56		19	7	05	47	13	59	17	06	90		
23	165	54.7		28.9	34	25.3 ⁹⁴		24.8 ¹⁴¹	58		23	12	7	57	57	14	07	93			
24	180	54.7	+18	29.5	48	53.6 ⁹³	-6	38.9 ¹⁴¹	60 S	6	27	7	19	8	08	13	55	11	2	08	96

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 8 ^h 37 ^m 0		Mag: -3.8 PMG: 10 ^h 19 ^m		Mag: +1.3 PMG: 10 ^h 35 ^m		Mag: -2.1 PMG: 10 ^h 12 ^m		Mag: +0.6 PMG: 21 ^h 20 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	230	24.5	205	16.2	+8	40.0	201	03.1	+11	20.6
1	245	27.0	220	15.8		41.1	216	03.8		21.2
2	260	29.4	235	15.4		42.2	231	04.5		21.9
3	275	31.9	250	15.0		43.3	246	05.1		22.6
4	290	34.4	265	14.6		44.5	261	05.8		23.3
5	305	36.8	280	14.3	+8	45.6	276	06.5	+11	23.9
6	320	39.3	295	13.9	+8	46.7	291	07.2	+11	24.6
7	335	41.8	310	13.5		47.8	306	07.8		25.3
8	350	44.2	325	13.1		48.9	321	08.5		26.0
9	5	46.7	340	12.7		50.0	336	09.2		26.6
10	20	49.1	355	12.3		51.1	351	09.9		27.3
11	35	51.6	10	11.9	+8	52.2	6	10.5	+11	28.0
12	50	54.1	25	11.5	+8	53.3	21	11.2	+11	28.6
13	65	56.5	40	11.1		54.4	36	11.9		29.3
14	80	59.0	55	10.7		55.5	51	12.5		30.0
15	96	01.5	70	10.3		56.6	66	13.2		30.6
16	111	03.9	85	09.9		57.7	81	13.9		31.3
17	126	06.4	100	09.5	+8	58.8	96	14.6	+11	32.0
18	141	08.9	115	09.1	+8	59.9	111	15.2	+11	32.7
19	156	11.3	130	08.8	+9	01.1	126	15.9		33.3
20	171	13.8	145	08.4		02.2	141	16.6		34.0
21	186	16.3	160	08.0		03.3	156	17.3		34.7
22	201	18.7	175	07.6		04.4	171	17.9		35.3
23	216	21.2	190	07.2		05.5	186	18.6		36.0
24	231	23.6	205	06.8	+9	06.6	201	19.3	+11	36.7
Dif	—		-4		+11		+7		+7	
									+19	
									+2	
									+26	
									0	

UT	SOL		LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna					
	SD: 15 ^h 8		Edad: 10 ^d 7	PHE { 4 ^h : 60/3 12 ^h : 60/4 20 ^h : 60/5 Rº: 56 ^m	SD: 16/4				Final del crepúsculo		Salida de Luna		Puesta de Luna					
	PMG: 11 ^h 56 ^m 4	PMG: 21 ^h 31 ^m			Civil	Náutico			Hora	Rº	Hora	Rº						
	hG ☉	Dec	hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	Rº	Hora	Rº				
h	°	'	°	'	°	'	°	h m	h m	h m	h m	m	h m	m				
0	180	54.7	+18	29.5	48	53.6	-6 38.9	60 N	20 29	21 32	** **	16 36	100	1 57 12				
1	195	54.7		30.1	63	21.9	-6 52.9 ¹⁴⁰	58	15	21 11	22 49	30 95		2 01 15				
2	210	54.7		30.7	77	50.1	-7 06.9 ¹⁴⁰	56	20 04	20 54	22 10	24 92		05 18				
3	225	54.7		31.3	92	18.3	92 20.9 ¹⁴⁰	54	19 54	40	21 45	19 89		08 21				
4	240	54.7		31.9	106	46.4	91 34.9 ¹⁴⁰	52	45	27	25	15 86		11 23				
5	255	54.7	+18	32.5	121	14.5	91 -7 48.8 ¹³⁹	50	19 37	20 17	21 09	16 10	85	2 14 25				
6	270	54.7	+18	33.1	135	42.5	90 -8 02.6 ¹³⁸	45	19 21	19 55	20 38	16 02	79	2 19 31				
7	285	54.7		33.7	150	10.4	89 16.4 ¹³⁸	40	19 07	38	20 15	15 54	76	24 34				
8	300	54.7		34.3	164	38.3	89 30.2 ¹³⁸	35	18 56	24	19 58	48 72		28 38				
9	315	54.7		34.9	179	06.2	89 43.9 ¹³⁷	30	46	19 12	43	43 69		32 41				
10	330	54.7		35.5	193	34.0	88 -8 57.6 ¹³⁷	20	28	18 52	20	34 63		39 45				
11	345	54.7	+18	36.1	208	01.7	87 -9 11.3 ¹³⁷	10 N	18 14	18 36	19 02	15 25	60	2 44 50				
12	0	54.7	+18	36.8	222	29.4	87 -9 24.9 ¹³⁶	0	18 00	18 22	18 47	15 18	55	2 50 54				
13	15	54.7		37.4	236	57.0	86 38.4 ¹³⁵	10 S	17 46	18 08	34	10 52		2 55 58				
14	30	54.7		38.0	251	24.5	85 -9 51.9 ¹³⁵	20	32	17 55	22	15 02	48	3 01 63				
15	45	54.7		38.6	265	52.0	85 -10 05.3 ¹³⁴	30	16	41	10	14 54	42	07 68				
16	60	54.7		39.2	280	19.5	85 18.7 ¹³⁴	35	17 06	33	18 04	48 40		11 71				
17	75	54.7	+18	39.8	294	46.8	83 -10 32.0 ¹³³	40	16 55	17 24	17 57	14 43	36	3 16 74				
18	90	54.7	+18	40.4	309	14.1	83 -10 45.2 ¹³²	45	16 43	17 14	17 50	14 36	32	3 21 78				
19	105	54.7		41.0	323	41.4	83 -10 58.4 ¹³²	50	27	17 03	42	28 28		27 83				
20	120	54.7		41.6	338	08.6	82 -11 11.5 ¹³¹	52	20	16 58	39	24 26		29 86				
21	135	54.7		42.2	352	35.7	81 24.6 ¹³¹	54	12	52	35	20 24		32 89				
22	150	54.7		42.8	7	02.8	81 37.6 ¹³⁰	56	16 03	46	31	16 20		36 91				
23	165	54.7		43.4	21	29.7	79 -11 50.5 ¹²⁹	58	15 53	39	27	11 17		40 94				
24	180	54.7	+18	44.0	35	56.7	80 -12 03.3 ¹²⁸	60 S	15 42	16 31	17 23	14 06	13	3 44 98				
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 8 ^h 33 ^m 0	Mag: -3.8 PMG: 10 ^h 20 ^m	Mag: +1.3 PMG: 10 ^h 34 ^m	Mag: -2.1 PMG: 10 ^h 09 ^m	Mag: +0.6 PMG: 21 ^h 16 ^m													
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec									
h	°	'	°	'	°	'	°	'	°	'								
0	231	23.6	205	06.8	+9	06.6	201	19.3	+11	36.7	207	32.0	+8	46.4	40	03.7	-1	57.8
1	246	26.1	220	06.4		07.7	216	20.0		37.3	222	33.9		46.6	55	06.3		57.7
2	261	28.6	235	06.0		08.8	231	20.6		38.0	237	35.8		46.8	70	08.9		57.7
3	276	31.0	250	05.6		09.9	246	21.3		38.7	252	37.8		47.0	85	11.5		57.7
4	291	33.5	265	05.2		11.0	261	22.0		39.3	267	39.7		47.2	100	14.1		57.6
5	306	36.0	280	04.8	+9	12.1	276	22.7	+11	40.0	282	41.6	+8	47.4	115	16.6	-1	57.6
6	321	38.4	295	04.4	+9	13.2	291	23.3	+11	40.7	297	43.6	+8	47.6	130	19.2	-1	57.5
7	336	40.9	310	04.0		14.3	306	24.0		41.3	312	45.5		47.8	145	21.8		57.5
8	351	43.4	325	03.6		15.4	321	24.7		42.0	327	47.4		48.0	160	24.4		57.5
9	6	45.8	340	03.2		16.5	336	25.3		42.7	342	49.3		48.2	175	26.9		57.4
10	21	48.3	355	02.8		17.6	351	26.0		43.3	357	51.3		48.4	190	29.5		57.4
11	36	50.7	10	02.4	+9	18.7	6	26.7	+11	44.0	12	53.2	+8	48.6	205	32.1	-1	57.3
12	51	53.2	25	02.0	+9	19.8	21	27.4	+11	44.7	27	55.1	+8	48.8	220	34.7	-1	57.3
13	66	55.7	40	01.6		20.9	36	28.0		45.3	42	57.1		49.0	235	37.2		57.3
14	81	58.1	55	01.2		22.0	51	28.7		46.0	57	59.0		49.2	250	39.8		57.2
15	97	00.6	70	00.8		23.1	66	29.4		46.7	73	00.9		49.4	265	42.4		57.2
16	112	03.1	85	00.4		24.2	81	30.1		47.3	88	02.8		49.6	280	45.0		57.1
17	127	05.5	100	00.0	+9	25.3	96	30.7	+11	48.0	103	04.8	+8	49.8	295	47.5	-1	57.1
18	142	08.0	114	59.6	+9	26.4	111	31.4	+11	48.7	118	06.7	+8	50.0	310	50.1	-1	57.1
19	157	10.5	129	59.2		27.5	126	32.1		49.3	133	08.6		50.2	325	52.7		57.0
20	172	12.9	144	58.8		28.6	141	32.7		50.0	148	10.6		50.4	340	55.3		57.0
21	187	15.4	159	58.4		29.7	156	33.4		50.7	163	12.5		50.6	355	57.8		57.0
22	202	17.9	174	58.0		30.8	171	34.1		51.3	178	14.4		50.8	11	00.4		56.9
23	217	20.3	189	57.6		31.9	186	34.8		52.0	193	16.3		51.1	26	03.0		56.9
24	232	22.8	204	57.2	+9	32.9	201	35.4	+11	52.6	208	18.3	+8	51.3	41	05.5	-1	56.8
Dif	—		-4	+11		+7	+7		+19	+2		+26		0				

UT	SOL			O 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: 11 ^d 7 PHE { 4 ^h : 60 ^s 5 12 ^h : 60 ^s 6 20 ^h : 60 ^s 5 PMG: 22 ^h 27 ^m R°: 59 ^m																
	hG ☉	Dec		hG ☾	Dif		Dec	Dif		Náutico	Civil		Hora	R°		Hora	R°			
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	m	h	m	m	
0	180	54.7	+18	44.0	35	56.7	-12	03.3	60 N	** **	2 20	3 23	18 16	98			2 09	16		
1	195	54.7		44.6	50	23.5	78	16.1 ¹²⁸	58	1 04	41	37	18 05	94			16	20		
2	210	54.7		45.2	64	50.3	78	28.8 ¹²⁷	56	1 42	2 58	48	17 56	91			23	23		
3	225	54.7		45.8	79	17.1	78	41.5 ¹²⁷	54	2 07	3 13	3 58	48 88			29	26			
4	240	54.7		46.3	93	43.7	76	-12 54.0 ¹²⁵	52	27	25	4 07	41 85			34	28			
5	255	54.7	+18	46.9	108	10.3	76	-13 06.5 ¹²⁵	50	2 43	3 35	4 15	17 35	83			2 39	30		
6	270	54.7	+18	47.5	122	36.9	76	-13 18.9 ¹²⁴	45	3 14	3 57	4 32	17 21	78			2 50	34		
7	285	54.7		48.1	137	03.3	74	31.2 ¹²³	40	37	4 15	45	10 74			2 58	39			
8	300	54.7		48.7	151	29.7	74	43.4 ¹²²	35	3 55	29	4 57	17 00	72			3 06	42		
9	315	54.7		49.3	165	56.1	74	-13 55.5 ¹²¹	30	4 09	4 41	5 07	16 52	69			13	44		
10	330	54.7		49.9	180	22.4	73	-14 07.6 ¹²¹	20	33	5 01	24	37 66			24	49			
11	345	54.7	+18	50.5	194	48.6	72	-14 19.5 ¹¹⁹	10 N	4 51	5 17	5 39	16 25	61			3 34	53		
12	0	54.7	+18	51.1	209	14.7	71	-14 31.4 ¹¹⁹	0	5 06	5 31	5 53	16 13	59			3 44	57		
13	15	54.7		51.7	223	40.8	71	43.2 ¹¹⁸	10 S	19	44	6 07	16 02	55			3 53	61		
14	30	54.7		52.3	238	06.8	70	-14 54.9 ¹¹⁷	20	31	5 58	21	15 50	51			4 04	64		
15	45	54.7		52.9	252	32.7	69	-15 06.4 ¹¹⁵	30	43	6 12	38	36 47			15	70			
16	60	54.7		53.4	266	58.6	69	17.9 ¹¹⁵	35	50	20	47	28 44			22	72			
17	75	54.6	+18	54.0	281	24.4	68	-15 29.3 ¹¹⁴	40	5 56	6 29	6 58	15 19	41			4 30	75		
18	90	54.6	+18	54.6	295	50.1	67	-15 40.6 ¹¹³	45	6 03	6 39	7 11	15 08	38			4 39	79		
19	105	54.6		55.2	310	15.8	67	-15 51.8 ¹¹²	50	11	50	26	14 56	34			50	84		
20	120	54.6		55.8	324	41.4	66	-16 02.8 ¹¹⁰	52	14	6 56	33	50 32			4 55	86			
21	135	54.6		56.4	339	07.0	66	13.8 ¹¹⁰	54	18	7 02	41	44 29			5 01	89			
22	150	54.6		57.0	353	32.4	64	24.7 ¹⁰⁹	56	22	08	7 50	36 27			07	92			
23	165	54.6		57.6	7	57.8	64	35.4 ¹⁰⁷	58	26	15	8 01	28 24			14	95			
24	180	54.6	+18	58.1	22	23.2	64	-16 46.1 ¹⁰⁷	60 S	6 31	7 23	8 12	14 19	20			5 22	100		
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO							
	PMG 8 ^h 29 ^m 1			Mag: -3.8 PMG: 10 ^h 20 ^m			Mag: +1.3 PMG: 10 ^h 33 ^m			Mag: -2.1 PMG: 10 ^h 05 ^m			Mag: +0.6 PMG: 21 ^h 12 ^m							
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec						
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	232	22.8	204	57.2	+9	32.9	201	35.4	+11	52.6	208	18.3	+8	51.3	41	05.5	-1	56.8		
1	247	25.2	219	56.8		34.0	216	36.1		53.3	223	20.2		51.5	56	08.1		56.8		
2	262	27.7	234	56.4		35.1	231	36.8		54.0	238	22.1		51.7	71	10.7		56.8		
3	277	30.2	249	56.0		36.2	246	37.5		54.6	253	24.1		51.9	86	13.3		56.7		
4	292	32.6	264	55.6		37.3	261	38.1		55.3	268	26.0		52.1	101	15.8		56.7		
5	307	35.1	279	55.1	+9	38.4	276	38.8	+11	56.0	283	27.9	+8	52.3	116	18.4	-1	56.7		
6	322	37.6	294	54.7	+9	39.5	291	39.5	+11	56.6	298	29.9	+8	52.5	131	21.0	-1	56.6		
7	337	40.0	309	54.3		40.6	306	40.1		57.3	313	31.8		52.7	146	23.6		56.6		
8	352	42.5	324	53.9		41.7	321	40.8		57.9	328	33.7		52.9	161	26.1		56.5		
9	7	45.0	339	53.5		42.8	336	41.5		58.6	343	35.6		53.1	176	28.7		56.5		
10	22	47.4	354	53.1		43.9	351	42.2		59.3	358	37.6		53.3	191	31.3		56.5		
11	37	49.9	9	52.7	+9	45.0	6	42.8	+11	59.9	13	39.5	+8	53.5	206	33.8	-1	56.4		
12	52	52.4	24	52.3	+9	46.1	21	43.5	+12	00.6	28	41.4	+8	53.7	221	36.4	-1	56.4		
13	67	54.8	39	51.9		47.2	36	44.2		01.2	43	43.4		53.9	236	39.0		56.4		
14	82	57.3	54	51.5		48.2	51	44.8		01.9	58	45.3		54.1	251	41.6		56.3		
15	97	59.7	69	51.1		49.3	66	45.5		02.6	73	47.2		54.3	266	44.1		56.3		
16	113	02.2	84	50.7		50.4	81	46.2		03.2	88	49.2		54.5	281	46.7		56.2		
17	128	04.7	99	50.3	+9	51.5	96	46.9	+12	03.9	103	51.1	+8	54.7	296	49.3	-1	56.2		
18	143	07.1	114	49.9	+9	52.6	111	47.5	+12	04.5	118	53.0	+8	54.9	311	51.8	-1	56.2		
19	158	09.6	129	49.4		53.7	126	48.2		05.2	133	55.0		55.1	326	54.4		56.1		
20	173	12.1	144	49.0		54.8	141	48.9		05.9	148	56.9		55.3	341	57.0		56.1		
21	188	14.5	159	48.6		55.9	156	49.5		06.5	163	58.8		55.5	356	59.6		56.1		
22	203	17.0	174	48.2		56.9	171	50.2		07.2	179	00.7		55.7	12	02.1		56.0		
23	218	19.5	189	47.8		58.0	186	50.9		07.8	194	02.7		55.9	27	04.7		56.0		
24	233	21.9	204	47.4	+9	59.1	201	51.6	+12	08.5	209	04.6	+8	56.1	42	07.3	-1	55.9		
Dif	—			-4 +11			+7 +7			+19 +2			+26 0							

UT	SOL		☉ LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8		Edad: 12 ^d 7 PHE { 4 ^h : 60 ^h 5 12 ^h : 60 ^h 4 20 ^h : 60 ^h 3 R°: 60 ^m											
	PMG: 11 ^h 56 ^m 4													
	hG ☉	Dec	hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	h m	h m	h m	h m m		h m m	
0	180	54.6	+18	58.1	22	23.2	-16 46.1	60 N	20 33	21 38	** **	19 54 90	2 25 23	
1	195	54.6		58.7	36	48.5	-16 56.6	58	20	21 16	23 02	39 87	36 27	
2	210	54.6		59.3	51	13.7	-17 07.0	56	20 08	20 58	22 18	27 83	46 30	
3	225	54.6	+18	59.9	65	38.9	17.3	54	19 58	44	21 51	16 81	2 55 33	
4	240	54.6	+19	00.5	80	04.0	27.5	52	48	31	30	19 06 79	3 02 36	
5	255	54.6	+19	01.1	94	29.0	-17 37.6	50	19 40	20 20	21 13	18 58 77	3 09 38	
6	270	54.5	+19	01.6	108	54.0	-17 47.5	45	19 23	19 57	20 41	18 39 75	3 24 42	
7	285	54.5		02.2	123	18.9	-17 57.3	40	19 09	40	18	24 72	37 45	
8	300	54.5		02.8	137	43.7	-18 07.0	35	18 57	25	20 00	12 70	48 47	
9	315	54.5		03.4	152	08.5	16.6	30	47	19 13	19 45	18 01 68	3 57 50	
10	330	54.5		04.0	166	33.3	26.1	20	29	18 53	21	17 43 65	4 13 53	
11	345	54.5	+19	04.5	180	57.9	-18 35.4	10 N	18 14	18 36	19 03	17 26 63	4 27 57	
12	0	54.5	+19	05.1	195	22.6	-18 44.6	0	18 00	18 22	18 47	17 12 60	4 41 59	
13	15	54.5		05.7	209	47.1	-18 53.6	10 S	17 46	18 08	34	16 57 58	4 54 62	
14	30	54.5		06.3	224	11.6	-19 02.6	20	31	17 54	21	41 55	5 08 66	
15	45	54.4		06.8	238	36.1	11.4	30	14	40	09	23 52	25 69	
16	60	54.4		07.4	253	00.5	20.0	35	17 05	32	18 02	12 51	34 71	
17	75	54.4	+19	08.0	267	24.9	-19 28.6	40	16 53	17 23	17 55	16 00 49	5 45 74	
18	90	54.4	+19	08.6	281	49.2	-19 36.9	45	16 40	17 12	17 48	15 46 46	5 58 77	
19	105	54.4		09.1	296	13.4	45.2	50	25	17 01	40	30 42	6 14 81	
20	120	54.4		09.7	310	37.6	-19 53.3	52	17	16 55	36	22 40	21 83	
21	135	54.4		10.3	325	01.8	-20 01.3	54	09	49	33	13 38	30 85	
22	150	54.4		10.9	339	25.9	09.1	56	16 00	43	29	15 03 36	39 88	
23	165	54.3		11.4	353	49.9	16.8	58	15 49	35	24	14 52 33	6 49 91	
24	180	54.3	+19	12.0	8	14.0	-20 24.4	60 S	15 37	16 27	17 19	14 39 29	7 02 95	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO		
	PMG: 8 ^h 25 ^m 2		Mag: -3.8 PMG: 10 ^h 21 ^m		Mag: +1.3 PMG: 10 ^h 32 ^m		Mag: -2.1 PMG: 10 ^h 02 ^m		Mag: +0.6 PMG: 21 ^h 08 ^m		
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec		
h	°	'	°	'	°	'	°	'	°	'	
0	233	21.9	204	47.4	+9	59.1	201	51.6	+12	08.5	
1	248	24.4	219	47.0	+10	00.2	216	52.2		09.1	
2	263	26.8	234	46.6		01.3	231	52.9		09.8	
3	278	29.3	249	46.2		02.4	246	53.6		10.5	
4	293	31.8	264	45.7		03.5	261	54.2		11.1	
5	308	34.2	279	45.3	+10	04.5	276	54.9	+12	11.8	
6	323	36.7	294	44.9	+10	05.6	291	55.6	+12	12.4	
7	338	39.2	309	44.5		06.7	306	56.2		13.1	
8	353	41.6	324	44.1		07.8	321	56.9		13.7	
9	8	44.1	339	43.7		08.9	336	57.6		14.4	
10	23	46.6	354	43.3		10.0	351	58.3		15.1	
11	38	49.0	9	42.8	+10	11.0	6	58.9	+12	15.7	
12	53	51.5	24	42.4	+10	12.1	21	59.6	+12	16.4	
13	68	54.0	39	42.0		13.2	37	00.3		17.0	
14	83	56.4	54	41.6		14.3	52	00.9		17.7	
15	98	58.9	69	41.2		15.4	67	01.6		18.3	
16	114	01.3	84	40.8		16.5	82	02.3		19.0	
17	129	03.8	99	40.4	+10	17.5	97	02.9	+12	19.6	
18	144	06.3	114	39.9	+10	18.6	112	03.6	+12	20.3	
19	159	08.7	129	39.5		19.7	127	04.3		20.9	
20	174	11.2	144	39.1		20.8	142	05.0		21.6	
21	189	13.7	159	38.7		21.9	157	05.6		22.2	
22	204	16.1	174	38.3		22.9	172	06.3		22.9	
23	219	18.6	189	37.8		24.0	187	07.0		23.6	
24	234	21.1	204	37.4	+10	25.1	202	07.6	+12	24.2	
Dif	—		-4	+11		+7	+7		+19	+2	
										+26	0

UT	SOL				LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15 ^h 8 PMG: 11 ^h 56 ^m 4				Edad: 13 ^d 7 PHE { 4 ^h : 60 ^m 2 12 ^h : 60 ^m 0 20 ^h : 59 ^m 9 PMG: **h **m R°: **m													
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m
0	180	54.3	+19	12.0	8	14.0	-20	24.4	60 N	**	**	2	14	3	19	21	24	72
1	195	54.3		12.6	22	38.0	50	31.8	58	0	50		36		32	21	06	70
2	210	54.3		13.1	37	01.9	49	39.0	56	1	34		2	54	44	20	50	70
3	225	54.3		13.7	51	25.8	49	46.1	54	2	02		3	09	3	55	37	69
4	240	54.3		14.3	65	49.7	49	53.1	52		22		21		4	04	25	68
5	255	54.3	+19	14.8	80	13.5	48	-20	59.9	50	2	39	3	32	4	12	20	15
6	270	54.2	+19	15.4	94	37.3	48	-21	06.6	45	3	11	3	55	4	29	19	54
7	285	54.2		16.0	109	01.0	47	13.1	65	40		35	4	13		43	36	66
8	300	54.2		16.5	123	24.7	47	19.4	63	35	3	53		27		4	55	22
9	315	54.2		17.1	137	48.4	47	25.6	62	30	4	08		4	39	5	06	19
10	330	54.2		17.7	152	12.1	47	31.7	61	20		32		5	00		23	18
11	345	54.2	+19	18.2	166	35.7	46	-21	37.6	10 N	4	50	5	16	5	39	18	29
12	0	54.1	+19	18.8	180	59.4	47	-21	43.4	0	5	05	5	31	5	53	18	12
13	15	54.1		19.4	195	22.9	45	48.9	55	10 S		19		45		6	07	17
14	30	54.1		19.9	209	46.5	46	54.4	55	20		32		5	59		22	36
15	45	54.1		20.5	224	10.1	46	-21	59.7	30		44		6	13		39	15
16	60	54.1		21.1	238	33.6	45	-22	04.8	35		51		22		6	49	17
17	75	54.1	+19	21.6	252	57.1	45	-22	09.7	40	5	58	6	31	7	00	16	49
18	90	54.0	+19	22.2	267	20.6	45	-22	14.6	45	6	05	6	41	7	13	16	32
19	105	54.0		22.7	281	44.1	45	19.2	46	50		13		53		29	12	52
20	120	54.0		23.3	296	07.5	44	23.7	45	52		17		6	58		36	16
21	135	54.0		23.9	310	31.0	45	28.0	43	54		21		7	04		45	15
22	150	54.0		24.4	324	54.4	44	32.2	42	56		25		11		7	54	39
23	165	53.9		25.0	339	17.9	45	36.2	40	58		29		18		8	05	25
24	180	53.9	+19	25.5	353	41.3	44	-22	40.0	60 S	6	34	7	27	8	17	15	08
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG 8 ^h 21 ^m 2		Mag: -3.8 PMG: 10 ^h 22 ^m				Mag: +1.3 PMG: 10 ^h 31 ^m				Mag: -2.1 PMG: 9 ^h 59 ^m				Mag: +0.7 PMG: 21 ^h 04 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	234	21.1	204	37.4	+10	25.1	202	07.6	+12	24.2	209	51.0	+9	00.9	43	08.9	-1	55.1
1	249	23.5	219	37.0		26.2	217	08.3		24.9	224	52.9		01.1	58	11.5		55.1
2	264	26.0	234	36.6		27.2	232	09.0		25.5	239	54.8		01.3	73	14.1		55.0
3	279	28.5	249	36.2		28.3	247	09.6		26.2	254	56.8		01.5	88	16.6		55.0
4	294	30.9	264	35.7		29.4	262	10.3		26.8	269	58.7		01.7	103	19.2		55.0
5	309	33.4	279	35.3	+10	30.5	277	11.0	+12	27.5	285	00.6	+9	01.9	118	21.8	-1	54.9
6	324	35.8	294	34.9	+10	31.5	292	11.6	+12	28.1	300	02.6	+9	02.1	133	24.3	-1	54.9
7	339	38.3	309	34.5		32.6	307	12.3		28.8	315	04.5		02.3	148	26.9		54.8
8	354	40.8	324	34.1		33.7	322	13.0		29.4	330	06.4		02.5	163	29.5		54.8
9	9	43.2	339	33.6		34.8	337	13.7		30.1	345	08.4		02.7	178	32.0		54.8
10	24	45.7	354	33.2		35.8	352	14.3		30.7	0	10.3		02.9	193	34.6		54.7
11	39	48.2	9	32.8	+10	36.9	7	15.0	+12	31.4	15	12.2	+9	03.1	208	37.1	-1	54.7
12	54	50.6	24	32.4	+10	38.0	22	15.7	+12	32.0	30	14.2	+9	03.3	223	39.7	-1	54.7
13	69	53.1	39	32.0		39.1	37	16.3		32.7	45	16.1		03.5	238	42.3		54.6
14	84	55.6	54	31.5		40.1	52	17.0		33.3	60	18.1		03.7	253	44.8		54.6
15	99	58.0	69	31.1		41.2	67	17.7		34.0	75	20.0		03.9	268	47.4		54.6
16	115	00.5	84	30.7		42.3	82	18.3		34.6	90	21.9		04.1	283	50.0		54.5
17	130	03.0	99	30.3	+10	43.3	97	19.0	+12	35.3	105	23.9	+9	04.3	298	52.5	-1	54.5
18	145	05.4	114	29.8	+10	44.4	112	19.7	+12	35.9	120	25.8	+9	04.5	313	55.1	-1	54.5
19	160	07.9	129	29.4		45.5	127	20.3		36.6	135	27.7		04.7	328	57.7		54.4
20	175	10.3	144	29.0		46.6	142	21.0		37.2	150	29.7		04.9	344	00.2		54.4
21	190	12.8	159	28.6		47.6	157	21.7		37.8	165	31.6		05.1	359	02.8		54.4
22	205	15.3	174	28.1		48.7	172	22.3		38.5	180	33.5		05.3	14	05.4		54.3
23	220	17.7	189	27.7		49.8	187	23.0		39.1	195	35.5		05.5	29	07.9		54.3
24	235	20.2	204	27.3	+10	50.8	202	23.7	+12	39.8	210	37.4	+9	05.7	44	10.5	-1	54.3
Dif	—		-4		+11		+7		+6		+19		+2		+26			
0																		

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8			Edad: 14 ^d 7 PHE { 4 ^h : 59/6 12 ^h : 59/4 20 ^h : 59/2					Final del crepúsculo			Salida de Luna		Puesta de Luna	
	PMG: 11 ^h 56 ^m 4			SD: 16/3 PMG: 0 ^h 26 ^m R°: 61 ^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	180	53.9	+19 25.5	353	41.3	-22 40.0	37	60 N	20 38	21 45	** **	22 36	50	3 24	54
1	195	53.9	26.1	8	04.8	45	43.7	58	24	21	23 20	16	52	43	55
2	210	53.9	26.6	22	28.2	44	47.3	56	12	21 03	22 26	22 00	52	3 58	56
3	225	53.9	27.2	36	51.7	45	50.6	54	20 01	20 48	21 57	21 46	53	4 12	57
4	240	53.8	27.8	51	15.1	44	53.8	52	19 51	35	35	33	54	24	57
5	255	53.8	+19 28.3	65	38.6	45	-22 56.9	50	19 43	20 23	21 17	21 22	55	4 34	58
6	270	53.8	+19 28.9	80	02.0	44	-22 59.7	45	19 25	20 00	20 44	21 00	55	4 56	58
7	285	53.8	29.4	94	25.5	45	-23 02.5	40	19 11	19 42	20	20 42	56	5 14	59
8	300	53.8	30.0	108	49.0	45	05.0	35	18 59	27	20 01	26	57	29	59
9	315	53.7	30.5	123	12.5	45	07.4	30	48	19 14	19 46	20 13	57	5 42	59
10	330	53.7	31.1	137	36.0	45	09.6	20	30	18 54	22	19 50	59	6 04	60
11	345	53.7	+19 31.6	151	59.5	45	-23 11.7	10 N	18 14	18 37	19 03	19 31	59	6 23	60
12	0	53.7	+19 32.2	166	23.1	46	-23 13.6	0	18 00	18 22	18 47	19 13	59	6 41	60
13	15	53.7	32.7	180	46.6	45	15.4	10 S	17 46	18 08	34	18 54	60	6 59	60
14	30	53.6	33.3	195	10.2	46	16.9	20	30	17 54	21	35	60	7 18	61
15	45	53.6	33.8	209	33.9	47	18.4	30	13	39	08	18 13	60	40	61
16	60	53.6	34.4	223	57.5	46	19.6	35	17 03	30	18 01	17 59	61	7 53	61
17	75	53.6	+19 34.9	238	21.2	47	-23 20.7	40	16 52	17 21	17 54	17 44	62	8 08	61
18	90	53.5	+19 35.5	252	44.9	47	-23 21.7	45	16 38	17 11	17 46	17 26	62	8 26	61
19	105	53.5	36.0	267	08.6	47	22.5	50	22	16 58	38	17 04	62	48	61
20	120	53.5	36.6	281	32.4	48	23.1	52	15	53	34	16 53	63	8 58	62
21	135	53.5	37.1	295	56.2	48	23.5	54	16 06	46	30	42	62	9 10	61
22	150	53.4	37.6	310	20.1	49	23.8	56	15 57	40	26	28	63	24	61
23	165	53.4	38.2	324	44.0	49	24.0	58	46	32	21	16 12	63	40	61
24	180	53.4	+19 38.7	339	07.9	49	-23 24.0	60 S	15 33	16 24	17 16	15 53	63	9 59	61

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG: 8 ^h 17 ^m 3		Mag: -3.8 PMG: 10 ^h 22 ^m		Mag: +1.3 PMG: 10 ^h 30 ^m		Mag: -2.1 PMG: 9 ^h 56 ^m		Mag: +0.7 PMG: 21 ^h 00 ^m						
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'					
0	235	20.2	204	27.3	+10 50.8	202	23.7	+12 39.8	210	37.4	+9 05.7	44	10.5	-1 54.3	
1	250	22.7	219	26.8	51.9	217	24.3	40.4	225	39.3	05.9	59	13.1	54.2	
2	265	25.1	234	26.4	53.0	232	25.0	41.1	240	41.3	06.1	74	15.6	54.2	
3	280	27.6	249	26.0	54.0	247	25.7	41.7	255	43.2	06.3	89	18.2	54.2	
4	295	30.1	264	25.6	55.1	262	26.3	42.4	270	45.1	06.5	104	20.7	54.1	
5	310	32.5	279	25.1	+10 56.2	277	27.0	+12 43.0	285	47.1	+9 06.7	119	23.3	-1 54.1	
6	325	35.0	294	24.7	+10 57.2	292	27.7	+12 43.7	300	49.0	+9 06.9	134	25.9	-1 54.1	
7	340	37.4	309	24.3	58.3	307	28.3	44.3	315	50.9	07.1	149	28.4	54.0	
8	355	39.9	324	23.8	+10 59.4	322	29.0	45.0	330	52.9	07.3	164	31.0	54.0	
9	10	42.4	339	23.4	+11 00.4	337	29.7	45.6	345	54.8	07.5	179	33.6	54.0	
10	25	44.8	354	23.0	01.5	352	30.3	46.2	0	56.7	07.7	194	36.1	53.9	
11	40	47.3	9	22.5	+11 02.6	7	31.0	+12 46.9	15	58.7	+9 07.9	209	38.7	-1 53.9	
12	55	49.8	24	22.1	+11 03.6	22	31.7	+12 47.5	31	00.6	+9 08.1	224	41.2	-1 53.9	
13	70	52.2	39	21.7	04.7	37	32.3	48.2	46	02.6	08.3	239	43.8	53.8	
14	85	54.7	54	21.3	05.7	52	33.0	48.8	61	04.5	08.5	254	46.4	53.8	
15	100	57.2	69	20.8	06.8	67	33.7	49.5	76	06.4	08.7	269	48.9	53.8	
16	115	59.6	84	20.4	07.9	82	34.3	50.1	91	08.4	08.9	284	51.5	53.7	
17	131	02.1	99	20.0	+11 08.9	97	35.0	+12 50.7	106	10.3	+9 09.1	299	54.1	-1 53.7	
18	146	04.6	114	19.5	+11 10.0	112	35.7	+12 51.4	121	12.2	+9 09.3	314	56.6	-1 53.7	
19	161	07.0	129	19.1	11.1	127	36.3	52.0	136	14.2	09.5	329	59.2	53.6	
20	176	09.5	144	18.7	12.1	142	37.0	52.7	151	16.1	09.7	345	01.7	53.6	
21	191	11.9	159	18.2	13.2	157	37.7	53.3	166	18.0	09.9	0	04.3	53.6	
22	206	14.4	174	17.8	14.2	172	38.3	54.0	181	20.0	10.1	15	06.9	53.5	
23	221	16.9	189	17.3	15.3	187	39.0	54.6	196	21.9	10.3	30	09.4	53.5	
24	236	19.3	204	16.9	+11 16.3	202	39.7	+12 55.2	211	23.8	+9 10.5	45	12.0	-1 53.5	
Dif	—		-4		+11	+7		+6	+19		+2	+26		0	

UT	SOL				LUNA							Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna			Puesta de Luna		
	SD: 15 ^h 8 PMG: 11 ^h 56 ^m 5				Edad: 15 ^d 7 PHE { 4 ^h : 58 ^m 9 12 ^h : 58 ^m 7 20 ^h : 58 ^m 4 PMG: 1 ^h 27 ^m R°: 59 ^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	53.4	+19	38.7	339	07.9			-23	24.0			60 N	** **	2 07	3 14	23 26	31	4 18	72	
1	195	53.4		39.3	353	31.9	50			23.8	2		58	0 32	31	29	23 08	34	38	70	
2	210	53.3		39.8	7	55.9	50			23.5	3		56	1 26	2 49	41	22 52	37	4 54	69	
3	225	53.3		40.4	22	20.0	51			23.0	5		54	1 56	3 05	3 52	39 39		5 09	67	
4	240	53.3		40.9	36	44.1	51			22.4	6		52	2 18	18	4 01	27 41		21	67	
5	255	53.3	+19	41.4	51	08.3	52			-23	21.6	8		50	2 35	3 29	4 09	22 17	42	5 32	66
6	270	53.2	+19	42.0	65	32.6	53			-23	20.6	10		45	3 08	3 53	4 27	21 55	45	5 54	65
7	285	53.2		42.5	79	56.9	53			19.5	11		40	32	4 11	42	38 47		6 13	63	
8	300	53.2		43.1	94	21.2	53			18.3	12		35	3 51	26	4 54	23 49		28	62	
9	315	53.1		43.6	108	45.6	54			16.9	14		30	4 07	38	5 05	21 10	51	6 41	62	
10	330	53.1		44.1	123	10.1	55			15.3	16		20	31	4 59	23	20 49	52	7 04	60	
11	345	53.1	+19	44.7	137	34.6	55			-23	13.6	17		10 N	4 50	5 16	5 38	20 30	54	7 23	59
12	0	53.1	+19	45.2	151	59.2	56			-23	11.7	19		0	5 05	5 31	5 53	20 12	56	7 41	58
13	15	53.0		45.7	166	23.8	56			09.7	20		10 S	19	45	6 07	19 54	58	7 59	57	
14	30	53.0		46.3	180	48.6	58			07.6	21		20	32	5 59	23	35 60		8 19	55	
15	45	53.0		46.8	195	13.3	57			05.3	23		30	45	6 14	40	13 62		41	54	
16	60	52.9		47.4	209	38.2	59			02.8	25		35	52	23	6 50	19 00	63	8 54	53	
17	75	52.9	+19	47.9	224	03.1	59			-23	00.3	25		40	5 59	6 32	7 02	18 46	64	9 09	52
18	90	52.9	+19	48.4	238	28.1	60			-22	57.5	28		45	6 07	6 43	7 15	18 28	66	9 27	50
19	105	52.9		49.0	252	53.2	61			54.6	29		50	16	6 55	32	18 06	69	9 49	48	
20	120	52.8		49.5	267	18.4	62			51.6	30		52	19	7 01	39	17 56	70	10 00	47	
21	135	52.8		50.0	281	43.6	62			48.5	31		54	23	07	48	44 71		11	47	
22	150	52.8		50.5	296	08.9	63			45.2	33		56	28	14	7 57	31 73		25	45	
23	165	52.7		51.1	310	34.3	64			41.7	35		58	32	22	8 08	17 15	75	10 41	43	
24	180	52.7	+19	51.6	324	59.7	64			-22	38.2	35		60 S	6 38	7 30	8 21	16 56	78	11 00	40

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG 8 ^h 13 ^m 4		Mag: -3.8 PMG: 10 ^h 23 ^m			Mag: +1.3 PMG: 10 ^h 29 ^m			Mag: -2.1 PMG: 9 ^h 53 ^m			Mag: +0.7 PMG: 20 ^h 56 ^m		
	hG ♈		hG ♀		Dec	hG ♂		Dec	hG ♃		Dec	hG ♄		Dec
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	236	19.3	204	16.9	+11 16.3	202	39.7	+12 55.2	211	23.8	+9 10.5	45	12.0	-1 53.5
1	251	21.8	219	16.5	17.4	217	40.3	55.9	226	25.8	10.7	60	14.5	53.5
2	266	24.3	234	16.0	18.5	232	41.0	56.5	241	27.7	10.9	75	17.1	53.4
3	281	26.7	249	15.6	19.5	247	41.7	57.2	256	29.7	11.1	90	19.7	53.4
4	296	29.2	264	15.2	20.6	262	42.3	57.8	271	31.6	11.3	105	22.2	53.4
5	311	31.7	279	14.7	+11 21.6	277	43.0	+12 58.4	286	33.5	+9 11.5	120	24.8	-1 53.3
6	326	34.1	294	14.3	+11 22.7	292	43.7	+12 59.1	301	35.5	+9 11.7	135	27.3	-1 53.3
7	341	36.6	309	13.9	23.7	307	44.3	+12 59.7	316	37.4	11.9	150	29.9	53.3
8	356	39.1	324	13.4	24.8	322	45.0	+13 00.4	331	39.3	12.1	165	32.5	53.2
9	11	41.5	339	13.0	25.9	337	45.7	01.0	346	41.3	12.3	180	35.0	53.2
10	26	44.0	354	12.5	26.9	352	46.3	01.6	1	43.2	12.5	195	37.6	53.2
11	41	46.4	9	12.1	+11 28.0	7	47.0	+13 02.3	16	45.2	+9 12.7	210	40.1	-1 53.1
12	56	48.9	24	11.7	+11 29.0	22	47.7	+13 02.9	31	47.1	+9 12.9	225	42.7	-1 53.1
13	71	51.4	39	11.2	30.1	37	48.3	03.6	46	49.0	13.1	240	45.3	53.1
14	86	53.8	54	10.8	31.1	52	49.0	04.2	61	51.0	13.3	255	47.8	53.0
15	101	56.3	69	10.3	32.2	67	49.7	04.8	76	52.9	13.5	270	50.4	53.0
16	116	58.8	84	09.9	33.2	82	50.3	05.5	91	54.8	13.7	285	52.9	53.0
17	132	01.2	99	09.5	+11 34.3	97	51.0	+13 06.1	106	56.8	+9 13.9	300	55.5	-1 53.0
18	147	03.7	114	09.0	+11 35.3	112	51.6	+13 06.7	121	58.7	+9 14.1	315	58.1	-1 52.9
19	162	06.2	129	08.6	36.4	127	52.3	07.4	137	00.7	14.3	331	00.6	52.9
20	177	08.6	144	08.1	37.4	142	53.0	08.0	152	02.6	14.5	346	03.2	52.9
21	192	11.1	159	07.7	38.5	157	53.6	08.6	167	04.5	14.7	1	05.7	52.8
22	207	13.6	174	07.2	39.5	172	54.3	09.3	182	06.5	14.9	16	08.3	52.8
23	222	16.0	189	06.8	40.6	187	55.0	09.9	197	08.4	15.1	31	10.8	52.8
24	237	18.5	204	06.3	+11 41.6	202	55.6	+13 10.6	212	10.3	+9 15.3	46	13.4	-1 52.7
Dif	—		-4		+11	+7		+6	+19		+2	+26		0

UT	SOL		☉ LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8 PMG: 11 ^h 56 ^m 5		Edad: 16 ^d 7 PHE { 4 ^h : 58 ^m 1 12 ^h : 57 ^m 8 20 ^h : 57 ^m 5 PMG: 2 ^h 26 ^m R°: 55 ^m											
	hG ☉	Dec	hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	
0	180	52.7	+19 51.6	324	59.7	-22 38.2	60 N	20 43	21 51	** **	23 57 20	5 30 83		
1	195	52.7	52.1	339	25.3	34.4	58	28	27	** **	42 24	5 48 79		
2	210	52.6	52.7	353	50.9	30.6	56	15	21 07	22 35	29 27	6 03 77		
3	225	52.6	53.2	8	16.6	26.6	54	20 04	20 52	22 03	18 29	16 74		
4	240	52.6	53.7	22	42.4	22.5	52	19 54	38	21 40	23 08 31	28 72		
5	255	52.5	+19 54.2	37	08.3	-22 18.3	50	19 46	20 26	21 21	22 59 33	6 38 70		
6	270	52.5	+19 54.8	51	34.2	-22 13.9	45	19 27	20 02	20 47	22 40 37	6 59 67		
7	285	52.5	55.3	66	00.3	09.4	40	13	19 44	23	25 39	7 16 65		
8	300	52.4	55.8	80	26.4	-22 04.7	35	19 00	29	20 03	12 41	30 63		
9	315	52.4	56.3	94	52.6	-22 00.0	30	18 49	19 16	19 48	22 01 43	7 43 61		
10	330	52.4	56.9	109	18.9	-21 55.1	20	31	18 55	23	21 41 47	8 04 59		
11	345	52.3	+19 57.4	123	45.3	-21 50.1	10 N	18 15	18 37	19 04	21 24 49	8 22 56		
12	0	52.3	+19 57.9	138	11.8	-21 44.9	0	18 00	18 22	18 48	21 08 52	8 39 54		
13	15	52.3	58.4	152	38.4	39.7	10 S	17 45	18 08	33	20 52 54	8 56 52		
14	30	52.2	59.0	167	05.1	34.3	20	30	17 53	20	35 57	9 14 50		
15	45	52.2	+19 59.5	181	31.9	28.8	30	12	38	07	15 61	35 47		
16	60	52.2	+20 00.0	195	58.7	23.2	35	17 02	29	18 00	20 03 63	9 47 45		
17	75	52.1	+20 00.5	210	25.7	-21 17.4	40	16 50	17 20	17 53	19 50 65	10 01 43		
18	90	52.1	+20 01.0	224	52.7	-21 11.6	45	16 36	17 09	17 45	19 34 68	10 17 41		
19	105	52.1	01.6	239	19.9	-21 05.6	50	20	16 56	36	15 71	37 38		
20	120	52.0	02.1	253	47.1	-20 59.5	52	12	50	32	19 06 73	47 36		
21	135	52.0	02.6	268	14.4	53.3	54	16 03	44	28	18 55 75	10 58 33		
22	150	52.0	03.1	282	41.9	47.0	56	15 53	37	23	44 77	11 10 31		
23	165	51.9	03.6	297	09.4	40.6	58	42	29	18	30 80	24 29		
24	180	51.9	+20 04.1	311	37.0	-20 34.1	60 S	15 29	16 20	17 13	18 14 84	11 40 25		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 8 ^h 09 ^m 4		Mag: -3.8 PMG: 10 ^h 24 ^m		Mag: +1.3 PMG: 10 ^h 28 ^m		Mag: -2.1 PMG: 9 ^h 50 ^m		Mag: +0.7 PMG: 20 ^h 52 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	237	18.5	204 06.3	+11 41.6	202 55.6	+13 10.6	212 10.3	+9 15.3	46 13.4	-1 52.7
1	252	20.9	219 05.9	42.7	217 56.3	11.2	227 12.3	15.5	61 16.0	52.7
2	267	23.4	234 05.5	43.7	232 57.0	11.8	242 14.2	15.7	76 18.5	52.7
3	282	25.9	249 05.0	44.8	247 57.6	12.5	257 16.2	15.9	91 21.1	52.6
4	297	28.3	264 04.6	45.8	262 58.3	13.1	272 18.1	16.1	106 23.6	52.6
5	312	30.8	279 04.1	+11 46.8	277 59.0	+13 13.7	287 20.0	+9 16.3	121 26.2	-1 52.6
6	327	33.3	294 03.7	+11 47.9	292 59.6	+13 14.4	302 22.0	+9 16.5	136 28.7	-1 52.6
7	342	35.7	309 03.2	48.9	308 00.3	15.0	317 23.9	16.6	151 31.3	52.5
8	357	38.2	324 02.8	50.0	323 00.9	15.6	332 25.9	16.8	166 33.9	52.5
9	12	40.7	339 02.3	51.0	338 01.6	16.3	347 27.8	17.0	181 36.4	52.5
10	27	43.1	354 01.9	52.1	353 02.3	16.9	2 29.7	17.2	196 39.0	52.4
11	42	45.6	9 01.4	+11 53.1	8 02.9	+13 17.5	17 31.7	+9 17.4	211 41.5	-1 52.4
12	57	48.1	24 01.0	+11 54.2	23 03.6	+13 18.2	32 33.6	+9 17.6	226 44.1	-1 52.4
13	72	50.5	39 00.5	55.2	38 04.3	18.8	47 35.5	17.8	241 46.6	52.3
14	87	53.0	54 00.1	56.2	53 04.9	19.4	62 37.5	18.0	256 49.2	52.3
15	102	55.4	68 59.6	57.3	68 05.6	20.1	77 39.4	18.2	271 51.7	52.3
16	117	57.9	83 59.2	58.3	83 06.2	20.7	92 41.4	18.4	286 54.3	52.3
17	133	00.4	98 58.7	+11 59.4	98 06.9	+13 21.3	107 43.3	+9 18.6	301 56.8	-1 52.2
18	148	02.8	113 58.3	+12 00.4	113 07.6	+13 21.9	122 45.2	+9 18.8	316 59.4	-1 52.2
19	163	05.3	128 57.8	01.4	128 08.2	22.6	137 47.2	19.0	332 02.0	52.2
20	178	07.8	143 57.4	02.5	143 08.9	23.2	152 49.1	19.2	347 04.5	52.1
21	193	10.2	158 56.9	03.5	158 09.6	23.8	167 51.1	19.4	2 07.1	52.1
22	208	12.7	173 56.5	04.6	173 10.2	24.5	182 53.0	19.6	17 09.6	52.1
23	223	15.2	188 56.0	05.6	188 10.9	25.1	197 54.9	19.8	32 12.2	52.1
24	238	17.6	203 55.6	+12 06.6	203 11.6	+13 25.7	212 56.9	+9 20.0	47 14.7	-1 52.0
Dif	—	-4	+10		+7	+6	+19	+2	+26	0

UT	SOL				LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15 ^h 8 PMG: 11 ^h 56 ^m 6				Edad: 17 ^d 7 PHE { 4 ^h : 57 ^m 2 12 ^h : 56 ^m 9 20 ^h : 56 ^m 6 PMG: 3 ^h 21 ^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	180	51.9	+20	04.1	311	37.0	-20	34.1	67	58	60 N	2 01	3 10	23 56	19	20	78	30	76	
1	195	51.8		04.7	326	04.7	87	27.4	67	58	58	26	25	47 22	30	76	40	73		
2	210	51.8		05.2	340	32.6	89	20.7	68	56	54	1 18	2 45	37	23 56	19	20	78		
3	225	51.8		05.7	355	00.5	89	13.9	68	54	54	1 50	3 01	49	47 22	30	76			
4	240	51.7		06.2	9	28.5	90	-20	06.9	70	52	2 13	15	3 58	39 24	40	73			
5	255	51.7	+20	06.7	23	56.6	91	-19	59.9	70	50	2 31	3 26	4 07	23 32	26	7 48	72		
6	270	51.7	+20	07.2	38	24.8	92	-19	52.7	72	45	3 06	3 50	4 25	23 17	29	8 06	68		
7	285	51.6		07.7	52	53.1	93	45.5	72	40	40	30	4 09	40	23 04	33	21	65		
8	300	51.6		08.2	67	21.5	94	38.1	74	35	35	3 49	24	4 53	22 53	36	33	62		
9	315	51.5		08.8	81	50.0	95	30.7	74	30	30	4 05	37	5 04	44 38	8 44	60			
10	330	51.5		09.3	96	18.6	96	23.1	76	20	20	30	4 58	22	28 41	9 03	56			
11	345	51.5	+20	09.8	110	47.3	97	-19	15.5	76	10 N	4 49	5 16	5 38	22 13	45	9 18	53		
12	0	51.4	+20	10.3	125	16.1	98	-19	07.8	77	0	5 05	5 31	5 53	22 00	48	9 33	50		
13	15	51.4		10.8	139	45.0	99	-19	00.0	78	10 S	20	5 45	6 08	21 46	52	9 48	47		
14	30	51.3		11.3	154	14.0	100	-18	52.1	79	20	33	6 00	23	32 55	10 04	44			
15	45	51.3		11.8	168	43.0	100	44.1	80	30	30	46	16	41	16 58	22	40			
16	60	51.3		12.3	183	12.2	102	36.0	81	35	35	5 53	24	6 52	21 06	61	32	38		
17	75	51.2	+20	12.8	197	41.5	103	-18	27.8	82	40	6 01	6 34	7 03	20 55	63	10 44	36		
18	90	51.2	+20	13.3	212	10.9	104	-18	19.6	82	45	6 09	6 45	7 17	20 42	66	10 58	33		
19	105	51.1		13.8	226	40.3	104	11.2	84	50	50	18	6 58	34	26 71	11 15	29			
20	120	51.1		14.3	241	09.9	106	-18	02.8	84	52	22	7 04	42	19 72	23	27			
21	135	51.0		14.8	255	39.6	107	-17	54.3	85	54	26	10	7 51	10 75	31	26			
22	150	51.0		15.3	270	09.3	107	45.7	86	56	56	30	17	8 01	20 01	77	41	23		
23	165	51.0		15.8	284	39.2	109	37.1	86	58	58	35	25	12	19 50	80	11 53	20		
24	180	50.9	+20	16.3	299	09.1	109	-17	28.3	88	60 S	6 41	7 34	8 25	19 38	84	12 05	17		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 8 ^h 05 ^m 5		Mag: -3.8 PMG: 10 ^h 25 ^m		Mag: +1.3 PMG: 10 ^h 27 ^m		Mag: -2.1 PMG: 9 ^h 47 ^m		Mag: +0.7 PMG: 20 ^h 47 ^m	
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄	
h	°	'	°	'	°	'	°	'	°	'
0	238	17.6	203	55.6	+12	06.6	203	11.6	+13	25.7
1	253	20.1	218	55.1		07.7	218	12.2		26.4
2	268	22.6	233	54.7		08.7	233	12.9		27.0
3	283	25.0	248	54.2		09.7	248	13.5		27.6
4	298	27.5	263	53.7		10.8	263	14.2		28.2
5	313	29.9	278	53.3	+12	11.8	278	14.9	+13	28.9
6	328	32.4	293	52.8	+12	12.8	293	15.5	+13	29.5
7	343	34.9	308	52.4		13.9	308	16.2		30.1
8	358	37.3	323	51.9		14.9	323	16.8		30.8
9	13	39.8	338	51.5		15.9	338	17.5		31.4
10	28	42.3	353	51.0		17.0	353	18.2		32.0
11	43	44.7	8	50.5	+12	18.0	8	18.8	+13	32.6
12	58	47.2	23	50.1	+12	19.0	23	19.5	+13	33.3
13	73	49.7	38	49.6		20.1	38	20.2		33.9
14	88	52.1	53	49.2		21.1	53	20.8		34.5
15	103	54.6	68	48.7		22.1	68	21.5		35.1
16	118	57.0	83	48.3		23.2	83	22.1		35.8
17	133	59.5	98	47.8	+12	24.2	98	22.8	+13	36.4
18	149	02.0	113	47.3	+12	25.2	113	23.5	+13	37.0
19	164	04.4	128	46.9		26.2	128	24.1		37.6
20	179	06.9	143	46.4		27.3	143	24.8		38.3
21	194	09.4	158	45.9		28.3	158	25.4		38.9
22	209	11.8	173	45.5		29.3	173	26.1		39.5
23	224	14.3	188	45.0		30.3	188	26.8		40.1
24	239	16.8	203	44.6	+12	31.4	203	27.4	+13	40.8
Dif	—		-5		+10		+7		+6	
									+19	
									+2	
									+26	
									0	

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8			Edad: 18 ^d 7 PHE { 4 ^h : 56 ^m 4 12 ^h : 56 ^m 1 20 ^h : 55 ^m 9										
	PMG: 11 ^h 56 ^m 6			SD: 15 ^h 4 PMG: 4 ^h 12 ^m R°: 47 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m
0	180	50.9	+20 16.3	299	09.1	-17 28.3	88	60 N	20 47	21 58	** **	0 17 13	8 18 83	
1	195	50.9	16.8	313	39.1 ¹¹⁰	19.5	88	58	32	32	** **	0 06 16	28 80	
2	210	50.8	17.3	328	09.3 ¹¹²	10.6	89	56	19	21 12	22 44	** ** *	38 76	
3	225	50.8	17.8	342	39.5 ¹¹²	-17 01.6	90	54	20 07	20 55	22 09	** ** *	46 74	
4	240	50.7	18.3	357	09.8 ¹¹³	-16 52.6	90	52	19 57	41	21 44	** ** *	8 53 72	
5	255	50.7	+20 18.8	11	40.2 ¹¹⁴	-16 43.5	91	50	19 48	20 29	21 25	23 58 21	9 00 70	
6	270	50.7	+20 19.3	26	10.7 ¹¹⁵	-16 34.3	92	45	19 30	20 05	20 50	23 46 26	9 14 66	
7	285	50.6	19.8	40	41.3 ¹¹⁶	25.0	93	40	14	19 46	25	37 28	26 62	
8	300	50.6	20.3	55	12.0 ¹¹⁷	15.7	93	35	19 02	30	20 05	29 31	35 60	
9	315	50.5	20.8	69	42.7 ¹¹⁷	-16 06.3	94	30	18 51	19 17	19 49	22 33	44 57	
10	330	50.5	21.3	84	13.6 ¹¹⁹	-15 56.9	94	20	32	18 56	24	23 09 38	9 59 53	
11	345	50.4	+20 21.8	98	44.5 ¹¹⁹	-15 47.4	95	10 N	18 15	18 38	19 04	22 58 42	10 11 50	
12	0	50.4	+20 22.3	113	15.6 ¹²¹	-15 37.8	96	0	18 00	18 22	18 48	22 48 45	10 23 47	
13	15	50.3	22.8	127	46.7 ¹²¹	28.1	97	10 S	17 45	18 08	33	38 48	35 43	
14	30	50.3	23.3	142	17.9 ¹²²	18.4	97	20	29	17 53	20	27 51	10 48 39	
15	45	50.3	23.8	156	49.2 ¹²³	-15 08.6	98	30	11	37	18 06	14 56	11 02 36	
16	60	50.2	24.3	171	20.5 ¹²³	-14 58.8	98	35	17 01	28	17 59	22 07 58	10 34	
17	75	50.2	+20 24.8	185	52.0 ¹²⁵	-14 48.9	99	40	16 49	17 18	17 51	21 58 62	11 20 30	
18	90	50.1	+20 25.2	200	23.5 ¹²⁵	-14 39.0	99	45	16 35	17 07	17 43	21 48 65	11 31 27	
19	105	50.1	25.7	214	55.2 ¹²⁷	29.0	100	50	18	16 54	34	37 68	44 23	
20	120	50.0	26.2	229	26.9 ¹²⁷	18.9	101	52	09	48	30	31 71	50 22	
21	135	50.0	26.7	243	58.7 ¹²⁸	-14 08.8	101	54	16 00	41	26	25 73	11 57 19	
22	150	49.9	27.2	258	30.5 ¹²⁸	-13 58.6	102	56	15 50	34	21	18 75	12 04 17	
23	165	49.9	27.7	273	02.5 ¹³⁰	48.4	102	58	39	26	16	10 78	13 14	
24	180	49.8	+20 28.2	287	34.5 ¹³⁰	-13 38.2	102	60 S	15 25	16 17	17 10	21 02 81	12 22 12	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 8 ^h 01 ^m 6		Mag: -3.8 PMG: 10 ^h 25 ^m		Mag: +1.3 PMG: 10 ^h 26 ^m		Mag: -2.1 PMG: 9 ^h 44 ^m		Mag: +0.7 PMG: 20 ^h 43 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	239	16.8	203 44.6	+12 31.4	203 27.4	+13 40.8	213 43.5	+9 24.7	48 16.0	-1 51.4
1	254	19.2	218 44.1	32.4	218 28.1	41.4	228 45.4	24.9	63 18.5	51.3
2	269	21.7	233 43.6	33.4	233 28.7	42.0	243 47.3	25.1	78 21.1	51.3
3	284	24.2	248 43.2	34.4	248 29.4	42.6	258 49.3	25.3	93 23.6	51.3
4	299	26.6	263 42.7	35.5	263 30.1	43.3	273 51.2	25.5	108 26.2	51.2
5	314	29.1	278 42.2	+12 36.5	278 30.7	+13 43.9	288 53.2	+9 25.6	123 28.7	-1 51.2
6	329	31.5	293 41.8	+12 37.5	293 31.4	+13 44.5	303 55.1	+9 25.8	138 31.3	-1 51.2
7	344	34.0	308 41.3	38.5	308 32.0	45.1	318 57.1	26.0	153 33.8	51.2
8	359	36.5	323 40.8	39.6	323 32.7	45.7	333 59.0	26.2	168 36.4	51.1
9	14	38.9	338 40.4	40.6	338 33.4	46.4	349 00.9	26.4	183 38.9	51.1
10	29	41.4	353 39.9	41.6	353 34.0	47.0	4 02.9	26.6	198 41.5	51.1
11	44	43.9	8 39.4	+12 42.6	8 34.7	+13 47.6	19 04.8	+9 26.8	213 44.0	-1 51.1
12	59	46.3	23 39.0	+12 43.6	23 35.3	+13 48.2	34 06.8	+9 27.0	228 46.6	-1 51.0
13	74	48.8	38 38.5	44.7	38 36.0	48.8	49 08.7	27.2	243 49.1	51.0
14	89	51.3	53 38.0	45.7	53 36.7	49.5	64 10.7	27.4	258 51.7	51.0
15	104	53.7	68 37.6	46.7	68 37.3	50.1	79 12.6	27.6	273 54.2	51.0
16	119	56.2	83 37.1	47.7	83 38.0	50.7	94 14.5	27.8	288 56.8	50.9
17	134	58.7	98 36.6	+12 48.7	98 38.6	+13 51.3	109 16.5	+9 28.0	303 59.3	-1 50.9
18	150	01.1	113 36.2	+12 49.7	113 39.3	+13 51.9	124 18.4	+9 28.2	319 01.9	-1 50.9
19	165	03.6	128 35.7	50.8	128 40.0	52.6	139 20.4	28.4	334 04.4	50.8
20	180	06.0	143 35.2	51.8	143 40.6	53.2	154 22.3	28.6	349 07.0	50.8
21	195	08.5	158 34.7	52.8	158 41.3	53.8	169 24.3	28.8	4 09.5	50.8
22	210	11.0	173 34.3	53.8	173 41.9	54.4	184 26.2	28.9	19 12.1	50.8
23	225	13.4	188 33.8	54.8	188 42.6	55.0	199 28.1	29.1	34 14.6	50.7
24	240	15.9	203 33.3	+12 55.8	203 43.3	+13 55.7	214 30.1	+9 29.3	49 17.2	-1 50.7
Dif	—		-5	+10	+7	+6	+19	+2	+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 7			Edad: 19 ^d 7 PHE SD: 15 ^h 2 PMG: 4 ^h 59 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora
h	°	'	°	'	°	'	°	h	m	h	m	h	m	m
0	180	49.8	+20	28.2	287	34.5	-13 38.2	60 N	** **	1 55	3 06	0 30	10	9 41 80
1	195	49.8		28.7	302	06.6 ¹³¹	27.8 ¹⁰⁴	58	** **	2 21	21	22 13		48 77
2	210	49.7		29.1	316	38.8 ¹³²	17.5 ¹⁰³	56	1 09	41	34	15 15		9 54 74
3	225	49.7		29.6	331	11.0 ¹³²	-13 07.0 ¹⁰⁵	54	1 44	2 58	46	09 17		10 00 72
4	240	49.6		30.1	345	43.4 ¹³⁴	-12 56.6 ¹⁰⁴	52	2 09	3 12	3 56	0 03	19	05 70
5	255	49.6	+20	30.6	0	15.8 ¹³⁴	-12 46.1 ¹⁰⁵	50	2 28	3 24	4 05	** ** *		10 10 67
6	270	49.5	+20	31.1	14	48.3 ¹³⁵	-12 35.5 ¹⁰⁶	45	3 03	3 48	4 23	** ** *		10 20 63
7	285	49.5		31.6	29	20.8 ¹³⁵	24.9 ¹⁰⁶	40	28	4 07	39	** ** *		28 60
8	300	49.4		32.0	43	53.4 ¹³⁶	14.3 ¹⁰⁶	35	3 48	23	4 51	** ** *		35 57
9	315	49.4		32.5	58	26.1 ¹³⁷	-12 03.6 ¹⁰⁷	30	4 04	36	5 03	23 55	31	41 55
10	330	49.3		33.0	72	58.9 ¹³⁸	-11 52.9 ¹⁰⁷	20	29	4 58	22	47 35		10 52 51
11	345	49.3	+20	33.5	87	31.8 ¹³⁹	-11 42.1 ¹⁰⁸	10 N	4 49	5 15	5 38	23 40	38	11 01 47
12	0	49.2	+20	34.0	102	04.7 ¹³⁹	-11 31.3 ¹⁰⁸	0	5 05	5 31	5 53	23 33	42	11 10 43
13	15	49.2		34.4	116	37.6 ¹³⁹	20.4 ¹⁰⁹	10 S	20	5 46	6 08	26 46		18 40
14	30	49.1		34.9	131	10.7 ¹⁴¹	-11 09.6 ¹⁰⁸	20	34	6 01	24	18 50		27 37
15	45	49.1		35.4	145	43.8 ¹⁴¹	-10 58.6 ¹¹⁰	30	47	17	42	10 54		38 32
16	60	49.0		35.9	160	16.9 ¹⁴¹	47.7 ¹⁰⁹	35	5 55	26	6 53	05 56		44 29
17	75	49.0	+20	36.4	174	50.2 ¹⁴³	-10 36.7 ¹¹⁰	40	6 02	6 35	7 05	23 00	59	11 50 27
18	90	48.9	+20	36.8	189	23.5 ¹⁴³	-10 25.7 ¹¹⁰	45	6 11	6 47	7 19	22 53	63	11 58 24
19	105	48.9		37.3	203	56.8 ¹⁴³	14.6 ¹¹¹	50	20	7 00	37	45 67		12 07 20
20	120	48.8		37.8	218	30.3 ¹⁴⁵	-10 03.5 ¹¹¹	52	24	06	45	42 68		12 18
21	135	48.8		38.2	233	03.7 ¹⁴⁴	-9 52.4 ¹¹¹	54	28	13	7 54	38 70		16 17
22	150	48.7		38.7	247	37.3 ¹⁴⁶	41.2 ¹¹²	56	33	20	8 04	33 73		21 15
23	165	48.7		39.2	262	10.9 ¹⁴⁶	30.0 ¹¹²	58	38	28	16	28 76		27 12
24	180	48.6	+20	39.7	276	44.5 ¹⁴⁶	-9 18.8 ¹¹²	60 S	6 44	7 37	8 29	22 23	78	12 34 9

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG 7 ^h 57 ^m 6		Mag: -3.8 PMG: 10 ^h 26 ^m		Mag: +1.3 PMG: 10 ^h 25 ^m		Mag: -2.1 PMG: 9 ^h 41 ^m		Mag: +0.7 PMG: 20 ^h 39 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	240	15.9	203	33.3	+12 55.8	203	43.3	+13 55.7	214	30.1	+9 29.3			
1	255	18.4	218	32.9	56.8	218	43.9	56.3	229	32.0	29.5			
2	270	20.8	233	32.4	57.9	233	44.6	56.9	244	34.0	29.7			
3	285	23.3	248	31.9	58.9	248	45.2	57.5	259	35.9	29.9			
4	300	25.8	263	31.4	+12 59.9	263	45.9	58.1	274	37.9	30.1			
5	315	28.2	278	31.0	+13 00.9	278	46.6	+13 58.7	289	39.8	+9 30.3			
6	330	30.7	293	30.5	+13 01.9	293	47.2	+13 59.4	304	41.8	+9 30.5			
7	345	33.2	308	30.0	02.9	308	47.9	+14 00.0	319	43.7	30.7			
8	0	35.6	323	29.5	03.9	323	48.5	+14 00.6	334	45.6	30.9			
9	15	38.1	338	29.1	04.9	338	49.2	01.2	349	47.6	31.1			
10	30	40.5	353	28.6	05.9	353	49.8	01.8	4	49.5	31.3			
11	45	43.0	8	28.1	+13 06.9	8	50.5	+14 02.4	19	51.5	+9 31.5			
12	60	45.5	23	27.6	+13 08.0	23	51.2	+14 03.0	34	53.4	+9 31.7			
13	75	47.9	38	27.1	09.0	38	51.8	03.7	49	55.4	31.8			
14	90	50.4	53	26.7	10.0	53	52.5	04.3	64	57.3	32.0			
15	105	52.9	68	26.2	11.0	68	53.1	04.9	79	59.3	32.2			
16	120	55.3	83	25.7	12.0	83	53.8	05.5	95	01.2	32.4			
17	135	57.8	98	25.2	+13 13.0	98	54.5	+14 06.1	110	03.1	+9 32.6			
18	151	00.3	113	24.7	+13 14.0	113	55.1	+14 06.7	125	05.1	+9 32.8			
19	166	02.7	128	24.3	15.0	128	55.8	07.3	140	07.0	33.0			
20	181	05.2	143	23.8	16.0	143	56.4	08.0	155	09.0	33.2			
21	196	07.6	158	23.3	17.0	158	57.1	08.6	170	10.9	33.4			
22	211	10.1	173	22.8	18.0	173	57.7	09.2	185	12.9	33.6			
23	226	12.6	188	22.3	19.0	188	58.4	09.8	200	14.8	33.8			
24	241	15.0	203	21.9	+13 20.0	203	59.1	+14 10.4	215	16.8	+9 34.0			
Dif	—		-5		+10	+7		+6	+19		+2	+25		0

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15°8			Edad: 20 ^d 7 PHE {	4 ^h : 55°0 12 ^h : 54°8 20 ^h : 54°7									
	PMG: 11 ^h 56 ^m 8				SD: 15°0 PMG: 5 ^h 43 ^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	m	h m m	m
0	180	48.6	+20 39.7	276	44.5	-9 18.8	60 N	20 51	22 05	** **	0 40 8	11 01 77		
1	195	48.5		291	18.2 ¹⁴⁷	-9 07.6 ¹¹²	58	35	21 37	** **	35 11	05 74		
2	210	48.5	40.6	305	52.0 ¹⁴⁸	-8 56.3 ¹¹³	56	22	21 16	22 54	30 13	08 73		
3	225	48.4	41.1	320	25.8 ¹⁴⁸	45.0 ¹¹³	54	10	20 59	22 15	26 15	12 70		
4	240	48.4	41.5	334	59.7 ¹⁴⁹	33.7 ¹¹³	52	20 00	45	21 49	22 18	15 68		
5	255	48.3	+20 42.0	349	33.6 ¹⁴⁹	-8 22.3 ¹¹⁴	50	19 51	20 32	21 29	0 19 19	11 17 66		
6	270	48.3	+20 42.5	4	07.6 ¹⁵⁰	-8 11.0 ¹¹³	45	19 32	20 07	20 53	0 12 22	11 23 62		
7	285	48.2	43.0	18	41.6 ¹⁵⁰	-7 59.6 ¹¹⁴	40	16	19 48	27	05 26	28 59		
8	300	48.2	43.4	33	15.7 ¹⁵¹	48.1 ¹¹⁵	35	19 03	32	20 07	0 00 28	32 56		
9	315	48.1	43.9	47	49.8 ¹⁵¹	36.7 ¹¹⁴	30	18 52	19 18	19 51	** ** *	36 53		
10	330	48.0	44.4	62	24.0 ¹⁵²	25.2 ¹¹⁵	20	32	18 56	25	** ** *	43 48		
11	345	48.0	+20 44.8	76	58.2 ¹⁵²	-7 13.7 ¹¹⁵	10 N	18 16	18 38	19 05	** ** *	11 48 45		
12	0	47.9	+20 45.3	91	32.5 ¹⁵³	-7 02.2 ¹¹⁵	0	18 00	18 23	18 48	** ** *	11 53 42		
13	15	47.9	45.7	106	06.8 ¹⁵³	-6 50.7 ¹¹⁵	10 S	17 45	18 08	33	** ** *	11 58 38		
14	30	47.8	46.2	120	41.1 ¹⁵³	39.2 ¹¹⁵	20	29	17 52	19	** ** *	12 04 34		
15	45	47.8	46.7	135	15.5 ¹⁵⁴	27.6 ¹¹⁶	30	10	36	18 05	** ** *	10 30		
16	60	47.7	47.1	149	50.0 ¹⁵⁵	16.0 ¹¹⁶	35	17 00	27	17 58	** ** *	13 28		
17	75	47.6	+20 47.6	164	24.5 ¹⁵⁵	-6 04.4 ¹¹⁶	40	16 47	17 17	17 50	23 59 58	12 17 25		
18	90	47.6	+20 48.1	178	59.0 ¹⁵⁵	-5 52.8 ¹¹⁶	45	16 33	17 06	17 42	23 56 61	12 22 22		
19	105	47.5	48.5	193	33.5 ¹⁵⁵	41.2 ¹¹⁶	50	15	16 52	32	52 65	27 19		
20	120	47.5	49.0	208	08.1 ¹⁵⁶	29.5 ¹¹⁷	52	16 07	46	28	50 67	30 16		
21	135	47.4	49.4	222	42.7 ¹⁵⁶	17.9 ¹¹⁶	54	15 58	39	24	48 69	33 14		
22	150	47.4	49.9	237	17.4 ¹⁵⁷	-5 06.2 ¹¹⁷	56	47	32	19	46 71	36 12		
23	165	47.3	50.3	251	52.1 ¹⁵⁷	-4 54.5 ¹¹⁷	58	36	23	13	44 74	39 10		
24	180	47.2	+20 50.8	266	26.8 ¹⁵⁷	-4 42.8 ¹¹⁷	60 S	15 22	16 14	17 08	23 41 77	12 43 7		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 7 ^h 53 ^m 7		Mag: -3.8 PMG: 10 ^h 27 ^m		Mag: +1.3 PMG: 10 ^h 24 ^m		Mag: -2.1 PMG: 9 ^h 38 ^m		Mag: +0.7 PMG: 20 ^h 35 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	241	15.0	203 21.9	+13 20.0	203 59.1	+14 10.4	215 16.8	+9 34.0	50 18.2	-1 50.1
1	256	17.5	218 21.4	21.0	218 59.7	11.0	230 18.7	34.2	65 20.8	50.1
2	271	20.0	233 20.9	22.0	234 00.4	11.6	245 20.7	34.3	80 23.3	50.1
3	286	22.4	248 20.4	23.0	249 01.0	12.2	260 22.6	34.5	95 25.9	50.0
4	301	24.9	263 19.9	24.0	264 01.7	12.8	275 24.6	34.7	110 28.4	50.0
5	316	27.4	278 19.4	+13 25.0	279 02.3	+14 13.5	290 26.5	+9 34.9	125 31.0	-1 50.0
6	331	29.8	293 18.9	+13 26.0	294 03.0	+14 14.1	305 28.4	+9 35.1	140 33.5	-1 50.0
7	346	32.3	308 18.5	27.0	309 03.6	14.7	320 30.4	35.3	155 36.0	50.0
8	1	34.8	323 18.0	28.0	324 04.3	15.3	335 32.3	35.5	170 38.6	49.9
9	16	37.2	338 17.5	29.0	339 05.0	15.9	350 34.3	35.7	185 41.1	49.9
10	31	39.7	353 17.0	30.0	354 05.6	16.5	5 36.2	35.9	200 43.7	49.9
11	46	42.1	8 16.5	+13 31.0	9 06.3	+14 17.1	20 38.2	+9 36.1	215 46.2	-1 49.9
12	61	44.6	23 16.0	+13 32.0	24 06.9	+14 17.7	35 40.1	+9 36.3	230 48.8	-1 49.8
13	76	47.1	38 15.5	33.0	39 07.6	18.3	50 42.1	36.5	245 51.3	49.8
14	91	49.5	53 15.1	34.0	54 08.2	18.9	65 44.0	36.6	260 53.8	49.8
15	106	52.0	68 14.6	35.0	69 08.9	19.5	80 46.0	36.8	275 56.4	49.8
16	121	54.5	83 14.1	35.9	84 09.6	20.1	95 47.9	37.0	290 58.9	49.7
17	136	56.9	98 13.6	+13 36.9	99 10.2	+14 20.8	110 49.9	+9 37.2	306 01.5	-1 49.7
18	151	59.4	113 13.1	+13 37.9	114 10.9	+14 21.4	125 51.8	+9 37.4	321 04.0	-1 49.7
19	167	01.9	128 12.6	38.9	129 11.5	22.0	140 53.8	37.6	336 06.5	49.7
20	182	04.3	143 12.1	39.9	144 12.2	22.6	155 55.7	37.8	351 09.1	49.7
21	197	06.8	158 11.6	40.9	159 12.8	23.2	170 57.6	38.0	6 11.6	49.6
22	212	09.3	173 11.1	41.9	174 13.5	23.8	185 59.6	38.2	21 14.2	49.6
23	227	11.7	188 10.6	42.9	189 14.1	24.4	201 01.5	38.4	36 16.7	49.6
24	242	14.2	203 10.1	+13 43.9	204 14.8	+14 25.0	216 03.5	+9 38.6	51 19.2	-1 49.6
Dif	—		-5	+10	+7	+6	+19	+2	+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 9			Edad: 21 ^d 7 PHE { 4 ^h : 54 ^m 6 12 ^h : 54 ^m 4 20 ^h : 54 ^m 3 PMG: 6 ^h 25 ^m R°: 41 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	m
0	180	47.2	+20 50.8	266	26.8	-4 42.8	60 N	** **	1 48	3 02	0 48	7	12 18	76	
1	195	47.2	51.3	281	01.6 ¹⁵⁸	31.1 ¹¹⁷	58	** **	2 16	18	46	9	19 74		
2	210	47.1	51.7	295	36.4 ¹⁵⁸	19.4 ¹¹⁷	56	1 00	37	31	43	12	21 70		
3	225	47.1	52.2	310	11.2 ¹⁵⁸	-4 07.7 ¹¹⁷	54	1 39	2 54	43	41	14	22 68		
4	240	47.0	52.6	324	46.1 ¹⁵⁹	-3 55.9 ¹¹⁸	52	2 04	3 09	3 53	40	15	23 66		
5	255	46.9	+20 53.1	339	20.9 ¹⁵⁸	-3 44.2 ¹¹⁷	50	2 24	3 21	4 02	0 38	17	12 23	65	
6	270	46.9	+20 53.5	353	55.9 ¹⁶⁰	-3 32.4 ¹¹⁸	45	3 00	3 46	4 22	0 34	21	12 25	61	
7	285	46.8	54.0	8	30.8 ¹⁵⁹	20.7 ¹¹⁷	40	26	4 06	37	31	25	27 58		
8	300	46.8	54.4	23	05.8 ¹⁶⁰	-3 08.9 ¹¹⁸	35	3 46	22	4 50	28	28	28 55		
9	315	46.7	54.9	37	40.7 ¹⁵⁹	-2 57.1 ¹¹⁸	30	4 03	35	5 02	26	30	29 53		
10	330	46.6	55.3	52	15.8 ¹⁶¹	45.4 ¹¹⁷	20	29	4 57	21	22	34	31 49		
11	345	46.6	+20 55.8	66	50.8 ¹⁶⁰	-2 33.6 ¹¹⁸	10 N	4 49	5 15	5 38	0 18	38	12 33	45	
12	0	46.5	+20 56.2	81	25.8 ¹⁶⁰	-2 21.8 ¹¹⁸	0	5 05	5 31	5 53	0 15	41	12 35	41	
13	15	46.4	56.7	96	00.9 ¹⁶¹	-2 10.0 ¹¹⁸	10 S	20	5 46	6 09	12	44	36 38		
14	30	46.4	57.1	110	36.0 ¹⁶¹	-1 58.2 ¹¹⁸	20	34	6 01	25	08	48	38 34		
15	45	46.3	57.6	125	11.1 ¹⁶¹	46.4 ¹¹⁸	30	48	18	44	04	53	40 29		
16	60	46.3	58.0	139	46.2 ¹⁶¹	34.6 ¹¹⁸	35	5 56	27	6 54	0 01	56	41 27		
17	75	46.2	+20 58.5	154	21.4 ¹⁶²	-1 22.8 ¹¹⁸	40	6 04	6 37	7 07	** ** *	**	12 42	25	
18	90	46.1	+20 58.9	168	56.6 ¹⁶²	-1 11.0 ¹¹⁸	45	6 12	6 49	7 21	** ** *	**	12 44	21	
19	105	46.1	59.4	183	31.7 ¹⁶¹	-0 59.2 ¹¹⁸	50	22	7 02	39	** ** *	**	46 17		
20	120	46.0	+20 59.8	198	06.9 ¹⁶²	47.4 ¹¹⁸	52	26	08	47	** ** *	**	46 16		
21	135	45.9	+21 00.3	212	42.1 ¹⁶²	35.6 ¹¹⁸	54	31	15	7 57	** ** *	**	47 14		
22	150	45.9	00.7	227	17.3 ¹⁶²	23.8 ¹¹⁸	56	36	23	8 07	** ** *	**	48 12		
23	165	45.8	01.1	241	52.6 ¹⁶³	12.0 ¹¹⁸	58	41	31	19	** ** *	**	49 10		
24	180	45.7	+21 01.6	256	27.8 ¹⁶²	-0 00.2 ¹¹⁸	60 S	6 47	7 41	8 33	** ** *	**	12 50	7	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG 7 ^h 49 ^m 8		Mag: -3.8 PMG: 10 ^h 28 ^m			Mag: +1.3 PMG: 10 ^h 23 ^m			Mag: -2.1 PMG: 9 ^h 35 ^m			Mag: +0.7 PMG: 20 ^h 31 ^m			
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	242	14.2	203 10.1	+13 43.9	204 14.8	+14 25.0	216 03.5	+9 38.6	51 19.2	-1 49.6					
1	257	16.6	218 09.7	44.9	219 15.5	25.6	231 05.4	38.7	66 21.8	49.5					
2	272	19.1	233 09.2	45.8	234 16.1	26.2	246 07.4	38.9	81 24.3	49.5					
3	287	21.6	248 08.7	46.8	249 16.8	26.8	261 09.3	39.1	96 26.9	49.5					
4	302	24.0	263 08.2	47.8	264 17.4	27.4	276 11.3	39.3	111 29.4	49.5					
5	317	26.5	278 07.7	+13 48.8	279 18.1	+14 28.0	291 13.2	+9 39.5	126 31.9	-1 49.4					
6	332	29.0	293 07.2	+13 49.8	294 18.7	+14 28.6	306 15.2	+9 39.7	141 34.5	-1 49.4					
7	347	31.4	308 06.7	50.8	309 19.4	29.2	321 17.1	39.9	156 37.0	49.4					
8	2	33.9	323 06.2	51.8	324 20.0	29.8	336 19.1	40.1	171 39.6	49.4					
9	17	36.4	338 05.7	52.7	339 20.7	30.4	351 21.0	40.3	186 42.1	49.4					
10	32	38.8	353 05.2	53.7	354 21.3	31.0	6 23.0	40.5	201 44.6	49.3					
11	47	41.3	8 04.7	+13 54.7	9 22.0	+14 31.6	21 24.9	+9 40.7	216 47.2	-1 49.3					
12	62	43.7	23 04.2	+13 55.7	24 22.7	+14 32.2	36 26.9	+9 40.8	231 49.7	-1 49.3					
13	77	46.2	38 03.7	56.7	39 23.3	32.8	51 28.8	41.0	246 52.3	49.3					
14	92	48.7	53 03.2	57.6	54 24.0	33.4	66 30.8	41.2	261 54.8	49.3					
15	107	51.1	68 02.7	58.6	69 24.6	34.0	81 32.7	41.4	276 57.3	49.2					
16	122	53.6	83 02.2	+13 59.6	84 25.3	34.6	96 34.7	41.6	291 59.9	49.2					
17	137	56.1	98 01.7	+14 00.6	99 25.9	+14 35.2	111 36.6	+9 41.8	307 02.4	-1 49.2					
18	152	58.5	113 01.2	+14 01.6	114 26.6	+14 35.8	126 38.6	+9 42.0	322 04.9	-1 49.2					
19	168	01.0	128 00.7	02.5	129 27.2	36.4	141 40.5	42.2	337 07.5	49.1					
20	183	03.5	143 00.2	03.5	144 27.9	37.0	156 42.5	42.4	352 10.0	49.1					
21	198	05.9	157 59.7	04.5	159 28.5	37.6	171 44.4	42.6	7 12.6	49.1					
22	213	08.4	172 59.2	05.5	174 29.2	38.2	186 46.4	42.7	22 15.1	49.1					
23	228	10.9	187 58.7	06.4	189 29.8	38.8	201 48.3	42.9	37 17.6	49.1					
24	243	13.3	202 58.2	+14 07.4	204 30.5	+14 39.4	216 50.3	+9 43.1	52 20.2	-1 49.0					
Dif	—		-5 +10		+7 +6		+19 +2		+25		0				

UT	SOL			 LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 15°8			Edad: 22 ^d 7 PHE { 4 ^h : 54/3 12 ^h : 54/2 20 ^h : 54/2					Civil		Náutico		Hora R°		
	PMG: 11 ^h 57 ^m 0			SD: 14°8 PMG: 7 ^h 06 ^m R°: 41 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec	Dif					Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	m	h m m	m
0	180	45.7	+21 01.6	256	27.8	-0 00.2		60 N	20 55	22 11	** **	0 55 7		13 34 76	
1	195	45.7	02.0	271	03.0 ¹⁶²	+0 11.5 ¹¹⁷		58	39	21 42	** **	55 10		33 73	
2	210	45.6	02.5	285	38.3 ¹⁶³	23.3 ¹¹⁸		56	25	20	23 04	55 12		31 71	
3	225	45.5	02.9	300	13.5 ¹⁶²	35.1 ¹¹⁸		54	13	21 03	22 21	55 14		30 69	
4	240	45.5	03.3	314	48.8 ¹⁶³	46.9 ¹¹⁸		52	20 03	20 48	21 54	55 16		29 67	
5	255	45.4	+21 03.8	329	24.1 ¹⁶³	+0 58.6 ¹¹⁷		50	19 53	20 35	21 33	0 55 18		13 28 65	
6	270	45.3	+21 04.2	343	59.3 ¹⁶²	+1 10.4 ¹¹⁸		45	19 34	20 09	20 56	0 55 22		13 26 61	
7	285	45.3	04.7	358	34.6 ¹⁶³	22.1 ¹¹⁷		40	18	19 50	29	56 24		25 57	
8	300	45.2	05.1	13	09.9 ¹⁶³	33.9 ¹¹⁸		35	19 05	33	20 09	56 27		23 55	
9	315	45.1	05.5	27	45.2 ¹⁶³	45.6 ¹¹⁷		30	18 53	19 20	19 52	56 29		22 52	
10	330	45.1	06.0	42	20.4 ¹⁶²	+1 57.3 ¹¹⁷		20	33	18 57	26	56 33		20 48	
11	345	45.0	+21 06.4	56	55.7 ¹⁶³	+2 09.1 ¹¹⁸		10 N	18 16	18 39	19 06	0 56 37		13 18 44	
12	0	44.9	+21 06.8	71	31.0 ¹⁶³	+2 20.8 ¹¹⁷		0	18 01	18 23	18 49	0 56 41		13 16 41	
13	15	44.9	07.3	86	06.3 ¹⁶³	32.4 ¹¹⁶		10 S	17 45	18 07	33	56 44		14 37	
14	30	44.8	07.7	100	41.5 ¹⁶²	44.1 ¹¹⁷		20	28	17 52	19	56 48		12 34	
15	45	44.7	08.1	115	16.8 ¹⁶³	+2 55.8 ¹¹⁷		30	17 10	35	18 05	57 52		09 30	
16	60	44.7	08.6	129	52.0 ¹⁶²	+3 07.5 ¹¹⁷		35	16 59	26	17 57	57 54		08 27	
17	75	44.6	+21 09.0	144	27.3 ¹⁶³	+3 19.1 ¹¹⁶		40	16 46	17 16	17 49	0 57 57		13 07 24	
18	90	44.5	+21 09.4	159	02.5 ¹⁶²	+3 30.7 ¹¹⁶		45	16 31	17 04	17 41	0 57 61		13 05 21	
19	105	44.5	09.9	173	37.8 ¹⁶³	42.3 ¹¹⁶		50	13	16 50	31	57 65		03 18	
20	120	44.4	10.3	188	13.0 ¹⁶²	+3 53.9 ¹¹⁶		52	16 05	44	26	57 67		02 16	
21	135	44.3	10.7	202	48.2 ¹⁶²	+4 05.5 ¹¹⁶		54	15 56	37	22	57 69		01 14	
22	150	44.3	11.2	217	23.4 ¹⁶²	17.1 ¹¹⁶		56	45	29	17	57 71		13 00 12	
23	165	44.2	11.6	231	58.6 ¹⁶²	28.7 ¹¹⁶		58	33	21	11	58 73		12 59 9	
24	180	44.1	+21 12.0	246	33.8 ¹⁶²	+4 40.2 ¹¹⁵		60 S	15 18	16 11	17 05	0 58 76		12 57 8	
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG: 7 ^h 45 ^m 8		Mag: -3.8 PMG: 10 ^h 28 ^m		Mag: +1.3 PMG: 10 ^h 22 ^m		Mag: -2.1 PMG: 9 ^h 31 ^m		Mag: +0.7 PMG: 20 ^h 27 ^m						
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec						
h	°	°	°	°	°	°	°	°	°						
0	243	13.3	202 58.2	+14 07.4	204 30.5	+14 39.4	216 50.3	+9 43.1	52 20.2						
1	258	15.8	217 57.7	08.4	219 31.2	40.0	231 52.2	43.3	67 22.7						
2	273	18.2	232 57.2	09.4	234 31.8	40.6	246 54.2	43.5	82 25.2						
3	288	20.7	247 56.7	10.3	249 32.5	41.2	261 56.1	43.7	97 27.8						
4	303	23.2	262 56.2	11.3	264 33.1	41.8	276 58.1	43.9	112 30.3						
5	318	25.6	277 55.7	+14 12.3	279 33.8	+14 42.4	292 00.0	+9 44.1	127 32.8						
6	333	28.1	292 55.2	+14 13.3	294 34.4	+14 43.0	307 02.0	+9 44.3	142 35.4						
7	348	30.6	307 54.7	14.2	309 35.1	43.6	322 03.9	44.4	157 37.9						
8	3	33.0	322 54.1	15.2	324 35.7	44.2	337 05.9	44.6	172 40.5						
9	18	35.5	337 53.6	16.2	339 36.4	44.8	352 07.8	44.8	187 43.0						
10	33	38.0	352 53.1	17.1	354 37.0	45.4	7 09.8	45.0	202 45.5						
11	48	40.4	7 52.6	+14 18.1	9 37.7	+14 46.0	22 11.7	+9 45.2	217 48.1						
12	63	42.9	22 52.1	+14 19.1	24 38.3	+14 46.6	37 13.7	+9 45.4	232 50.6						
13	78	45.3	37 51.6	20.0	39 39.0	47.2	52 15.6	45.6	247 53.1						
14	93	47.8	52 51.1	21.0	54 39.6	47.8	67 17.6	45.8	262 55.7						
15	108	50.3	67 50.6	22.0	69 40.3	48.4	82 19.5	46.0	277 58.2						
16	123	52.7	82 50.1	22.9	84 40.9	49.0	97 21.5	46.1	293 00.7						
17	138	55.2	97 49.6	+14 23.9	99 41.6	+14 49.6	112 23.4	+9 46.3	308 03.3						
18	153	57.7	112 49.1	+14 24.9	114 42.3	+14 50.2	127 25.4	+9 46.5	323 05.8						
19	169	00.1	127 48.5	25.8	129 42.9	50.8	142 27.3	46.7	338 08.3						
20	184	02.6	142 48.0	26.8	144 43.6	51.4	157 29.3	46.9	353 10.9						
21	199	05.1	157 47.5	27.8	159 44.2	52.0	172 31.2	47.1	8 13.4						
22	214	07.5	172 47.0	28.7	174 44.9	52.6	187 33.2	47.3	23 15.9						
23	229	10.0	187 46.5	29.7	189 45.5	53.1	202 35.1	47.5	38 18.5						
24	244	12.5	202 46.0	+14 30.6	204 46.2	+14 53.7	217 37.1	+9 47.7	53 21.0						
Dif	—	-5	+10	+7	+6	+20	+2	+25	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 1				Edad: 23 ^d 7 PHE SD: 14/7 PMG: 7 ^h 47 ^m R°: 41 ^m													
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m
0	180	44.1	+21	12.0	246	33.8	+4	40.2	60 N	** **	1 42	2 58	1 02	8	14 50	77		
1	195	44.1		12.4	261	08.9 ¹⁶¹	+4	51.7 ¹¹⁵	58	** **	2 12	3 15	05	10	46	74		
2	210	44.0		12.9	275	44.1 ¹⁶²	+5	03.2 ¹¹⁵	56	0 49	33	29	07	13	42	72		
3	225	43.9		13.3	290	19.2 ¹⁶¹		14.7 ¹¹⁵	54	1 33	2 51	41	09	15	39	69		
4	240	43.8		13.7	304	54.3 ¹⁶¹		26.1 ¹¹⁴	52	2 00	3 06	3 51	11	17	36	67		
5	255	43.8	+21	14.1	319	29.4 ¹⁶¹	+5	37.6 ¹¹⁵	50	2 21	3 19	4 00	1 13	18	14 33	65		
6	270	43.7	+21	14.6	334	04.5 ¹⁶¹	+5	49.0 ¹¹⁴	45	2 58	3 44	4 20	1 17	22	14 27	62		
7	285	43.6		15.0	348	39.6 ¹⁶¹	+6	00.4 ¹¹⁴	40	3 25	4 04	36	20	25	22	58		
8	300	43.6		15.4	3	14.6 ¹⁶⁰		11.8 ¹¹⁴	35	3 45	21	4 49	23	28	18	55		
9	315	43.5		15.8	17	49.7 ¹⁶¹		23.1 ¹¹³	30	4 02	34	5 01	25	30	14	53		
10	330	43.4		16.2	32	24.6 ¹⁵⁹		34.4 ¹¹³	20	28	4 57	21	29	35	08	49		
11	345	43.3	+21	16.7	46	59.6 ¹⁶⁰	+6	45.7 ¹¹³	10 N	4 48	5 15	5 38	1 33	38	14 02	45		
12	0	43.3	+21	17.1	61	34.6 ¹⁶⁰	+6	57.0 ¹¹³	0	5 06	5 31	5 54	1 37	41	13 57	42		
13	15	43.2		17.5	76	09.5 ¹⁵⁹	+7	08.3 ¹¹³	10 S	21	5 47	6 09	40	45	51	39		
14	30	43.1		17.9	90	44.4 ¹⁵⁹		19.5 ¹¹²	20	35	6 02	26	44	49	46	35		
15	45	43.0		18.3	105	19.3 ¹⁵⁹		30.7 ¹¹²	30	49	19	45	49	52	39	31		
16	60	43.0		18.7	119	54.1 ¹⁵⁸		41.9 ¹¹²	35	5 57	28	6 56	51	55	35	29		
17	75	42.9	+21	19.2	134	28.9 ¹⁵⁸	+7	53.0 ¹¹¹	40	6 05	6 39	7 08	1 54	58	13 31	26		
18	90	42.8	+21	19.6	149	03.7 ¹⁵⁸	+8	04.1 ¹¹¹	45	6 14	6 50	7 23	1 58	61	13 26	24		
19	105	42.8		20.0	163	38.5 ¹⁵⁸		15.2 ¹¹¹	50	24	7 04	41	2 02	65	21	19		
20	120	42.7		20.4	178	13.2 ¹⁵⁷		26.3 ¹¹¹	52	28	11	50	04	67	18	18		
21	135	42.6		20.8	192	47.9 ¹⁵⁷		37.3 ¹¹⁰	54	33	18	7 59	06	69	15	16		
22	150	42.5		21.2	207	22.6 ¹⁵⁷		48.3 ¹¹⁰	56	38	25	8 10	08	71	12	14		
23	165	42.5		21.6	221	57.2 ¹⁵⁶	+8	59.2 ¹⁰⁹	58	44	34	23	11	73	08	12		
24	180	42.4	+21	22.1	236	31.8 ¹⁵⁶	+9	10.2 ¹¹⁰	60 S	6 50	7 44	8 37	2 14	76	13 05	8		
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 7 ^h 41 ^m 9		Mag: -3.8 PMG: 10 ^h 29 ^m				Mag: +1.3 PMG: 10 ^h 20 ^m				Mag: -2.1 PMG: 9 ^h 28 ^m				Mag: +0.7 PMG: 20 ^h 23 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	244	12.5	202	46.0	+14	30.6	204	46.2	+14	53.7	217	37.1	+9	47.7	53	21.0	-1	48.6
1	259	14.9	217	45.5		31.6	219	46.8		54.3	232	39.0		47.8	68	23.5		48.5
2	274	17.4	232	45.0		32.6	234	47.5		54.9	247	41.0		48.0	83	26.1		48.5
3	289	19.8	247	44.4		33.5	249	48.1		55.5	262	42.9		48.2	98	28.6		48.5
4	304	22.3	262	43.9		34.5	264	48.8		56.1	277	44.9		48.4	113	31.1		48.5
5	319	24.8	277	43.4	+14	35.4	279	49.4	+14	56.7	292	46.9	+9	48.6	128	33.7	-1	48.5
6	334	27.2	292	42.9	+14	36.4	294	50.1	+14	57.3	307	48.8	+9	48.8	143	36.2	-1	48.4
7	349	29.7	307	42.4		37.3	309	50.7		57.9	322	50.8		49.0	158	38.7		48.4
8	4	32.2	322	41.9		38.3	324	51.4		58.5	337	52.7		49.2	173	41.3		48.4
9	19	34.6	337	41.3		39.3	339	52.0		59.1	352	54.7		49.3	188	43.8		48.4
10	34	37.1	352	40.8		40.2	354	52.7	+14	59.7	7	56.6		49.5	203	46.3		48.4
11	49	39.6	7	40.3	+14	41.2	9	53.3	+15	00.2	22	58.6	+9	49.7	218	48.9	-1	48.3
12	64	42.0	22	39.8	+14	42.1	24	54.0	+15	00.8	38	00.5	+9	49.9	233	51.4	-1	48.3
13	79	44.5	37	39.3		43.1	39	54.6		01.4	53	02.5		50.1	248	53.9		48.3
14	94	47.0	52	38.7		44.0	54	55.3		02.0	68	04.4		50.3	263	56.4		48.3
15	109	49.4	67	38.2		45.0	69	55.9		02.6	83	06.4		50.5	278	59.0		48.3
16	124	51.9	82	37.7		45.9	84	56.6		03.2	98	08.3		50.7	294	01.5		48.3
17	139	54.3	97	37.2	+14	46.9	99	57.2	+15	03.8	113	10.3	+9	50.8	309	04.0	-1	48.2
18	154	56.8	112	36.7	+14	47.8	114	57.9	+15	04.4	128	12.2	+9	51.0	324	06.6	-1	48.2
19	169	59.3	127	36.1		48.8	129	58.5		04.9	143	14.2		51.2	339	09.1		48.2
20	185	01.7	142	35.6		49.7	144	59.2		05.5	158	16.1		51.4	354	11.6		48.2
21	200	04.2	157	35.1		50.7	159	59.8		06.1	173	18.1		51.6	9	14.2		48.2
22	215	06.7	172	34.6		51.6	175	00.5		06.7	188	20.1		51.8	24	16.7		48.1
23	230	09.1	187	34.0		52.6	190	01.1		07.3	203	22.0		52.0	39	19.2		48.1
24	245	11.6	202	33.5	+14	53.5	205	01.8	+15	07.9	218	24.0	+9	52.2	54	21.7	-1	48.1
Dif	—		-5		+10		+7		+6		+20		+2		+25			
															0			

UT	SOL				☾ LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna			
	SD: 15'8 PMG: 11 ^h 57 ^m 2				Edad: 24 ^d 7 PHE { SD: 14'8 PMG: 8 ^h 28 ^m														
					R ^o : 44 ^m														
	hG ☉	Dec			hG ☾	Dif					Civil	Náutico		Hora	R ^o	Hora	R ^o		
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m			
0	180	42.4	+21	22.1	236	31.8	+9	10.2	60 N	20 59	22 18	** **	1 10 10	16 07 79					
1	195	42.3		22.5	251	06.4 ¹⁵⁶		21.1 ¹⁰⁹	58	43	21 47	** **	15 13	16 00 75					
2	210	42.2		22.9	265	40.9 ¹⁵⁵		31.9 ¹⁰⁸	56	28	24	23 17	20 15	15 54 72					
3	225	42.2		23.3	280	15.4 ¹⁵⁵		42.8 ¹⁰⁹	54	16	21 06	22 27	24 17	48 70					
4	240	42.1		23.7	294	49.9 ¹⁵⁵	+9	53.6 ¹⁰⁸	52	20 05	20 51	21 58	28 19	43 68					
5	255	42.0	+21	24.1	309	24.3 ¹⁵⁴	+10	04.3 ¹⁰⁷	50	19 56	20 38	21 37	1 31 21	15 38 67					
6	270	41.9	+21	24.5	323	58.7 ¹⁵⁴	+10	15.0 ¹⁰⁷	45	19 36	20 12	20 58	1 39 24	15 29 62					
7	285	41.8		24.9	338	33.0 ¹⁵³		25.7 ¹⁰⁷	40	19	19 51	31	45 27	20 59					
8	300	41.8		25.3	353	07.3 ¹⁵³		36.4 ¹⁰⁷	35	19 06	35	20 10	51 30	13 57					
9	315	41.7		25.7	7	41.6 ¹⁵³		47.0 ¹⁰⁶	30	18 54	19 21	19 53	1 55 33	15 07 54					
10	330	41.6		26.1	22	15.8 ¹⁵²	+10	57.5 ¹⁰⁵	20	34	18 58	27	2 04 36	14 57 50					
11	345	41.5	+21	26.5	36	50.0 ¹⁵²	+11	08.1 ¹⁰⁶	10 N	18 17	18 40	19 06	2 11 40	14 47 47					
12	0	41.5	+21	26.9	51	24.1 ¹⁵¹	+11	18.5 ¹⁰⁴	0	18 01	18 23	18 49	2 18 43	14 39 43					
13	15	41.4		27.3	65	58.2 ¹⁵¹		29.0 ¹⁰⁵	10 S	17 45	18 08	34	25 46	30 41					
14	30	41.3		27.7	80	32.2 ¹⁵⁰		39.4 ¹⁰⁴	20	28	17 52	19	33 49	21 37					
15	45	41.2		28.2	95	06.2 ¹⁵⁰	+11	49.7 ¹⁰³	30	17 09	35	18 04	41 54	10 34					
16	60	41.2		28.6	109	40.2 ¹⁵⁰	+12	00.0 ¹⁰³	35	16 58	25	17 57	46 56	14 04 32					
17	75	41.1	+21	29.0	124	14.1 ¹⁴⁹	+12	10.3 ¹⁰³	40	16 45	17 15	17 48	2 52 59	13 57 29					
18	90	41.0	+21	29.4	138	48.0 ¹⁴⁹	+12	20.5 ¹⁰²	45	16 30	17 03	17 39	2 59 62	13 50 25					
19	105	40.9		29.8	153	21.8 ¹⁴⁸		30.7 ¹⁰²	50	12	16 49	29	3 07 66	40 22					
20	120	40.8		30.1	167	55.5 ¹⁴⁷		40.9 ¹⁰²	52	16 03	42	25	11 67	36 20					
21	135	40.8		30.5	182	29.2 ¹⁴⁷	+12	50.9 ¹⁰⁰	54	15 53	35	20	15 70	31 18					
22	150	40.7		30.9	197	02.9 ¹⁴⁷	+13	01.0 ¹⁰¹	56	42	27	15	19 72	26 16					
23	165	40.6		31.3	211	36.5 ¹⁴⁶		11.0 ¹⁰⁰	58	30	19	09	24 75	20 13					
24	180	40.5	+21	31.7	226	10.1 ¹⁴⁶	+13	20.9 ⁹⁹	60 S	15 15	16 09	17 03	3 30 78	13 13 11					
UT	ARIES			VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 7 ^h 38 ^m 0			Mag: -3.8 PMG: 10 ^h 30 ^m				Mag: +1.3 PMG: 10 ^h 19 ^m				Mag: -2.1 PMG: 9 ^h 25 ^m				Mag: +0.7 PMG: 20 ^h 19 ^m			
	hG ♈			hG ♀ Dec				hG ♂ Dec				hG ♃ Dec				hG ♄ Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'			
0	245	11.6	202	33.5	+14	53.5	205	01.8	+15	07.9	218	24.0	+9	52.2	54	21.7			
1	260	14.1	217	33.0		54.5	220	02.4		08.5	233	25.9		52.3	69	24.3			
2	275	16.5	232	32.5		55.4	235	03.1		09.1	248	27.9		52.5	84	26.8			
3	290	19.0	247	31.9		56.4	250	03.7		09.6	263	29.8		52.7	99	29.3			
4	305	21.4	262	31.4		57.3	265	04.4		10.2	278	31.8		52.9	114	31.9			
5	320	23.9	277	30.9	+14	58.2	280	05.0	+15	10.8	293	33.7	+9	53.1	129	34.4			
6	335	26.4	292	30.4	+14	59.2	295	05.7	+15	11.4	308	35.7	+9	53.3	144	36.9			
7	350	28.8	307	29.8	+15	00.1	310	06.3		12.0	323	37.6		53.5	159	39.4			
8	5	31.3	322	29.3		01.1	325	07.0		12.6	338	39.6		53.6	174	42.0			
9	20	33.8	337	28.8		02.0	340	07.6		13.1	353	41.6		53.8	189	44.5			
10	35	36.2	352	28.3		03.0	355	08.3		13.7	8	43.5		54.0	204	47.0			
11	50	38.7	7	27.7	+15	03.9	10	08.9	+15	14.3	23	45.5	+9	54.2	219	49.6			
12	65	41.2	22	27.2	+15	04.8	25	09.6	+15	14.9	38	47.4	+9	54.4	234	52.1			
13	80	43.6	37	26.7		05.8	40	10.2		15.5	53	49.4		54.6	249	54.6			
14	95	46.1	52	26.1		06.7	55	10.9		16.1	68	51.3		54.8	264	57.1			
15	110	48.6	67	25.6		07.6	70	11.5		16.6	83	53.3		54.9	279	59.7			
16	125	51.0	82	25.1		08.6	85	12.2		17.2	98	55.2		55.1	295	02.2			
17	140	53.5	97	24.5	+15	09.5	100	12.8	+15	17.8	113	57.2	+9	55.3	310	04.7			
18	155	55.9	112	24.0	+15	10.5	115	13.5	+15	18.4	128	59.2	+9	55.5	325	07.2			
19	170	58.4	127	23.5		11.4	130	14.1		19.0	144	01.1		55.7	340	09.8			
20	186	00.9	142	22.9		12.3	145	14.8		19.5	159	03.1		55.9	355	12.3			
21	201	03.3	157	22.4		13.3	160	15.4		20.1	174	05.0		56.1	10	14.8			
22	216	05.8	172	21.9		14.2	175	16.1		20.7	189	07.0		56.2	25	17.4			
23	231	08.3	187	21.3		15.1	190	16.7		21.3	204	08.9		56.4	40	19.9			
24	246	10.7	202	20.8	+15	16.1	205	17.3	+15	21.9	219	10.9	+9	56.6	55	22.4			
Dif	—			-5 +9				+6 +6				+20 +2				+25 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: 25 ^d 7 PHE { 4 ^h : 54'4 12 ^h : 54'5 20 ^h : 54'6 PMG: 9 ^h 12 ^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	40.5	+21	31.7	226	10.1	+13	20.9	60 N	** **	1 36	2 55	1 20	12	17 26	78	
1	195	40.4		32.1	240	43.6 ¹⁴⁵		30.8	99 58	** **	2 07	3 12	28 15		15 75		
2	210	40.4		32.5	255	17.0 ¹⁴⁴		40.6	98 56		0 37	30	26	35 18	17 06	73	
3	225	40.3		32.9	269	50.4 ¹⁴⁴	+13	50.4	98 54		1 28	2 48	38	41 21	16 58	70	
4	240	40.2		33.3	284	23.8 ¹⁴⁴	+14	00.1	97 52		1 56	3 03	49	47 22	51 68		
5	255	40.1	+21	33.7	298	57.1 ¹⁴³	+14	09.8	97 50		2 18	3 17	3 59	1 52	24	16 45	66
6	270	40.0	+21	34.1	313	30.3 ¹⁴²	+14	19.4	96 45		2 56	3 43	4 19	2 03	28	16 31	63
7	285	40.0		34.5	328	03.5 ¹⁴²		29.0	96 40		3 23	4 03	35	12 31		19 60	
8	300	39.9		34.9	342	36.6 ¹⁴¹		38.5	95 35		3 44	20	4 49	21 33		10 57	
9	315	39.8		35.3	357	09.7 ¹⁴¹		48.0	95 30		4 01	33	5 00	28 35	16 01	56	
10	330	39.7		35.7	11	42.7 ¹⁴⁰	+14	57.4	94 20		28	4 56	20	40 39	15 47	52	
11	345	39.6	+21	36.1	26	15.7 ¹⁴⁰	+15	06.7	93 10 N		4 48	5 15	5 38	2 51	42	15 34	49
12	0	39.5	+21	36.4	40	48.6 ¹³⁹	+15	16.0	93 0		5 06	5 32	5 54	3 01	45	15 22	47
13	15	39.5		36.8	55	21.4 ¹³⁸		25.2	92 10 S		21	5 47	6 10	11 48		15 11	43
14	30	39.4		37.2	69	54.2 ¹³⁸		34.3	91 20		36	6 03	27	22 52	14 58	41	
15	45	39.3		37.6	84	26.9 ¹³⁷		43.4	91 30		50	20	46	35 55	44 37		
16	60	39.2		38.0	98	59.6 ¹³⁷	+15	52.5	91 35		5 58	29	6 57	42 58	36 35		
17	75	39.1	+21	38.4	113	32.2 ¹³⁶	+16	01.4	89 40		6 06	6 40	7 10	3 51	60	14 26	33
18	90	39.0	+21	38.8	128	04.7 ¹³⁵	+16	10.3	89 45		6 15	6 52	7 25	4 01	62	14 15	31
19	105	39.0		39.1	142	37.2 ¹³⁵		19.2	89 50		26	7 06	44	13 66	14 02	27	
20	120	38.9		39.5	157	09.6 ¹³⁴		28.0	88 52		30	13	7 52	18 69	13 56	25	
21	135	38.8		39.9	171	42.0 ¹³⁴		36.7	87 54		35	20	8 02	25 70	49 23		
22	150	38.7		40.3	186	14.3 ¹³³		45.3	86 56		40	28	13	31 73	42 20		
23	165	38.6		40.7	200	46.5 ¹³²	+16	53.9	86 58		46	37	26	39 76	33 18		
24	180	38.5	+21	41.0	215	18.6 ¹³¹	+17	02.4	85 60 S		6 52	7 47	8 41	4 48	79	13 24	14

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 7 ^h 34 ^m 0		Mag: -3.8 PMG: 10 ^h 31 ^m		Mag: +1.3 PMG: 10 ^h 18 ^m		Mag: -2.1 PMG: 9 ^h 22 ^m		Mag: +0.7 PMG: 20 ^h 15 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	246	10.7	202	20.8	+15	16.1	219	10.9	+9	56.6
1	261	13.2	217	20.3		17.0	220	18.0		22.4
2	276	15.7	232	19.7		17.9	235	18.6		23.0
3	291	18.1	247	19.2		18.8	250	19.3		23.6
4	306	20.6	262	18.7		19.8	265	19.9		24.2
5	321	23.1	277	18.1	+15	20.7	280	20.6	+15	24.8
6	336	25.5	292	17.6	+15	21.6	295	21.2	+15	25.3
7	351	28.0	307	17.0		22.6	310	21.9		25.9
8	6	30.4	322	16.5		23.5	325	22.5		26.5
9	21	32.9	337	16.0		24.4	340	23.2		27.1
10	36	35.4	352	15.4		25.3	355	23.8		27.6
11	51	37.8	7	14.9	+15	26.3	10	24.5	+15	28.2
12	66	40.3	22	14.3	+15	27.2	25	25.1	+15	28.8
13	81	42.8	37	13.8		28.1	40	25.8		29.4
14	96	45.2	52	13.3		29.0	55	26.4		29.9
15	111	47.7	67	12.7		29.9	70	27.1		30.5
16	126	50.2	82	12.2		30.9	85	27.7		31.1
17	141	52.6	97	11.6	+15	31.8	100	28.3	+15	31.7
18	156	55.1	112	11.1	+15	32.7	115	29.0	+15	32.2
19	171	57.5	127	10.5		33.6	130	29.6		32.8
20	187	00.0	142	10.0		34.5	145	30.3		33.4
21	202	02.5	157	09.5		35.5	160	30.9		34.0
22	217	04.9	172	08.9		36.4	175	31.6		34.5
23	232	07.4	187	08.4		37.3	190	32.2		35.1
24	247	09.9	202	07.8	+15	38.2	205	32.9	+15	35.7
Dif	—		-5		+9		+6		+6	
									+20	
									+2	
									+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 57 ^m 5			Edad: 26 ^d 7 PHE { SD: 14 ^h 9 PMG: 9 ^h 57 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m m	h m m	h m m
0	180	38.5	+21	41.0	215	18.6	+17	02.4	60 N	21 03	22 25	** **	1 32 18	18 44 76
1	195	38.5		41.4	229	50.7 ¹³¹		10.8 ⁸⁴	58	20 46	21 52	** **	43 22	30 73
2	210	38.4		41.8	244	22.8 ¹³¹		19.2 ⁸⁴	56	31	28	23 33	1 53 24	19 70
3	225	38.3		42.2	258	54.8 ¹³⁰		27.5 ⁸³	54	19	21 09	22 33	2 02 26	18 08 68
4	240	38.2		42.6	273	26.7 ¹²⁹		35.7 ⁸²	52	20 08	20 54	22 02	09 28	17 59 66
5	255	38.1	+21	42.9	287	58.5 ¹²⁸	+17	43.8 ⁸¹	50	19 58	20 40	21 40	2 16 30	17 51 65
6	270	38.0	+21	43.3	302	30.3 ¹²⁸	+17	51.9 ⁸¹	45	19 37	20 14	21 01	2 31 33	17 34 61
7	285	37.9		43.7	317	02.0 ¹²⁷	+17	59.9 ⁸⁰	40	21	19 53	20 33	43 36	19 60
8	300	37.9		44.1	331	33.6 ¹²⁶	+18	07.8 ⁷⁹	35	19 07	36	20 12	2 54 38	17 07 58
9	315	37.8		44.4	346	05.2 ¹²⁶		15.7 ⁷⁹	30	18 55	19 22	19 55	3 03 40	16 57 56
10	330	37.7		44.8	0	36.7 ¹²⁵		23.4 ⁷⁷	20	35	18 59	28	19 43	39 54
11	345	37.6	+21	45.2	15	08.2 ¹²⁵	+18	31.1 ⁷⁷	10 N	18 17	18 40	19 07	3 33 45	16 23 52
12	0	37.5	+21	45.6	29	39.6 ¹²⁴	+18	38.7 ⁷⁶	0	18 01	18 23	18 49	3 46 48	16 09 49
13	15	37.4		45.9	44	10.9 ¹²³		46.2 ⁷⁵	10 S	17 45	18 08	34	3 59 51	15 54 47
14	30	37.3		46.3	58	42.1 ¹²²	+18	53.7 ⁷⁵	20	28	17 52	19	4 14 53	39 45
15	45	37.2		46.7	73	13.3 ¹²²	+19	01.0 ⁷³	30	17 08	34	18 04	30 56	21 42
16	60	37.2		47.0	87	44.4 ¹²¹		08.3 ⁷³	35	16 57	25	17 56	40 57	15 11 40
17	75	37.1	+21	47.4	102	15.5 ¹²¹	+19	15.5 ⁷²	40	16 44	17 14	17 48	4 51 60	14 59 39
18	90	37.0	+21	47.8	116	46.5 ¹²⁰	+19	22.6 ⁷¹	45	16 29	17 02	17 38	5 03 63	14 46 36
19	105	36.9		48.1	131	17.4 ¹¹⁹		29.6 ⁷⁰	50	10	16 47	28	19 66	29 33
20	120	36.8		48.5	145	48.2 ¹¹⁸		36.6 ⁷⁰	52	16 01	41	23	27 67	21 31
21	135	36.7		48.9	160	19.0 ¹¹⁸		43.4 ⁶⁸	54	15 51	33	19	35 70	12 30
22	150	36.6		49.2	174	49.7 ¹¹⁷		50.2 ⁶⁸	56	40	25	13	44 72	14 02 28
23	165	36.5		49.6	189	20.4 ¹¹⁷	+19	56.9 ⁶⁷	58	27	16	07	5 55 75	13 51 25
24	180	36.4	+21	50.0	203	51.0 ¹¹⁶	+20	03.4 ⁶⁵	60 S	15 12	16 06	17 01	6 07 78	13 38 22
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 7 ^h 30 ^m 1		Mag: -3.8 PMG: 10 ^h 32 ^m			Mag: +1.3 PMG: 10 ^h 17 ^m			Mag: -2.1 PMG: 9 ^h 19 ^m			Mag: +0.7 PMG: 20 ^h 11 ^m		
	hG ♈		hG ♀		Dec	hG ♂		Dec	hG ♃		Dec	hG ♄		Dec
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	247	09.9	202	07.8	+15	38.2	205	32.9	+15	35.7	219	57.9	+10	01.1
1	262	12.3	217	07.3		39.1	220	33.5		36.3	234	59.8		01.2
2	277	14.8	232	06.7		40.0	235	34.2		36.8	250	01.8		01.4
3	292	17.3	247	06.2		41.0	250	34.8		37.4	265	03.8		01.6
4	307	19.7	262	05.6		41.9	265	35.5		38.0	280	05.7		01.8
5	322	22.2	277	05.1	+15	42.8	280	36.1	+15	38.5	295	07.7	+10	02.0
6	337	24.7	292	04.5	+15	43.7	295	36.7	+15	39.1	310	09.6	+10	02.2
7	352	27.1	307	04.0		44.6	310	37.4		39.7	325	11.6		02.3
8	7	29.6	322	03.4		45.5	325	38.0		40.3	340	13.6		02.5
9	22	32.0	337	02.9		46.4	340	38.7		40.8	355	15.5		02.7
10	37	34.5	352	02.3		47.3	355	39.3		41.4	10	17.5		02.9
11	52	37.0	7	01.8	+15	48.3	10	40.0	+15	42.0	25	19.4	+10	03.1
12	67	39.4	22	01.2	+15	49.2	25	40.6	+15	42.5	40	21.4	+10	03.3
13	82	41.9	37	00.7		50.1	40	41.3		43.1	55	23.4		03.4
14	97	44.4	52	00.1		51.0	55	41.9		43.7	70	25.3		03.6
15	112	46.8	66	59.6		51.9	70	42.6		44.2	85	27.3		03.8
16	127	49.3	81	59.0		52.8	85	43.2		44.8	100	29.2		04.0
17	142	51.8	96	58.5	+15	53.7	100	43.8	+15	45.4	115	31.2	+10	04.2
18	157	54.2	111	57.9	+15	54.6	115	44.5	+15	46.0	130	33.2	+10	04.4
19	172	56.7	126	57.3		55.5	130	45.1		46.5	145	35.1		04.5
20	187	59.2	141	56.8		56.4	145	45.8		47.1	160	37.1		04.7
21	203	01.6	156	56.2		57.3	160	46.4		47.7	175	39.0		04.9
22	218	04.1	171	55.7		58.2	175	47.1		48.2	190	41.0		05.1
23	233	06.5	186	55.1	+15	59.1	190	47.7		48.8	205	43.0		05.3
24	248	09.0	201	54.6	+16	00.0	205	48.4	+15	49.4	220	44.9	+10	05.5
Dif	—		-6		+9		+6		+6		+20		+2	

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8			Edad: 27 ^d 7 PHE { 4 ^h : 55 ^h 1 12 ^h : 55 ^h 2 20 ^h : 55 ^h 4										
	PMG: 11 ^h 57 ^m 6			SD: 15 ^h 0										
	hG ☉ Dec			hG ☾ Dif Dec Dif				Náutico	Civil		Hora	R°	Hora	R°
h	°	'	°	°	'	°	°	h	m	h	m	h	m	m
0	180	36.4	+21 50.0	203	51.0	+20 03.4	60 N	** **	1 30	2 51	1 50	27	20 00	68
1	195	36.4	50.3	218	21.5 ¹¹⁵	09.9	58	** **	2 03	3 09	2 05	30	19 43	66
2	210	36.3	50.7	232	51.9 ¹¹⁴	16.3	56	0 21	27	24	17 32		29 64	
3	225	36.2	51.1	247	22.3 ¹¹⁴	22.6	54	1 22	2 45	36	28 34		16 63	
4	240	36.1	51.4	261	52.7 ¹¹⁴	28.8	52	1 52	3 01	47	37 36		19 05	62
5	255	36.0	+21 51.8	276	22.9 ¹¹²	+20 35.0	50	2 15	3 14	3 57	2 46	37	18 56	61
6	270	35.9	+21 52.2	290	53.1 ¹¹²	+20 41.0	45	2 54	3 41	4 17	3 04	40	18 35	60
7	285	35.8	52.5	305	23.2 ¹¹¹	46.9	40	3 22	4 02	34	19 42		19 58	
8	300	35.7	52.9	319	53.3 ¹¹¹	52.7	35	3 43	19	4 48	32 43		18 05	57
9	315	35.6	53.2	334	23.3 ¹¹⁰	+20 58.5	30	4 00	33	5 00	3 43	44	17 53	56
10	330	35.5	53.6	348	53.2 ¹⁰⁹	+21 04.1	20	27	4 56	20	4 02	47	33 54	
11	345	35.5	+21 53.9	3	23.1 ¹⁰⁹	+21 09.6	10 N	4 48	5 15	5 38	4 18	49	17 15	53
12	0	35.4	+21 54.3	17	52.9 ¹⁰⁸	+21 15.1	0	5 06	5 32	5 54	4 34	51	16 58	52
13	15	35.3	54.7	32	22.6 ¹⁰⁷	20.4	10 S	22	5 48	6 10	4 50	52	41 51	
14	30	35.2	55.0	46	52.3 ¹⁰⁷	25.6	20	36	6 04	27	5 07	54	24 49	
15	45	35.1	55.4	61	21.9 ¹⁰⁶	30.7	30	51	21	47	26 56		16 03	48
16	60	35.0	55.7	75	51.4 ¹⁰⁵	35.8	35	5 59	31	6 58	37 58		15 51	47
17	75	34.9	+21 56.1	90	20.9 ¹⁰⁵	+21 40.7	40	6 08	6 41	7 11	5 51	59	15 38	45
18	90	34.8	+21 56.4	104	50.3 ¹⁰⁴	+21 45.5	45	6 17	6 54	7 27	6 06	61	15 22	43
19	105	34.7	56.8	119	19.7 ¹⁰⁴	50.2	50	27	7 08	46	25 64		15 02	41
20	120	34.6	57.1	133	49.0 ¹⁰³	54.8	52	32	15	7 55	34 65		14 52	41
21	135	34.5	57.5	148	18.3 ¹⁰³	+21 59.3	54	37	22	8 05	45 66		42 39	
22	150	34.4	57.8	162	47.4 ¹⁰¹	+22 03.7	56	42	30	16	6 56	68	30 37	
23	165	34.3	58.2	177	16.6 ¹⁰²	07.9	58	48	40	29	7 10	70	16 36	
24	180	34.3	+21 58.5	191	45.6 ¹⁰⁰	+22 12.1	60 S	6 55	7 50	8 44	7 25	73	14 00	33
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG 7 ^h 26 ^m 2		Mag: -3.8 PMG: 10 ^h 33 ^m			Mag: +1.3 PMG: 10 ^h 16 ^m			Mag: -2.2 PMG: 9 ^h 16 ^m			Mag: +0.7 PMG: 20 ^h 07 ^m		
	hG ♈		hG ♀ Dec			hG ♂ Dec			hG ♃ Dec			hG ♄ Dec		
h	°	'	°	°	'	°	°	°	°	'	°	°	°	'
0	248	09.0	201	54.6	+16 00.0	205	48.4	+15 49.4	220	44.9	+10 05.5	57	23.5	-1 47.0
1	263	11.5	216	54.0	+16 00.9	220	49.0	49.9	235	46.9	05.6	72	26.0	47.0
2	278	13.9	231	53.5	01.8	235	49.6	50.5	250	48.8	05.8	87	28.5	47.0
3	293	16.4	246	52.9	02.7	250	50.3	51.0	265	50.8	06.0	102	31.0	47.0
4	308	18.9	261	52.3	03.6	265	50.9	51.6	280	52.8	06.2	117	33.5	47.0
5	323	21.3	276	51.8	+16 04.5	280	51.6	+15 52.2	295	54.7	+10 06.4	132	36.1	-1 47.0
6	338	23.8	291	51.2	+16 05.4	295	52.2	+15 52.7	310	56.7	+10 06.5	147	38.6	-1 46.9
7	353	26.3	306	50.7	06.3	310	52.9	53.3	325	58.7	06.7	162	41.1	46.9
8	8	28.7	321	50.1	07.2	325	53.5	53.9	341	00.6	06.9	177	43.6	46.9
9	23	31.2	336	49.5	08.1	340	54.2	54.4	356	02.6	07.1	192	46.1	46.9
10	38	33.6	351	49.0	09.0	355	54.8	55.0	11	04.5	07.3	207	48.6	46.9
11	53	36.1	6	48.4	+16 09.9	10	55.4	+15 55.6	26	06.5	+10 07.5	222	51.2	-1 46.9
12	68	38.6	21	47.8	+16 10.8	25	56.1	+15 56.1	41	08.5	+10 07.6	237	53.7	-1 46.9
13	83	41.0	36	47.3	11.6	40	56.7	56.7	56	10.4	07.8	252	56.2	46.9
14	98	43.5	51	46.7	12.5	55	57.4	57.2	71	12.4	08.0	267	58.7	46.9
15	113	46.0	66	46.2	13.4	70	58.0	57.8	86	14.4	08.2	283	01.2	46.8
16	128	48.4	81	45.6	14.3	85	58.7	58.4	101	16.3	08.4	298	03.7	46.8
17	143	50.9	96	45.0	+16 15.2	100	59.3	+15 58.9	116	18.3	+10 08.5	313	06.3	-1 46.8
18	158	53.4	111	44.5	+16 16.1	115	59.9	+15 59.5	131	20.2	+10 08.7	328	08.8	-1 46.8
19	173	55.8	126	43.9	17.0	131	00.6	+16 00.1	146	22.2	08.9	343	11.3	46.8
20	188	58.3	141	43.3	17.9	146	01.2	00.6	161	24.2	09.1	358	13.8	46.8
21	204	00.8	156	42.8	18.8	161	01.9	01.2	176	26.1	09.3	13	16.3	46.8
22	219	03.2	171	42.2	19.6	176	02.5	01.7	191	28.1	09.5	28	18.8	46.8
23	234	05.7	186	41.6	20.5	191	03.2	02.3	206	30.1	09.6	43	21.3	46.7
24	249	08.1	201	41.0	+16 21.4	206	03.8	+16 02.9	221	32.0	+10 09.8	58	23.9	-1 46.7
Dif	—		-6 +9			+6 +6			+20 +2			+25 0		

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15°8			Edad: 28 ^d 7 PHE { 4 ^h : 55'5 12 ^h : 55'7 20 ^h : 55'8 R°: 53 ^m										
	PMG: 11 ^h 57 ^m 8			SD: 15'1 PMG: 11 ^h 37 ^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	180	34.3	+21	58.5	191	45.6	+22 12.1	60 N	21 07	22 31	** **	2 17 41	21 08 54	
1	195	34.2		58.9	206	14.6 ¹⁰⁰	16.2 41	58	20 49	21 56	** **	35 42	20 49 54	
2	210	34.1		59.2	220	43.6 ¹⁰⁰	20.1 39	56	34	32	** **	2 49 44	33 54	
3	225	34.0		59.6	235	12.5 ⁹⁹	23.9 38	54	21	21 12	22 39	3 02 45	19 54	
4	240	33.9	+21	59.9	249	41.3 ⁹⁸	27.6 37	52	10	20 56	22 06	13 46	20 07 54	
5	255	33.8	+22	00.3	264	10.1 ⁹⁸	+22 31.2 36	50	20 00	20 43	21 43	3 23 46	19 57 54	
6	270	33.7	+22	00.6	278	38.9 ⁹⁸	+22 34.7 35	45	19 39	20 16	21 03	3 44 48	19 35 54	
7	285	33.6		01.0	293	07.5 ⁹⁶	38.1 34	40	22	19 55	20 35	4 01 49	17 54	
8	300	33.5		01.3	307	36.2 ⁹⁷	41.4 33	35	19 08	38	20 14	15 50	19 02 54	
9	315	33.4		01.6	322	04.8 ⁹⁶	44.5 31	30	18 56	23	19 56	27 51	18 49 54	
10	330	33.3		02.0	336	33.3 ⁹⁵	47.5 30	20	36	19 00	29	4 49 51	27 54	
11	345	33.2	+22	02.3	351	01.8 ⁹⁵	+22 50.4 29	10 N	18 18	18 41	19 08	5 07 52	18 08 53	
12	0	33.1	+22	02.7	5	30.2 ⁹⁴	+22 53.2 28	0	18 01	18 24	18 50	5 25 52	17 50 53	
13	15	33.0		03.0	19	58.6 ⁹⁴	55.9 27	10 S	17 45	18 08	34	5 42 54	32 53	
14	30	32.9		03.3	34	26.9 ⁹³	+22 58.4 25	20	28	17 52	19	6 01 54	17 13 53	
15	45	32.8		03.7	48	55.2 ⁹³	+23 00.9 25	30	17 08	34	18 04	22 56	16 51 52	
16	60	32.7		04.0	63	23.4 ⁹²	03.2 23	35	16 56	24	17 56	35 56	38 52	
17	75	32.6	+22	04.4	77	51.6 ⁹²	+23 05.4 22	40	16 43	17 13	17 47	6 50 56	16 23 52	
18	90	32.5	+22	04.7	92	19.7 ⁹¹	+23 07.4 20	45	16 28	17 01	17 38	7 07 57	16 05 52	
19	105	32.4		05.0	106	47.9 ⁹²	09.4 20	50	09	16 46	27	29 58	15 43 52	
20	120	32.3		05.4	121	15.9 ⁹⁰	11.2 18	52	16 00	39	22	39 58	33 51	
21	135	32.2		05.7	135	43.9 ⁹⁰	12.9 17	54	15 49	32	17	7 51 59	21 51	
22	150	32.1		06.0	150	11.9 ⁹⁰	14.5 16	56	38	24	12	8 04 60	15 07 51	
23	165	32.0		06.4	164	39.9 ⁹⁰	15.9 14	58	25	14	17 06	20 60	14 52 49	
24	180	32.0	+22	06.7	179	07.8 ⁸⁹	+23 17.2 13	60 S	15 09	16 04	16 59	8 38 62	14 33 48	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 7 ^h 22 ^m 2		Mag: -3.8 PMG: 10 ^h 34 ^m		Mag: +1.3 PMG: 10 ^h 15 ^m		Mag: -2.2 PMG: 9 ^h 13 ^m		Mag: +0.7 PMG: 20 ^h 03 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	249	08.1	201	41.0	+16	21.4	221	32.0	+10	09.8
1	264	10.6	216	40.5		22.3	236	34.0		10.0
2	279	13.1	231	39.9		23.2	251	36.0		10.2
3	294	15.5	246	39.3		24.1	266	37.9		10.4
4	309	18.0	261	38.8		24.9	281	39.9		10.5
5	324	20.5	276	38.2	+16	25.8	296	41.8	+10	10.7
6	339	22.9	291	37.6	+16	26.7	311	43.8	+10	10.9
7	354	25.4	306	37.1		27.6	326	45.8		11.1
8	9	27.9	321	36.5		28.5	341	47.7		11.3
9	24	30.3	336	35.9		29.3	356	49.7		11.4
10	39	32.8	351	35.3		30.2	11	51.7		11.6
11	54	35.3	6	34.8	+16	31.1	26	53.6	+10	11.8
12	69	37.7	21	34.2	+16	32.0	41	55.6	+10	12.0
13	84	40.2	36	33.6		32.8	56	57.6		12.2
14	99	42.6	51	33.0		33.7	71	59.5		12.4
15	114	45.1	66	32.5		34.6	87	01.5		12.5
16	129	47.6	81	31.9		35.5	102	03.5		12.7
17	144	50.0	96	31.3	+16	36.3	117	05.4	+10	12.9
18	159	52.5	111	30.7	+16	37.2	132	07.4	+10	13.1
19	174	55.0	126	30.2		38.1	147	09.4		13.3
20	189	57.4	141	29.6		38.9	162	11.3		13.4
21	204	59.9	156	29.0		39.8	177	13.3		13.6
22	220	02.4	171	28.4		40.7	192	15.3		13.8
23	235	04.8	186	27.8		41.5	207	17.2		14.0
24	250	07.3	201	27.3	+16	42.4	222	19.2	+10	14.2
Dif	—		-6	+9		+6	+6	+20		+2

UT	SOL				● LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 15/8 PMG: 11 ^h 57 ^m 9				Edad: 0 ^d 1 PHE { SD: 15/2 PMG: 12 ^h 30 ^m R°: 55 ^m 4 ^h : 56/0 12 ^h : 56/2 20 ^h : 56/4															
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°				
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m			
0	180	32.0	+22	06.7	179	07.8	+23	17.2	12	60 N	** **	1 24	2 48	2 58	58	22 02	38			
1	195	31.9		07.0	193	35.6	88	18.4	11	58	** **	1 59	3 06	3 17	58	21 43	40			
2	210	31.8		07.4	208	03.5	89	19.5	10	56	** **	2 24	21	33	57	27	42			
3	225	31.7		07.7	222	31.3	88	20.4	9	54	1 17	43	34	47	57	13	44			
4	240	31.6		08.0	236	59.0	87	21.3	9	52	1 49	2 59	46	3 59	57	21 01	45			
5	255	31.5	+22	08.4	251	26.8	88	+23 22.0	7	50	2 12	3 13	3 55	4 09	57	20 51	46			
6	270	31.4	+22	08.7	265	54.5	87	+23 22.5	5	45	2 52	3 40	4 16	4 32	56	20 29	47			
7	285	31.3		09.0	280	22.2	87	22.9	4	40	3 20	4 01	33	4 50	55	20 11	49			
8	300	31.2		09.3	294	49.8	86	23.3	4	35	42	18	47	5 05	55	19 56	50			
9	315	31.1		09.7	309	17.4	86	23.4	1	30	3 59	32	4 59	18	55	43	51			
10	330	31.0		10.0	323	45.0	86	23.5	1	20	4 27	4 56	5 20	40	55	21	52			
11	345	30.9	+22	10.3	338	12.6	86	+23 23.4	1	10 N	4 48	5 15	5 38	5 59	55	19 01	54			
12	0	30.8	+22	10.6	352	40.1	85	+23 23.2	2	0	5 06	5 32	5 54	6 17	55	18 43	55			
13	15	30.7		11.0	7	07.6	85	22.9	3	10 S	22	5 48	6 11	36	53	25	56			
14	30	30.6		11.3	21	35.1	85	22.4	5	20	37	6 04	28	6 55	53	18 06	56			
15	45	30.5		11.6	36	02.6	85	21.8	6	30	5 52	22	6 48	7 18	52	17 43	58			
16	60	30.4		11.9	50	30.0	84	21.1	7	35	6 00	32	7 00	31	52	30	58			
17	75	30.3	+22	12.3	64	57.5	85	+23 20.2	9	40	6 09	6 43	7 13	7 46	52	17 15	59			
18	90	30.2	+22	12.6	79	24.9	84	+23 19.2	10	45	6 18	6 55	7 28	8 04	51	16 57	60			
19	105	30.1		12.9	93	52.3	84	18.1	11	50	29	7 10	48	27	50	35	61			
20	120	30.0		13.2	108	19.6	83	16.8	13	52	34	17	7 57	37	50	24	62			
21	135	29.9		13.5	122	47.0	84	15.5	13	54	39	24	8 07	8 50	49	16 12	62			
22	150	29.8		13.8	137	14.4	84	13.9	16	56	45	33	19	9 04	48	15 58	63			
23	165	29.7		14.2	151	41.7	83	12.3	16	58	51	42	32	20	47	41	65			
24	180	29.6	+22	14.5	166	09.0	83	+23 10.5	18	60 S	6 57	7 53	8 47	9 40	46	15 21	67			
UT	ARIES				VENUS				MARTE				JÚPITER				SATURNO			
	PMG 7 ^h 18 ^m 3				Mag: -3.8 PMG: 10 ^h 35 ^m				Mag: +1.3 PMG: 10 ^h 14 ^m				Mag: -2.2 PMG: 9 ^h 10 ^m				Mag: +0.8 PMG: 19 ^h 59 ^m			
	hG ♈		Dec		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	250	07.3	201	27.3	+16	42.4	206	19.2	+16	16.2	222	19.2	+10	14.2	59	24.2	-1	46.5		
1	265	09.8	216	26.7		43.3	221	19.8		16.7	237	21.2		14.3	74	26.7		46.5		
2	280	12.2	231	26.1		44.1	236	20.5		17.3	252	23.1		14.5	89	29.2		46.5		
3	295	14.7	246	25.5		45.0	251	21.1		17.8	267	25.1		14.7	104	31.7		46.5		
4	310	17.1	261	24.9		45.9	266	21.8		18.4	282	27.1		14.9	119	34.2		46.5		
5	325	19.6	276	24.4	+16	46.7	281	22.4	+16	18.9	297	29.0	+10	15.0	134	36.7	-1	46.4		
6	340	22.1	291	23.8	+16	47.6	296	23.0	+16	19.5	312	31.0	+10	15.2	149	39.2	-1	46.4		
7	355	24.5	306	23.2		48.5	311	23.7		20.0	327	33.0		15.4	164	41.7		46.4		
8	10	27.0	321	22.6		49.3	326	24.3		20.6	342	34.9		15.6	179	44.2		46.4		
9	25	29.5	336	22.0		50.2	341	25.0		21.1	357	36.9		15.8	194	46.8		46.4		
10	40	31.9	351	21.4		51.0	356	25.6		21.7	12	38.9		15.9	209	49.3		46.4		
11	55	34.4	6	20.9	+16	51.9	11	26.2	+16	22.2	27	40.8	+10	16.1	224	51.8	-1	46.4		
12	70	36.9	21	20.3	+16	52.8	26	26.9	+16	22.8	42	42.8	+10	16.3	239	54.3	-1	46.4		
13	85	39.3	36	19.7		53.6	41	27.5		23.3	57	44.8		16.5	254	56.8		46.4		
14	100	41.8	51	19.1		54.5	56	28.2		23.9	72	46.7		16.7	269	59.3		46.4		
15	115	44.3	66	18.5		55.3	71	28.8		24.4	87	48.7		16.8	285	01.8		46.4		
16	130	46.7	81	17.9		56.2	86	29.4		25.0	102	50.7		17.0	300	04.3		46.4		
17	145	49.2	96	17.3	+16	57.0	101	30.1	+16	25.5	117	52.6	+10	17.2	315	06.8	-1	46.3		
18	160	51.6	111	16.7	+16	57.9	116	30.7	+16	26.1	132	54.6	+10	17.4	330	09.3	-1	46.3		
19	175	54.1	126	16.2		58.8	131	31.4		26.6	147	56.6		17.6	345	11.8		46.3		
20	190	56.6	141	15.6	+16	59.6	146	32.0		27.2	162	58.5		17.7	0	14.3		46.3		
21	205	59.0	156	15.0	+17	00.5	161	32.6		27.7	178	00.5		17.9	15	16.9		46.3		
22	221	01.5	171	14.4		01.3	176	33.3		28.3	193	02.5		18.1	30	19.4		46.3		
23	236	04.0	186	13.8		02.2	191	33.9		28.8	208	04.4		18.3	45	21.9		46.3		
24	251	06.4	201	13.2	+17	03.0	206	34.6	+16	29.4	223	06.4	+10	18.4	60	24.4	-1	46.3		
Dif	—				-6 +9				+6 +5				+20 +2				+25 0			

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15/8 PMG: 11 ^h 58 ^m 1			Edad: 1 ^d 1 PHE { 4 ^h : 56/5 12 ^h : 56/7 20 ^h : 56/9 PMG: 13 ^h 25 ^m R°: 54 ^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	180	29.6	+22 14.5	166	09.0	+23 10.5	19	60 N	21 10	22 37	** **	3 56	74	22 40
1	195	29.5	14.8	180	36.4	84 08.6	19	58	20 52	22 01	** **	4 15	71	23 30
2	210	29.3	15.1	195	03.7	83 06.6	20	56	37	21 35	** **	30	70	22 09
3	225	29.2	15.4	209	31.0	83 04.4	22	54	24	21 15	22 44	44	68	21 57
4	240	29.1	15.7	223	58.3	83 +23 02.1	23	52	12	20 59	22 10	4 56	66	46 36
5	255	29.0	+22 16.1	238	25.6	83 +22 59.7	24	50	20 02	20 45	21 47	5 06	66	21 37
6	270	28.9	+22 16.4	252	52.9	83 +22 57.1	26	45	19 41	20 17	21 05	5 28	63	21 16
7	285	28.8	16.7	267	20.2	83 54.4	27	40	24	19 56	20 37	5 45	62	21 00
8	300	28.7	17.0	281	47.5	83 51.6	28	35	19 10	39	20 15	6 00	61	20 46
9	315	28.6	17.3	296	14.8	83 48.6	30	30	18 57	24	19 57	13 59	59	34 46
10	330	28.5	17.6	310	42.1	83 45.5	31	20	36	19 01	30	35 57	57	20 13
11	345	28.4	+22 17.9	325	09.4	83 +22 42.3	32	10 N	18 18	18 41	19 08	6 54	56	19 55
12	0	28.3	+22 18.2	339	36.7	83 +22 39.0	33	0	18 02	18 24	18 50	7 12	54	19 38
13	15	28.2	18.5	354	04.0	83 35.5	35	10 S	17 45	18 08	34	29 53	53	21 55
14	30	28.1	18.8	8	31.3	83 31.9	36	20	28	17 51	19	7 48	51	19 02
15	45	28.0	19.1	22	58.6	83 28.1	38	30	17 08	34	18 03	8 10	49	18 41
16	60	27.9	19.5	37	25.9	83 24.3	38	35	16 56	24	17 55	23 47	47	28 63
17	75	27.8	+22 19.8	51	53.2	83 +22 20.3	40	40	16 43	17 13	17 46	8 38	46	18 14
18	90	27.7	+22 20.1	66	20.6	84 +22 16.1	42	45	16 27	17 00	17 37	8 55	44	17 57
19	105	27.6	20.4	80	47.9	83 11.9	42	50	16 07	16 45	26	9 17	41	36 69
20	120	27.5	20.7	95	15.3	84 07.5	44	52	15 58	38	21	27 40	40	26 70
21	135	27.4	21.0	109	42.7	84 +22 03.0	45	54	48	31	16	39 39	39	14 73
22	150	27.3	21.3	124	10.1	84 +21 58.3	47	56	36	22	10	9 52	37	17 01
23	165	27.2	21.6	138	37.5	84 53.6	47	58	23	13	17 04	10 07	35	16 46
24	180	27.1	+22 21.9	153	04.9	84 +21 48.7	49	60 S	15 07	16 02	16 57	10 26	31	16 28
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 7 ^h 14 ^m 4		Mag: -3.8 PMG: 10 ^h 36 ^m			Mag: +1.3 PMG: 10 ^h 13 ^m			Mag: -2.2 PMG: 9 ^h 06 ^m			Mag: +0.8 PMG: 19 ^h 55 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	251	06.4	201 13.2	+17 03.0	206 34.6	+16 29.4	223 06.4	+10 18.4	60 24.4	-1 46.3				
1	266	08.9	216 12.6	03.9	221 35.2	29.9	238 08.4	18.6	75 26.9	46.3				
2	281	11.4	231 12.0	04.7	236 35.8	30.4	253 10.3	18.8	90 29.4	46.3				
3	296	13.8	246 11.4	05.6	251 36.5	31.0	268 12.3	19.0	105 31.9	46.3				
4	311	16.3	261 10.8	06.4	266 37.1	31.5	283 14.3	19.2	120 34.4	46.3				
5	326	18.7	276 10.2	+17 07.2	281 37.7	+16 32.1	298 16.3	+10 19.3	135 36.9	-1 46.3				
6	341	21.2	291 09.6	+17 08.1	296 38.4	+16 32.6	313 18.2	+10 19.5	150 39.4	-1 46.2				
7	356	23.7	306 09.1	08.9	311 39.0	33.2	328 20.2	19.7	165 41.9	46.2				
8	11	26.1	321 08.5	09.8	326 39.7	33.7	343 22.2	19.9	180 44.4	46.2				
9	26	28.6	336 07.9	10.6	341 40.3	34.3	358 24.1	20.1	195 46.9	46.2				
10	41	31.1	351 07.3	11.5	356 40.9	34.8	13 26.1	20.2	210 49.4	46.2				
11	56	33.5	6 06.7	+17 12.3	11 41.6	+16 35.3	28 28.1	+10 20.4	225 51.9	-1 46.2				
12	71	36.0	21 06.1	+17 13.1	26 42.2	+16 35.9	43 30.0	+10 20.6	240 54.5	-1 46.2				
13	86	38.5	36 05.5	14.0	41 42.9	36.4	58 32.0	20.8	255 57.0	46.2				
14	101	40.9	51 04.9	14.8	56 43.5	37.0	73 34.0	20.9	270 59.5	46.2				
15	116	43.4	66 04.3	15.7	71 44.1	37.5	88 36.0	21.1	286 02.0	46.2				
16	131	45.9	81 03.7	16.5	86 44.8	38.0	103 37.9	21.3	301 04.5	46.2				
17	146	48.3	96 03.1	+17 17.3	101 45.4	+16 38.6	118 39.9	+10 21.5	316 07.0	-1 46.2				
18	161	50.8	111 02.5	+17 18.2	116 46.0	+16 39.1	133 41.9	+10 21.6	331 09.5	-1 46.2				
19	176	53.2	126 01.9	19.0	131 46.7	39.7	148 43.8	21.8	346 12.0	46.2				
20	191	55.7	141 01.3	19.8	146 47.3	40.2	163 45.8	22.0	1 14.5	46.2				
21	206	58.2	156 00.7	20.7	161 48.0	40.7	178 47.8	22.2	16 17.0	46.1				
22	222	00.6	171 00.1	21.5	176 48.6	41.3	193 49.8	22.4	31 19.5	46.1				
23	237	03.1	185 59.5	22.3	191 49.2	41.8	208 51.7	22.5	46 22.0	46.1				
24	252	05.6	200 58.9	+17 23.2	206 49.9	+16 42.4	223 53.7	+10 22.7	61 24.5	-1 46.1				
Dif	—		-6 +8		+6 +5		+20 +2		+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 58 ^m 3				Edad: 2 ^d 1 PHE { 4 ^h : 57 ^h 0 12 ^h : 57 ^h 2 20 ^h : 57 ^h 4 Rº: 52 ^m												
	hG ☉		Dec		hG ☾ Dif		Dec Dif			Náutico	Civil		Hora	Rº	Hora	Rº	
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	180	27.1	+22	21.9	153	04.9	+21	48.7	50	60 N	** *	1 19	2 46	5 10	84	23 06	18
1	195	27.0		22.2	167	32.3	84		43.7	58	** *	1 55	3 04		26 81	22 53	21
2	210	26.9		22.5	181	59.8	85		38.5	52	** *	2 21	19		40 78		41 25
3	225	26.7		22.8	196	27.2	84		33.2	53		1 12	41	33	5 52	75	31 27
4	240	26.6		23.1	210	54.7	85		27.8	54		1 46	2 57	44	6 02	74	22 29
5	255	26.5	+22	23.4	225	22.2	85	+21	22.3	55	50	2 09	3 11	3 54	6 12	72	22 14 31
6	270	26.4	+22	23.7	239	49.8	86	+21	16.7	56	45	2 51	3 39	4 15	6 31	69	21 57 35
7	285	26.3		24.0	254	17.3	85		10.9	58	40	3 19	4 00	32	6 47	66	43 38
8	300	26.2		24.3	268	44.9	86	+21	05.0	59	35	41	17	47	7 01	63	31 40
9	315	26.1		24.5	283	12.5	86	+20	59.0	60	30	3 59	32	4 59	12 62		20 43
10	330	26.0		24.8	297	40.1	86		52.8	62	20	4 27	4 56	5 20	32 59		21 02 47
11	345	25.9	+22	25.1	312	07.8	87	+20	46.6	62	10 N	4 48	5 15	5 38	7 50	55	20 46 50
12	0	25.8	+22	25.4	326	35.5	87	+20	40.2	64	0	5 06	5 32	5 55	8 06	53	20 31 53
13	15	25.7		25.7	341	03.2	87		33.7	65	10 S	22	5 49	6 11	22 51		16 56
14	30	25.6		26.0	355	30.9	87		27.1	66	20	38	6 05	29	39 48		20 00 59
15	45	25.5		26.3	9	58.7	88		20.3	68	30	5 53	23	6 49	8 59	45	19 42 62
16	60	25.4		26.6	24	26.4	87		13.5	68	35	6 01	33	7 01	9 10	43	31 64
17	75	25.2	+22	26.9	38	54.3	89	+20	06.5	70	40	6 10	6 44	7 14	9 24	40	19 18 67
18	90	25.1	+22	27.2	53	22.1	88	+19	59.4	71	45	6 20	6 57	7 30	9 39	38	19 03 70
19	105	25.0		27.5	67	50.0	89		52.2	72	50	31	7 12	50	9 58	34	18 45 74
20	120	24.9		27.7	82	17.9	89		44.8	74	52	36	19	7 59	10 07	33	36 76
21	135	24.8		28.0	96	45.8	89		37.4	74	54	41	26	8 09	18 30		27 78
22	150	24.7		28.3	111	13.8	90		29.8	76	56	46	35	21	29 28		16 81
23	165	24.6		28.6	125	41.8	90		22.2	76	58	6 53	44	35	42 25		18 03 84
24	180	24.5	+22	28.9	140	09.8	90	+19	14.4	78	60 S	7 00	7 55	8 50	10 57	21	17 48 88

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG 7 ^h 10 ^m 5		Mag: -3.8 PMG: 10 ^h 37 ^m		Mag: +1.3 PMG: 10 ^h 12 ^m		Mag: -2.2 PMG: 9 ^h 03 ^m		Mag: +0.8 PMG: 19 ^h 51 ^m									
	hG ♈		hG ♀ Dec		hG ♂ Dec		hG ♃ Dec		hG ♄ Dec									
h	°	'	°	'	°	'	°	'	°	'								
0	252	05.6	200	58.9	+17	23.2	206	49.9	+16	42.4	223	53.7	+10	22.7	61	24.5	-1	46.1
1	267	08.0	215	58.3		24.0	221	50.5		42.9	238	55.7		22.9	76	27.0		46.1
2	282	10.5	230	57.7		24.8	236	51.1		43.4	253	57.6		23.1	91	29.5		46.1
3	297	13.0	245	57.1		25.7	251	51.8		44.0	268	59.6		23.2	106	32.0		46.1
4	312	15.4	260	56.5		26.5	266	52.4		44.5	284	01.6		23.4	121	34.5		46.1
5	327	17.9	275	55.8	+17	27.3	281	53.1	+16	45.0	299	03.6	+10	23.6	136	37.0	-1	46.1
6	342	20.4	290	55.2	+17	28.2	296	53.7	+16	45.6	314	05.5	+10	23.8	151	39.5	-1	46.1
7	357	22.8	305	54.6		29.0	311	54.3		46.1	329	07.5		23.9	166	42.0		46.1
8	12	25.3	320	54.0		29.8	326	55.0		46.7	344	09.5		24.1	181	44.5		46.1
9	27	27.7	335	53.4		30.6	341	55.6		47.2	359	11.4		24.3	196	47.0		46.1
10	42	30.2	350	52.8		31.5	356	56.2		47.7	14	13.4		24.5	211	49.5		46.1
11	57	32.7	5	52.2	+17	32.3	11	56.9	+16	48.3	29	15.4	+10	24.7	226	52.0	-1	46.1
12	72	35.1	20	51.6	+17	33.1	26	57.5	+16	48.8	44	17.4	+10	24.8	241	54.5	-1	46.1
13	87	37.6	35	51.0		33.9	41	58.1		49.3	59	19.3		25.0	256	57.0		46.1
14	102	40.1	50	50.4		34.7	56	58.8		49.9	74	21.3		25.2	271	59.5		46.1
15	117	42.5	65	49.8		35.6	71	59.4		50.4	89	23.3		25.4	287	02.0		46.0
16	132	45.0	80	49.2		36.4	87	00.1		50.9	104	25.3		25.5	302	04.5		46.0
17	147	47.5	95	48.6	+17	37.2	102	00.7	+16	51.5	119	27.2	+10	25.7	317	07.0	-1	46.0
18	162	49.9	110	47.9	+17	38.0	117	01.3	+16	52.0	134	29.2	+10	25.9	332	09.5	-1	46.0
19	177	52.4	125	47.3		38.8	132	02.0		52.5	149	31.2		26.1	347	12.0		46.0
20	192	54.9	140	46.7		39.7	147	02.6		53.1	164	33.1		26.2	2	14.5		46.0
21	207	57.3	155	46.1		40.5	162	03.2		53.6	179	35.1		26.4	17	17.0		46.0
22	222	59.8	170	45.5		41.3	177	03.9		54.1	194	37.1		26.6	32	19.5		46.0
23	238	02.2	185	44.9		42.1	192	04.5		54.7	209	39.1		26.8	47	22.0		46.0
24	253	04.7	200	44.3	+17	42.9	207	05.1	+16	55.2	224	41.0	+10	26.9	62	24.5	-1	46.0
Dif	—		-6		+8		+6		+5		+20		+2		+25			

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8 PMG: 11 ^h 58 ^m 5			Edad: 3 ^d 1 SD: 15 ^h 6 PMG: 15 ^h 11 ^m	PHE { 4 ^h : 57 ^h 5 12 ^h : 57 ^h 7 20 ^h : 57 ^h 8 R°: 52 ^m										
	hG ☉	Dec				hG ☾			Dif	Dec	Dif	Civil	Náutico	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	
0	180	24.5	+22 28.9	140	09.8	+19 14.4	79	60 N	21 13	22 44	** **	6 34 90	23 24 13		
1	195	24.4	29.2	154	37.9	+19 06.5	91	58	20 55	22 05	** **	47 86	14 17		
2	210	24.3	29.4	169	06.0	+18 58.5	80	56	39	21 38	** **	6 58 83	23 06 19		
3	225	24.2	29.7	183	34.1	50.4	81	54	26	18	22 50	7 07 80	22 58 22		
4	240	24.1	30.0	198	02.3	42.1	83	52	14	21 01	22 14	16 78	51 24		
5	255	23.9	+22 30.3	212	30.5	+18 33.8	83	50	20 04	20 47	21 50	7 24 75	22 45 26		
6	270	23.8	+22 30.6	226	58.7	+18 25.3	85	45	19 42	20 19	21 08	7 40 71	22 32 30		
7	285	23.7	30.8	241	27.0	16.8	85	40	25	19 58	20 39	7 53 68	21 34		
8	300	23.6	31.1	255	55.3	+18 08.1	87	35	19 11	40	20 16	8 04 65	11 37		
9	315	23.5	31.4	270	23.6	+17 59.4	87	30	18 58	26	19 59	14 63	22 03 39		
10	330	23.4	31.7	284	52.0	50.5	89	20	37	19 02	31	31 58	21 49 43		
11	345	23.3	+22 32.0	299	20.4	+17 41.5	90	10 N	18 19	18 42	19 09	8 45 55	21 36 47		
12	0	23.2	+22 32.2	313	48.9	+17 32.4	91	0	18 02	18 25	18 51	8 59 52	21 24 51		
13	15	23.1	32.5	328	17.4	23.2	92	10 S	17 45	18 08	34	9 13 48	21 12 54		
14	30	22.9	32.8	342	45.9	14.0	92	20	28	17 51	19	27 45	20 59 58		
15	45	22.8	33.1	357	14.5	+17 04.6	94	30	17 07	33	18 03	44 40	44 63		
16	60	22.7	33.3	11	43.1	+16 55.1	95	35	16 55	23	17 55	9 53 39	35 66		
17	75	22.6	+22 33.6	26	11.7	+16 45.5	96	40	16 42	17 12	17 46	10 04 36	20 25 69		
18	90	22.5	+22 33.9	40	40.4	+16 35.8	97	45	16 26	16 59	17 36	10 17 32	20 13 72		
19	105	22.4	34.1	55	09.1	26.1	97	50	16 06	44	25	32 29	19 59 77		
20	120	22.3	34.4	69	37.8	16.2	99	52	15 57	37	20	40 26	52 79		
21	135	22.2	34.7	84	06.6	+16 06.2	100	54	46	29	15	48 24	45 81		
22	150	22.1	35.0	98	35.4	+15 56.2	100	56	35	21	09	10 57 21	37 83		
23	165	21.9	35.2	113	04.3	46.0	102	58	21	11	17 03	11 07 18	27 87		
24	180	21.8	+22 35.5	127	33.2	+15 35.8	102	60 S	15 05	16 00	16 56	11 18 15	19 16 91		

UT	ARIES		VENUS		MARTE		JÚPITER			SATURNO								
	PMG: 7 ^h 06 ^m 5		Mag: -3.8 PMG: 10 ^h 37 ^m		Mag: +1.3 PMG: 10 ^h 11 ^m		Mag: -2.2 PMG: 9 ^h 00 ^m			Mag: +0.8 PMG: 19 ^h 47 ^m								
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec		hG ♄	Dec							
h	°	'	°	'	°	'	°	'	°	'	°	'						
0	253	04.7	200	44.3	+17	42.9	207	05.1	+16	55.2	224	41.0	+10	26.9	62	24.5	-1	46.0
1	268	07.2	215	43.6		43.7	222	05.8		55.7	239	43.0		27.1	77	27.0		46.0
2	283	09.6	230	43.0		44.5	237	06.4		56.3	254	45.0		27.3	92	29.5		46.0
3	298	12.1	245	42.4		45.3	252	07.0		56.8	269	47.0		27.5	107	32.0		46.0
4	313	14.6	260	41.8		46.2	267	07.7		57.3	284	48.9		27.6	122	34.5		46.0
5	328	17.0	275	41.2	+17	47.0	282	08.3	+16	57.8	299	50.9	+10	27.8	137	37.0	-1	46.0
6	343	19.5	290	40.6	+17	47.8	297	08.9	+16	58.4	314	52.9	+10	28.0	152	39.5	-1	46.0
7	358	22.0	305	40.0		48.6	312	09.6		58.9	329	54.9		28.2	167	42.0		46.0
8	13	24.4	320	39.3		49.4	327	10.2	+16	59.4	344	56.8		28.3	182	44.5		46.0
9	28	26.9	335	38.7		50.2	342	10.9	+17	00.0	359	58.8		28.5	197	47.0		46.0
10	43	29.4	350	38.1		51.0	357	11.5	+17	00.5	15	00.8		28.7	212	49.5		46.0
11	58	31.8	5	37.5	+17	51.8	12	12.1	+17	01.0	30	02.8	+10	28.9	227	52.0	-1	46.0
12	73	34.3	20	36.9	+17	52.6	27	12.8	+17	01.5	45	04.7	+10	29.0	242	54.5	-1	46.0
13	88	36.7	35	36.2		53.4	42	13.4		02.1	60	06.7		29.2	257	57.0		46.0
14	103	39.2	50	35.6		54.2	57	14.0		02.6	75	08.7		29.4	272	59.5		46.0
15	118	41.7	65	35.0		55.0	72	14.7		03.1	90	10.7		29.6	288	02.0		45.9
16	133	44.1	80	34.4		55.8	87	15.3		03.6	105	12.6		29.7	303	04.5		45.9
17	148	46.6	95	33.8	+17	56.6	102	15.9	+17	04.2	120	14.6	+10	29.9	318	07.0	-1	45.9
18	163	49.1	110	33.1	+17	57.4	117	16.6	+17	04.7	135	16.6	+10	30.1	333	09.5	-1	45.9
19	178	51.5	125	32.5		58.2	132	17.2		05.2	150	18.6		30.3	348	12.0		45.9
20	193	54.0	140	31.9		59.0	147	17.8		05.7	165	20.6		30.4	3	14.5		45.9
21	208	56.5	155	31.3	+17	59.8	162	18.5		06.3	180	22.5		30.6	18	17.0		45.9
22	223	58.9	170	30.6	+18	00.6	177	19.1		06.8	195	24.5		30.8	33	19.5		45.9
23	239	01.4	185	30.0		01.4	192	19.7		07.3	210	26.5		31.0	48	22.0		45.9
24	254	03.9	200	29.4	+18	02.2	207	20.4	+17	07.8	225	28.5	+10	31.1	63	24.5	-1	45.9
Dif	—		-6		+8		+6		+5		+20		+2		+25			

UT	SOL				☾ LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15 ^h 8				Edad: 4 ^d 1 PHE { 4 ^h : 58 ^o 0 12 ^h : 58 ^o 1 20 ^h : 58 ^o 3 R°: 50 ^m													
	PMG: 11 ^h 58 ^m 6				SD: 15 ^h 8 PMG: 16 ^h 03 ^m					Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	'	hG ☾	Dif	Dec	Dif	°	h	m	h	m	h	m	h	m	m
0	180	21.8	+22	35.5	127	33.2	+15	35.8	60 N	**	**	1	13	2	43	8	04	91
1	195	21.7		35.8	142	02.1	99	25.4	58	**	**	1	52	3	02	13	87	31
2	210	21.6		36.0	156	31.0	99	15.0	56	**	**	2	18	18		21	84	25
3	225	21.5		36.3	171	00.0	100	+15	04.5	54	1	07	39	31		27	82	20
4	240	21.4		36.6	185	29.1	101	+14	53.9	52	1	43	2	55	43		34	79
5	255	21.3	+22	36.8	199	58.1	100	+14	43.2	50	2	07	3	10	3	53	8	39
6	270	21.2	+22	37.1	214	27.2	101	+14	32.4	45	2	49	3	38	4	14	8	51
7	285	21.0		37.3	228	56.4	102	21.6	40	3	18	3	59	32		9	01	69
8	300	20.9		37.6	243	25.6	102	+14	10.6	35	41	4	17	46		09	66	48
9	315	20.8		37.9	257	54.8	102	+13	59.6	30	3	58	31	4	59	17	62	42
10	330	20.7		38.1	272	24.0	102	48.5	20	4	26	4	55	5	20	29	58	32
11	345	20.6	+22	38.4	286	53.3	103	+13	37.3	10 N	4	48	5	15	5	38	9	40
12	0	20.5	+22	38.6	301	22.6	103	+13	26.0	0	5	07	5	33	5	55	9	51
13	15	20.4		38.9	315	52.0	104	14.7	10 S	23	5	49	6	12	10	01	46	22
14	30	20.2		39.2	330	21.3	103	+13	03.3	20	38	6	06	30		12	42	21
15	45	20.1		39.4	344	50.7	104	+12	51.8	30	5	54	24	6	50	24	38	47
16	60	20.0		39.7	359	20.2	105	40.2	35	6	02	34	7	02		32	35	41
17	75	19.9	+22	39.9	13	49.7	105	+12	28.5	40	6	11	6	45	7	15	10	40
18	90	19.8	+22	40.2	28	19.2	105	+12	16.8	45	6	21	6	58	7	32	10	49
19	105	19.7		40.4	42	48.7	105	+12	05.0	50	32	7	13	7	51	11	01	24
20	120	19.6		40.7	57	18.3	106	+11	53.1	52	37	20	8	01		06	22	11
21	135	19.4		40.9	71	47.9	106	41.2	54	42	28	11		12	20		06	82
22	150	19.3		41.2	86	17.5	106	29.2	56	48	37	23		18	17		21	00
23	165	19.2		41.5	100	47.1	106	17.1	58	6	55	46	37		25	15		20
24	180	19.1	+22	41.7	115	16.8	107	+11	05.0	60 S	7	02	7	57	8	53	11	33

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 7 ^h 02 ^m 6		Mag: -3.8 PMG: 10 ^h 38 ^m		Mag: +1.3 PMG: 10 ^h 10 ^m		Mag: -2.2 PMG: 8 ^h 57 ^m		Mag: +0.8 PMG: 19 ^h 43 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	254	03.9	200	29.4	+18	02.2	207	20.4	+17	07.8
1	269	06.3	215	28.8		03.0	222	21.0		08.4
2	284	08.8	230	28.1		03.8	237	21.6		08.9
3	299	11.2	245	27.5		04.6	252	22.3		09.4
4	314	13.7	260	26.9		05.4	267	22.9		09.9
5	329	16.2	275	26.2	+18	06.2	282	23.5	+17	10.5
6	344	18.6	290	25.6	+18	07.0	297	24.2	+17	11.0
7	359	21.1	305	25.0		07.7	312	24.8		11.5
8	14	23.6	320	24.4		08.5	327	25.4		12.0
9	29	26.0	335	23.7		09.3	342	26.1		12.5
10	44	28.5	350	23.1		10.1	357	26.7		13.1
11	59	31.0	5	22.5	+18	10.9	12	27.3	+17	13.6
12	74	33.4	20	21.8	+18	11.7	27	28.0	+17	14.1
13	89	35.9	35	21.2		12.5	42	28.6		14.6
14	104	38.3	50	20.6		13.2	57	29.2		15.2
15	119	40.8	65	19.9		14.0	72	29.9		15.7
16	134	43.3	80	19.3		14.8	87	30.5		16.2
17	149	45.7	95	18.7	+18	15.6	102	31.1	+17	16.7
18	164	48.2	110	18.0	+18	16.4	117	31.8	+17	17.2
19	179	50.7	125	17.4		17.2	132	32.4		17.7
20	194	53.1	140	16.8		17.9	147	33.0		18.3
21	209	55.6	155	16.1		18.7	162	33.7		18.8
22	224	58.1	170	15.5		19.5	177	34.3		19.3
23	240	00.5	185	14.9		20.3	192	34.9		19.8
24	255	03.0	200	14.2	+18	21.0	207	35.6	+17	20.3
Dif	—		-6 +8		+6 +5		+20 +2		+25 0	

UT	SOL			 LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8			Edad: 5 ^d 1	PHE { 4 ^h : 58 ^h /4 12 ^h : 58 ^h /6 20 ^h : 58 ^h /7	Final del crepúsculo			Salida de Luna		Puesta de Luna			
	PMG: 11 ^h 58 ^m 8					SD: 15 ^h 9			R ^o : 49 ^m					
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Civil	Náutico	Hora	R ^o	Hora	R ^o
h	°	'	°	°	'	°	'	°	h m	h m	h m	m	h m	m
0	180	19.1	+22 41.7	115	16.8	+11 05.0		60 N	21 16	22 49	** **	9 35 91	23 47 9	
1	195	19.0	42.0	129	46.5 ¹⁰⁷	+10 52.8 ¹²²		58	20 57	22 08	** **	40 88	44 12	
2	210	18.9	42.2	144	16.2 ¹⁰⁷	40.5 ¹²³		56	41	21 41	** **	45 85	41 15	
3	225	18.8	42.5	158	46.0 ¹⁰⁸	28.2 ¹²³		54	28	21	22 55	49 82	39 17	
4	240	18.6	42.7	173	15.8 ¹⁰⁸	15.8 ¹²⁴		52	16	21 04	22 18	53 80	36 20	
5	255	18.5	+22 42.9	187	45.6 ¹⁰⁸	+10 03.3 ¹²⁵		50	20 06	20 49	21 52	9 56 78	23 34 22	
6	270	18.4	+22 43.2	202	15.4 ¹⁰⁸	+9 50.8 ¹²⁵		45	19 44	20 21	21 09	10 04 73	23 29 26	
7	285	18.3	43.4	216	45.3 ¹⁰⁹	38.2 ¹²⁶		40	26	19 59	20 40	10 69	26 29	
8	300	18.2	43.7	231	15.2 ¹⁰⁹	25.6 ¹²⁶		35	19 12	41	18	15 66	22 33	
9	315	18.1	43.9	245	45.1 ¹⁰⁹	12.9 ¹²⁷		30	18 59	27	20 00	19 63	19 36	
10	330	17.9	44.2	260	15.0 ¹⁰⁹	+9 00.1 ¹²⁸		20	38	19 02	19 31	27 58	14 40	
11	345	17.8	+22 44.4	274	45.0 ¹¹⁰	+8 47.3 ¹²⁸		10 N	18 20	18 42	19 09	10 34 54	23 09 45	
12	0	17.7	+22 44.7	289	14.9 ¹⁰⁹	+8 34.5 ¹²⁸		0	18 02	18 25	18 51	10 41 49	23 05 49	
13	15	17.6	44.9	303	44.9 ¹¹⁰	21.6 ¹²⁹		10 S	17 46	18 08	35	47 46	23 00 54	
14	30	17.5	45.1	318	14.9 ¹¹⁰	+8 08.6 ¹³⁰		20	28	17 52	19	10 54 41	22 55 58	
15	45	17.4	45.4	332	44.9 ¹¹⁰	+7 55.6 ¹³⁰		30	17 07	33	18 03	11 02 36	50 63	
16	60	17.2	45.6	347	15.0 ¹¹¹	42.5 ¹³¹		35	16 55	23	17 55	07 33	46 66	
17	75	17.1	+22 45.9	1	45.0 ¹¹⁰	+7 29.4 ¹³¹		40	16 41	17 12	17 46	11 12 30	22 43 69	
18	90	17.0	+22 46.1	16	15.1 ¹¹¹	+7 16.3 ¹³¹		45	16 25	16 59	17 36	11 18 26	22 38 74	
19	105	16.9	46.3	30	45.2 ¹¹¹	+7 03.1 ¹³²		50	16 05	43	25	25 22	33 78	
20	120	16.8	46.6	45	15.3 ¹¹¹	+6 49.8 ¹³³		52	15 56	36	20	28 20	31 80	
21	135	16.7	46.8	59	45.4 ¹¹¹	36.6 ¹³²		54	45	28	14	32 17	28 83	
22	150	16.5	47.0	74	15.5 ¹¹¹	23.2 ¹³⁴		56	33	20	08	35 16	25 85	
23	165	16.4	47.3	88	45.7 ¹¹²	+6 09.9 ¹³³		58	19	16 10	17 02	40 12	22 88	
24	180	16.3	+22 47.5	103	15.8 ¹¹¹	+5 56.5 ¹³⁴		60 S	15 03	15 59	16 55	11 45 9	22 18 92	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 6 ^h 58 ^m 7		Mag: -3.8 PMG: 10 ^h 40 ^m		Mag: +1.3 PMG: 10 ^h 09 ^m		Mag: -2.2 PMG: 8 ^h 54 ^m		Mag: +0.8 PMG: 19 ^h 39 ^m					
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	255	03.0	200	14.2	+18 21.0	207	35.6	+17 20.3	226	15.9	+10 35.3	64	24.3	-1 45.9
1	270	05.5	215	13.6	21.8	222	36.2	20.8	241	17.9	35.5	79	26.8	45.9
2	285	07.9	230	13.0	22.6	237	36.8	21.4	256	19.9	35.6	94	29.3	45.9
3	300	10.4	245	12.3	23.4	252	37.5	21.9	271	21.9	35.8	109	31.8	45.9
4	315	12.8	260	11.7	24.1	267	38.1	22.4	286	23.9	36.0	124	34.3	45.9
5	330	15.3	275	11.0	+18 24.9	282	38.7	+17 22.9	301	25.8	+10 36.1	139	36.8	-1 45.9
6	345	17.8	290	10.4	+18 25.7	297	39.4	+17 23.4	316	27.8	+10 36.3	154	39.3	-1 45.9
7	0	20.2	305	09.8	26.4	312	40.0	23.9	331	29.8	36.5	169	41.8	45.9
8	15	22.7	320	09.1	27.2	327	40.6	24.5	346	31.8	36.7	184	44.3	45.9
9	30	25.2	335	08.5	28.0	342	41.3	25.0	1	33.8	36.8	199	46.7	45.9
10	45	27.6	350	07.8	28.7	357	41.9	25.5	16	35.7	37.0	214	49.2	45.9
11	60	30.1	5	07.2	+18 29.5	12	42.5	+17 26.0	31	37.7	+10 37.2	229	51.7	-1 45.9
12	75	32.6	20	06.5	+18 30.3	27	43.1	+17 26.5	46	39.7	+10 37.3	244	54.2	-1 45.9
13	90	35.0	35	05.9	31.0	42	43.8	27.0	61	41.7	37.5	259	56.7	45.9
14	105	37.5	50	05.3	31.8	57	44.4	27.5	76	43.7	37.7	274	59.2	45.9
15	120	40.0	65	04.6	32.6	72	45.0	28.0	91	45.7	37.9	290	01.7	45.9
16	135	42.4	80	04.0	33.3	87	45.7	28.6	106	47.6	38.0	305	04.2	45.9
17	150	44.9	95	03.3	+18 34.1	102	46.3	+17 29.1	121	49.6	+10 38.2	320	06.7	-1 45.9
18	165	47.3	110	02.7	+18 34.9	117	46.9	+17 29.6	136	51.6	+10 38.4	335	09.2	-1 45.9
19	180	49.8	125	02.0	35.6	132	47.6	30.1	151	53.6	38.5	350	11.6	45.9
20	195	52.3	140	01.4	36.4	147	48.2	30.6	166	55.6	38.7	5	14.1	45.9
21	210	54.7	155	00.7	37.1	162	48.8	31.1	181	57.5	38.9	20	16.6	45.9
22	225	57.2	170	00.1	37.9	177	49.5	31.6	196	59.5	39.1	35	19.1	45.9
23	240	59.7	184	59.4	38.6	192	50.1	32.1	212	01.5	39.2	50	21.6	45.9
24	255	02.1	199	58.8	+18 39.4	207	50.7	+17 32.6	227	03.5	+10 39.4	65	24.1	-1 45.9
Dif	—		-6 +8		+6 +5		+20 +2		+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 59 ^m 0			Edad: 6 ^d 1 PHE	SD: 16 ^h 0 PMG: 17 ^h 42 ^m										
	hG ☉	Dec			hG ☾	Dif		Dec	Dif		Náutico	Civil	Hora	R°	Hora
h	°	'	°	°	'	°	'	h	m	h	m	h	m	h	m
0	180	16.3	+22 47.5	103	15.8	+5 56.5	60 N	** *	1 08	2 41	11 06	93	23 56	10	
1	195	16.2	47.8	117	46.0 ¹¹²	43.0 ¹³⁵	58	** *	1 49	3 00	08 89		56 13		
2	210	16.1	48.0	132	16.1 ¹¹¹	29.5 ¹³⁵	56	** *	2 16	16	10 86		56 15		
3	225	15.9	48.2	146	46.3 ¹¹²	16.0 ¹³⁵	54	1 02	37	30	11 84		56 17		
4	240	15.8	48.4	161	16.5 ¹¹²	+5 02.5 ¹³⁵	52	1 40	2 54	42	13 81		56 20		
5	255	15.7	+22 48.7	175	46.7 ¹¹²	+4 48.9 ¹³⁶	50	2 05	3 08	3 52	11 14	79	23 56	21	
6	270	15.6	+22 48.9	190	16.9 ¹¹²	+4 35.3 ¹³⁶	45	2 48	3 37	4 14	11 17	73	23 55	27	
7	285	15.5	49.1	204	47.1 ¹¹²	21.6 ¹³⁷	40	3 18	3 59	31	19 70		55 30		
8	300	15.4	49.4	219	17.3 ¹¹²	+4 07.9 ¹³⁷	35	40	4 16	46	21 66		55 33		
9	315	15.2	49.6	233	47.5 ¹¹²	+3 54.2 ¹³⁷	30	3 58	31	4 58	22 64		55 36		
10	330	15.1	49.8	248	17.7 ¹¹²	40.5 ¹³⁷	20	4 26	4 55	5 20	25 59		54 42		
11	345	15.0	+22 50.0	262	47.9 ¹¹²	+3 26.7 ¹³⁸	10 N	4 48	5 15	5 38	11 28	54	23 54	46	
12	0	14.9	+22 50.3	277	18.1 ¹¹²	+3 13.0 ¹³⁷	0	5 07	5 33	5 55	11 30	50	23 54	50	
13	15	14.8	50.5	291	48.3 ¹¹²	+2 59.1 ¹³⁹	10 S	23	5 50	6 12	33 45		54 54		
14	30	14.6	50.7	306	18.5 ¹¹²	45.3 ¹³⁸	20	39	6 06	30	35 41		53 59		
15	45	14.5	50.9	320	48.7 ¹¹²	31.5 ¹³⁸	30	5 55	25	6 51	38 36		53 64		
16	60	14.4	51.2	335	18.8 ¹¹¹	17.6 ¹³⁹	35	6 03	35	7 03	40 33		52 67		
17	75	14.3	+22 51.4	349	49.0 ¹¹²	+2 03.7 ¹³⁹	40	6 12	6 46	7 17	11 42	30	23 52	70	
18	90	14.2	+22 51.6	4	19.2 ¹¹²	+1 49.8 ¹³⁹	45	6 22	6 59	7 33	11 44	26	23 52	74	
19	105	14.0	51.8	18	49.4 ¹¹²	35.9 ¹³⁹	50	34	7 15	7 53	47 21		51 79		
20	120	13.9	52.1	33	19.6 ¹¹²	21.9 ¹⁴⁰	52	39	22	8 02	48 20		51 81		
21	135	13.8	52.3	47	49.7 ¹¹¹	+1 08.0 ¹³⁹	54	44	30	13	49 18		51 83		
22	150	13.7	52.5	62	19.9 ¹¹²	+0 54.0 ¹⁴⁰	56	50	39	25	51 15		50 87		
23	165	13.6	52.7	76	50.0 ¹¹¹	40.0 ¹⁴⁰	58	6 56	7 48	39	52 13		50 90		
24	180	13.4	+22 52.9	91	20.1 ¹¹¹	+0 26.0 ¹⁴⁰	60 S	7 03	8 00	8 56	11 54	9	23 50	93	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO		
	PMG: 6 ^h 54 ^m 7		Mag: -3.8 PMG: 10 ^h 41 ^m		Mag: +1.3 PMG: 10 ^h 08 ^m		Mag: -2.2 PMG: 8 ^h 51 ^m		Mag: +0.8 PMG: 19 ^h 35 ^m		
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	
0	256	02.1	199 58.8	+18 39.4	207 50.7	+17 32.6	227 03.5	+10 39.4	65 24.1	-1 45.9	
1	271	04.6	214 58.1	40.2	222 51.3	33.1	242 05.5	39.6	80 26.6	45.9	
2	286	07.1	229 57.5	40.9	237 52.0	33.7	257 07.5	39.7	95 29.1	45.9	
3	301	09.5	244 56.8	41.7	252 52.6	34.2	272 09.4	39.9	110 31.6	45.9	
4	316	12.0	259 56.2	42.4	267 53.2	34.7	287 11.4	40.1	125 34.0	45.9	
5	331	14.4	274 55.5	+18 43.2	282 53.9	+17 35.2	302 13.4	+10 40.2	140 36.5	-1 45.9	
6	346	16.9	289 54.9	+18 43.9	297 54.5	+17 35.7	317 15.4	+10 40.4	155 39.0	-1 45.9	
7	1	19.4	304 54.2	44.7	312 55.1	36.2	332 17.4	40.6	170 41.5	45.9	
8	16	21.8	319 53.6	45.4	327 55.8	36.7	347 19.4	40.8	185 44.0	45.9	
9	31	24.3	334 52.9	46.2	342 56.4	37.2	2	21.3	200 46.5	45.9	
10	46	26.8	349 52.3	46.9	357 57.0	37.7	17 23.3	41.1	215 49.0	45.9	
11	61	29.2	4	51.6	+18 47.7	12 57.7	+17 38.2	32 25.3	+10 41.3	230 51.4	-1 45.9
12	76	31.7	19 51.0	+18 48.4	27 58.3	+17 38.7	47 27.3	+10 41.4	245 53.9	-1 45.9	
13	91	34.2	34 50.3	49.1	42 58.9	39.2	62 29.3	41.6	260 56.4	45.9	
14	106	36.6	49 49.7	49.9	57 59.5	39.7	77 31.3	41.8	275 58.9	45.9	
15	121	39.1	64 49.0	50.6	73 00.2	40.2	92 33.2	41.9	291 01.4	45.9	
16	136	41.6	79 48.4	51.4	88 00.8	40.7	107 35.2	42.1	306 03.9	45.9	
17	151	44.0	94 47.7	+18 52.1	103 01.4	+17 41.2	122 37.2	+10 42.3	321 06.4	-1 45.9	
18	166	46.5	109 47.0	+18 52.9	118 02.1	+17 41.7	137 39.2	+10 42.5	336 08.8	-1 45.9	
19	181	48.9	124 46.4	53.6	133 02.7	42.3	152 41.2	42.6	351 11.3	45.9	
20	196	51.4	139 45.7	54.3	148 03.3	42.8	167 43.2	42.8	6 13.8	45.9	
21	211	53.9	154 45.1	55.1	163 03.9	43.3	182 45.2	43.0	21 16.3	45.9	
22	226	56.3	169 44.4	55.8	178 04.6	43.8	197 47.1	43.1	36 18.8	45.9	
23	241	58.8	184 43.8	56.5	193 05.2	44.3	212 49.1	43.3	51 21.3	45.9	
24	257	01.3	199 43.1	+18 57.3	208 05.8	+17 44.8	227 51.1	+10 43.5	66 23.8	-1 45.9	
Dif	—		-7	+7	+6	+5	+20	+2	+25	0	

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 15 ^h 8			Edad: 7 ^d 1	PHE { 4 ^h : 59/2 12 ^h : 59/3 20 ^h : 59/4	Final del crepúsculo			Salida de Luna		Puesta de Luna					
	PMG: 11 ^h 59 ^m 2					Civil			Náutico		Hora R°		Hora R°			
	hG ☉	Dec		hG ☾	Dif	Dec	Dif									
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m	
0	180	13.4	+22 52.9	91	20.1	+0 26.0		60 N	21 19	22 55	** **	12 39 93		** ** *	** ** *	
1	195	13.3		105	50.2 ¹¹¹	+0 12.0 ¹⁴⁰		58	20 59	22 12	** **	37 91		** ** *	** ** *	
2	210	13.2	53.4	120	20.3 ¹¹¹	-0 02.0 ¹⁴⁰		56	43	21 44	** **	36 87		** ** *	** ** *	
3	225	13.1	53.6	134	50.4 ¹¹¹	16.0 ¹⁴⁰		54	30	23	23 01	35 84		** ** *	** ** *	
4	240	13.0	53.8	149	20.5 ¹¹¹	30.0 ¹⁴⁰		52	18	21 06	22 21	34 82		** ** *	** ** *	
5	255	12.8	+22 54.0	163	50.5 ¹¹⁰	-0 44.0 ¹⁴⁰		50	20 07	20 51	21 55	12 33 79		** ** *	** ** *	
6	270	12.7	+22 54.2	178	20.5 ¹¹⁰	-0 58.0 ¹⁴⁰		45	19 45	20 22	21 11	12 30 75		** ** *	** ** *	
7	285	12.6	54.4	192	50.5 ¹¹⁰	-1 12.1 ¹⁴¹		40	28	20 00	20 41	29 71		** ** *	** ** *	
8	300	12.5	54.6	207	20.5 ¹¹⁰	26.1 ¹⁴⁰		35	13	19 42	19	27 68		** ** *	** ** *	
9	315	12.3	54.9	221	50.5 ¹¹⁰	40.1 ¹⁴⁰		30	19 00	27	20 01	26 64		** ** *	** ** *	
10	330	12.2	55.1	236	20.5 ¹¹⁰	-1 54.1 ¹⁴⁰		20	18 39	19 03	19 32	24 59		** ** *	** ** *	
11	345	12.1	+22 55.3	250	50.4 ¹⁰⁹	-2 08.1 ¹⁴⁰		10 N	18 20	18 43	19 10	12 22 55		** ** *	** ** *	
12	0	12.0	+22 55.5	265	20.3 ¹⁰⁹	-2 22.2 ¹⁴¹		0	18 03	18 25	18 51	12 20 51		** ** *	** ** *	
13	15	11.9	55.7	279	50.2 ¹⁰⁹	36.2 ¹⁴⁰		10 S	17 46	18 09	35	18 47		** ** *	** ** *	
14	30	11.7	55.9	294	20.0 ¹⁰⁸	-2 50.2 ¹⁴⁰		20	28	17 52	19	16 42		** ** *	** ** *	
15	45	11.6	56.1	308	49.8 ¹⁰⁸	-3 04.1 ¹³⁹		30	17 07	33	18 03	14 37		** ** *	** ** *	
16	60	11.5	56.3	323	19.6 ¹⁰⁸	18.1 ¹⁴⁰		35	16 55	23	17 54	13 34		** ** *	** ** *	
17	75	11.4	+22 56.5	337	49.4 ¹⁰⁸	-3 32.1 ¹⁴⁰		40	16 41	17 11	17 45	12 12 30		** ** *	** ** *	
18	90	11.2	+22 56.7	352	19.1 ¹⁰⁷	-3 46.0 ¹³⁹		45	16 25	16 58	17 35	12 10 27		** ** *	** ** *	
19	105	11.1	56.9	6	48.8 ¹⁰⁷	-4 00.0 ¹⁴⁰		50	16 05	43	24	08 23		** ** *	** ** *	
20	120	11.0	57.1	21	18.5 ¹⁰⁷	-4 13.9 ¹³⁹		52	15 55	35	19	08 20		** ** *	** ** *	
21	135	10.9	57.3	35	48.1 ¹⁰⁶	27.8 ¹³⁹		54	44	28	13	07 18		** ** *	** ** *	
22	150	10.8	57.5	50	17.7 ¹⁰⁶	41.7 ¹³⁹		56	32	19	08	06 15		** ** *	** ** *	
23	165	10.6	57.7	64	47.3 ¹⁰⁶	-4 55.5 ¹³⁸		58	18	16 09	17 01	05 13		** ** *	** ** *	
24	180	10.5	+22 57.9	79	16.8 ¹⁰⁵	-5 09.4 ¹³⁹		60 S	15 01	15 58	16 54	12 03 10		** ** *	** ** *	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO				
	PMG: 6 ^h 50 ^m 8		Mag: -3.8 PMG: 10 ^h 42 ^m			Mag: +1.3 PMG: 10 ^h 07 ^m			Mag: -2.2 PMG: 8 ^h 47 ^m			Mag: +0.8 PMG: 19 ^h 31 ^m				
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	
0	257	01.3	199	43.1	+18 57.3		208	05.8	+17 44.8		227	51.1	+10 43.5		66 23.8	-1 45.9
1	272	03.7	214	42.4	58.0		223	06.5	45.3		242	53.1	43.6		81 26.2	45.9
2	287	06.2	229	41.8	58.8		238	07.1	45.8		257	55.1	43.8		96 28.7	45.9
3	302	08.7	244	41.1	+18 59.5		253	07.7	46.3		272	57.1	44.0		111 31.2	45.9
4	317	11.1	259	40.4	+19 00.2		268	08.3	46.8		287	59.1	44.1		126 33.7	45.9
5	332	13.6	274	39.8	+19 00.9		283	09.0	+17 47.3		303	01.0	+10 44.3		141 36.2	-1 45.9
6	347	16.1	289	39.1	+19 01.7		298	09.6	+17 47.8		318	03.0	+10 44.5		156 38.7	-1 45.9
7	2	18.5	304	38.5	02.4		313	10.2	48.3		333	05.0	44.7		171 41.1	45.9
8	17	21.0	319	37.8	03.1		328	10.9	48.8		348	07.0	44.8		186 43.6	45.9
9	32	23.4	334	37.1	03.9		343	11.5	49.3		3	09.0	45.0		201 46.1	45.9
10	47	25.9	349	36.5	04.6		358	12.1	49.8		18	11.0	45.2		216 48.6	45.9
11	62	28.4	4	35.8	+19 05.3		13	12.7	+17 50.3		33	13.0	+10 45.3		231 51.1	-1 45.9
12	77	30.8	19	35.1	+19 06.0		28	13.4	+17 50.8		48	15.0	+10 45.5		246 53.6	-1 45.9
13	92	33.3	34	34.5	06.8		43	14.0	51.3		63	16.9	45.7		261 56.0	46.0
14	107	35.8	49	33.8	07.5		58	14.6	51.8		78	18.9	45.8		276 58.5	46.0
15	122	38.2	64	33.1	08.2		73	15.3	52.3		93	20.9	46.0		292 01.0	46.0
16	137	40.7	79	32.5	08.9		88	15.9	52.7		108	22.9	46.2		307 03.5	46.0
17	152	43.2	94	31.8	+19 09.7		103	16.5	+17 53.2		123	24.9	+10 46.3		322 06.0	-1 46.0
18	167	45.6	109	31.1	+19 10.4		118	17.1	+17 53.7		138	26.9	+10 46.5		337 08.4	-1 46.0
19	182	48.1	124	30.5	11.1		133	17.8	54.2		153	28.9	46.7		352 10.9	46.0
20	197	50.5	139	29.8	11.8		148	18.4	54.7		168	30.9	46.8		7 13.4	46.0
21	212	53.0	154	29.1	12.5		163	19.0	55.2		183	32.8	47.0		22 15.9	46.0
22	227	55.5	169	28.5	13.2		178	19.7	55.7		198	34.8	47.2		37 18.4	46.0
23	242	57.9	184	27.8	14.0		193	20.3	56.2		213	36.8	47.3		52 20.8	46.0
24	258	00.4	199	27.1	+19 14.7		208	20.9	+17 56.7		228	38.8	+10 47.5		67 23.3	-1 46.0
Dif	—		-7 +7			+6 +5			+20 +2			+25				

UT	SOL				LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15/8 PMG: 11 ^h 59 ^m 4				Edad: 8 ^d 1 PHE { SD: 16/2 PMG: 19 ^h 23 ^m R°: 53 ^m 4 ^h : 59/5 12 ^h : 59/5 20 ^h : 59/6												
	hG ☉	Dec			hG ☾	Dif				Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	180	10.5	+22	57.9	79	16.8	-5	09.4	60 N	** **	1 03	2 39	14 12	96	0 06	10	
1	195	10.4		58.1	93	46.3 ¹⁰⁵		23.2 ¹³⁸	58	** **	1 47	2 59	08 92		09 13		
2	210	10.3		58.3	108	15.8 ¹⁰⁵		37.0 ¹³⁸	56	** **	2 14	3 15	14 03	89	11 17		
3	225	10.1		58.5	122	45.2 ¹⁰⁴	-5	50.7 ¹³⁷	54	0 58	35	29	13 59	86	13 20		
4	240	10.0		58.7	137	14.6 ¹⁰⁴	-6	04.5 ¹³⁸	52	1 38	2 53	41	56 83		16 21		
5	255	09.9	+22	58.9	151	44.0 ¹⁰⁴	-6	18.2 ¹³⁷	50	2 04	3 07	3 51	13 52	81	0 17	24	
6	270	09.8	+22	59.1	166	13.3 ¹⁰³	-6	31.9 ¹³⁷	45	2 47	3 36	4 13	13 45	77	0 22	28	
7	285	09.6		59.3	180	42.5 ¹⁰²		45.5 ¹³⁶	40	3 17	3 58	31	40 72		25 32		
8	300	09.5		59.5	195	11.7 ¹⁰²	-6	59.1 ¹³⁶	35	40	4 16	46	35 69		28 35		
9	315	09.4		59.7	209	40.9 ¹⁰²	-7	12.7 ¹³⁶	30	3 58	31	4 58	30 66		31 38		
10	330	09.3	+22	59.9	224	10.0 ¹⁰¹		26.3 ¹³⁶	20	4 26	4 55	5 20	23 61		36 43		
11	345	09.2	+23	00.1	238	39.1 ¹⁰¹	-7	39.8 ¹³⁵	10 N	4 49	5 16	5 38	13 17	56	0 40	47	
12	0	09.0	+23	00.3	253	08.2 ¹⁰¹	-7	53.3 ¹³⁵	0	5 07	5 33	5 56	13 11	52	0 44	51	
13	15	08.9		00.5	267	37.1 ⁹⁹	-8	06.7 ¹³⁴	10 S	24	5 50	6 13	13 05	48	48 55		
14	30	08.8		00.7	282	06.1 ¹⁰⁰		20.1 ¹³⁴	20	40	6 07	31	12 58	45	52 60		
15	45	08.7		00.9	296	35.0 ⁹⁹		33.4 ¹³³	30	5 56	25	6 52	51 40		57 65		
16	60	08.5		01.1	311	03.8 ⁹⁸	-8	46.7 ¹³³	35	6 04	36	7 04	47 37		0 59 68		
17	75	08.4	+23	01.2	325	32.6 ⁹⁸	-9	00.0 ¹³³	40	6 13	6 47	7 18	12 42	34	1 02	72	
18	90	08.3	+23	01.4	340	01.3 ⁹⁷	-9	13.2 ¹³²	45	6 23	7 01	7 34	12 37	30	1 06	75	
19	105	08.2		01.6	354	30.0 ⁹⁷		26.4 ¹³²	50	35	16	7 54	31 25		10 81		
20	120	08.0		01.8	8	58.7 ⁹⁷		39.5 ¹³¹	52	40	23	8 04	28 23		12 83		
21	135	07.9		02.0	23	27.3 ⁹⁶	-9	52.6 ¹³¹	54	45	31	15	25 21		14 86		
22	150	07.8		02.2	37	55.8 ⁹⁵	-10	05.6 ¹³⁰	56	51	40	27	21 19		17 88		
23	165	07.7		02.4	52	24.3 ⁹⁵		18.5 ¹²⁹	58	6 58	7 50	41	18 15		20 91		
24	180	07.5	+23	02.6	66	52.7 ⁹⁴	-10	31.4 ¹²⁹	60 S	7 05	8 01	8 58	12 13	12	1 23	94	
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO				
	PMG 6 ^h 46 ^m 9			Mag: -3.8 PMG: 10 ^h 43 ^m			Mag: +1.3 PMG: 10 ^h 06 ^m			Mag: -2.2 PMG: 8 ^h 44 ^m			Mag: +0.8 PMG: 19 ^h 27 ^m				
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	258	00.4	199	27.1	+19	14.7	208	20.9	+17	56.7	228	38.8	+10	47.5	67	23.3	
1	273	02.9	214	26.4		15.4	223	21.5		57.2	243	40.8		47.7	82	25.8	
2	288	05.3	229	25.8		16.1	238	22.2		57.7	258	42.8		47.8	97	28.3	
3	303	07.8	244	25.1		16.8	253	22.8		58.2	273	44.8		48.0	112	30.8	
4	318	10.3	259	24.4		17.5	268	23.4		58.7	288	46.8		48.2	127	33.2	
5	333	12.7	274	23.8	+19	18.2	283	24.0	+17	59.2	303	48.8	+10	48.3	142	35.7	
6	348	15.2	289	23.1	+19	18.9	298	24.7	+17	59.7	318	50.7	+10	48.5	157	38.2	
7	3	17.7	304	22.4		19.7	313	25.3	+18	00.2	333	52.7		48.7	172	40.7	
8	18	20.1	319	21.7		20.4	328	25.9		00.7	348	54.7		48.8	187	43.2	
9	33	22.6	334	21.1		21.1	343	26.6		01.1	3	56.7		49.0	202	45.6	
10	48	25.0	349	20.4		21.8	358	27.2		01.6	18	58.7		49.2	217	48.1	
11	63	27.5	4	19.7	+19	22.5	13	27.8	+18	02.1	34	00.7	+10	49.3	232	50.6	
12	78	30.0	19	19.0	+19	23.2	28	28.4	+18	02.6	49	02.7	+10	49.5	247	53.1	
13	93	32.4	34	18.4		23.9	43	29.1		03.1	64	04.7		49.7	262	55.6	
14	108	34.9	49	17.7		24.6	58	29.7		03.6	79	06.7		49.8	277	58.0	
15	123	37.4	64	17.0		25.3	73	30.3		04.1	94	08.7		50.0	293	00.5	
16	138	39.8	79	16.3		26.0	88	30.9		04.6	109	10.6		50.2	308	03.0	
17	153	42.3	94	15.6	+19	26.7	103	31.6	+18	05.1	124	12.6	+10	50.3	323	05.5	
18	168	44.8	109	15.0	+19	27.4	118	32.2	+18	05.6	139	14.6	+10	50.5	338	07.9	
19	183	47.2	124	14.3		28.1	133	32.8		06.0	154	16.6		50.7	353	10.4	
20	198	49.7	139	13.6		28.8	148	33.4		06.5	169	18.6		50.8	8	12.9	
21	213	52.1	154	12.9		29.5	163	34.1		07.0	184	20.6		51.0	23	15.4	
22	228	54.6	169	12.2		30.2	178	34.7		07.5	199	22.6		51.2	38	17.9	
23	243	57.1	184	11.6		30.9	193	35.3		08.0	214	24.6		51.3	53	20.3	
24	258	59.5	199	10.9	+19	31.6	208	35.9	+18	08.5	229	26.6	+10	51.5	68	22.8	
Dif	—		-7		+7		+6		+5		+20		+2		+25		
															0		

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15'8 PMG: 11 ^h 59 ^m 6			Edad: 9 ^d 1 PHE { 4 ^h : 59'7 12 ^h : 59'7 20 ^h : 59'7 Rº: 56 ^m	Dec	Dif			Civil	Náutico	Hora	Rº	Hora	Rº
	hG ☉	Dec	hG ☾											
h	°	'	°	°	'	°	°	h	m	h	m	h	m	m
0	180	07.5	+23 02.6	66	52.7	-10 31.4	60 N	21 21	23 00	** **		15 48	97	0 16 14
1	195	07.4		81	21.0 ⁹³	44.3 ¹²⁹	58	21 01	22 15	** **		40 92		22 17
2	210	07.3		95	49.3 ⁹³	-10 57.0 ¹²⁷	56	20 45	21 46	** **		32 89		28 20
3	225	07.2		110	17.6 ⁹³	-11 09.8 ¹²⁸	54	31	25	23 05		25 86		33 22
4	240	07.0		124	45.8 ⁹²	22.4 ¹²⁶	52	19	21 07	22 24		19 83		37 25
5	255	06.9	+23 03.5	139	13.9 ⁹¹	-11 35.0 ¹²⁶	50	20 08	20 53	21 57		15 13	82	0 41 27
6	270	06.8	+23 03.6	153	42.0 ⁹¹	-11 47.6 ¹²⁶	45	19 46	20 24	21 13		15 02	76	0 50 31
7	285	06.7		168	10.0 ⁹⁰	-12 00.0 ¹²⁴	40	29	20 01	20 43		14 52	73	0 57 35
8	300	06.5		182	37.9 ⁸⁹	-12 12.4 ¹²⁴	35	14	19 43	20		44 69		1 03 39
9	315	06.4		197	05.8 ⁸⁹	24.8 ¹²⁴	30	19 01	28	20 02		36 68		09 41
10	330	06.3		211	33.6 ⁸⁸	37.0 ¹²²	20	18 39	19 04	19 33		24 63		19 46
11	345	06.2	+23 04.5	226	01.4 ⁸⁸	-12 49.2 ¹²²	10 N	18 21	18 44	19 11		14 13	59	1 27 50
12	0	06.0	+23 04.7	240	29.1 ⁸⁷	-13 01.3 ¹²¹	0	18 03	18 26	18 52		14 03	55	1 35 54
13	15	05.9		254	56.7 ⁸⁶	13.4 ¹²¹	10 S	17 46	18 09	35		13 53	52	43 58
14	30	05.8		269	24.3 ⁸⁶	25.3 ¹¹⁹	20	28	17 52	19		43 48		1 52 62
15	45	05.6		283	51.8 ⁸⁵	37.2 ¹¹⁹	30	17 07	33	18 03		31 43		2 02 66
16	60	05.5		298	19.3 ⁸⁵	-13 49.0 ¹¹⁸	35	16 55	23	17 54		24 41		07 70
17	75	05.4	+23 05.6	312	46.7 ⁸⁴	-14 00.7 ¹¹⁷	40	16 41	17 11	17 45		13 16	38	2 14 73
18	90	05.3	+23 05.7	327	14.0 ⁸³	-14 12.4 ¹¹⁷	45	16 24	16 58	17 35		13 07	34	2 21 77
19	105	05.1		341	41.3 ⁸³	23.9 ¹¹⁵	50	16 04	42	24		12 56	30	31 81
20	120	05.0		356	08.4 ⁸¹	35.4 ¹¹⁵	52	15 54	35	18		51 28		35 83
21	135	04.9		10	35.6 ⁸²	46.8 ¹¹⁴	54	43	27	13		46 25		40 86
22	150	04.8		25	02.6 ⁸⁰	-14 58.1 ¹¹³	56	31	18	07		40 22		45 89
23	165	04.6		39	29.6 ⁸⁰	-15 09.3 ¹¹²	58	17	16 08	17 00		33 20		51 92
24	180	04.5	+23 06.8	53	56.6 ⁸⁰	-15 20.4 ¹¹¹	60 S	15 00	15 57	16 53		12 25	16	2 57 96
UT	ARIES		VENUS		MARTE		JÚPITER			SATURNO				
	PMG: 6 ^h 42 ^m 9		Mag: -3.8 PMG: 10 ^h 44 ^m		Mag: +1.3 PMG: 10 ^h 05 ^m		Mag: -2.2 PMG: 8 ^h 41 ^m			Mag: +0.8 PMG: 19 ^h 23 ^m				
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'		
0	258	59.5	199	10.9	+19 31.6		208	35.9	+18 08.5	229	26.6	+10 51.5	68 22.8	-1 46.1
1	274	02.0	214	10.2	32.3		223	36.6	09.0	244	28.6	51.7	83 25.3	46.1
2	289	04.5	229	09.5	33.0		238	37.2	09.4	259	30.6	51.8	98 27.8	46.1
3	304	06.9	244	08.8	33.6		253	37.8	09.9	274	32.6	52.0	113 30.2	46.1
4	319	09.4	259	08.1	34.3		268	38.5	10.4	289	34.5	52.2	128 32.7	46.1
5	334	11.9	274	07.5	+19 35.0		283	39.1	+18 10.9	304	36.5	+10 52.3	143 35.2	-1 46.1
6	349	14.3	289	06.8	+19 35.7		298	39.7	+18 11.4	319	38.5	+10 52.5	158 37.7	-1 46.1
7	4	16.8	304	06.1	36.4		313	40.3	11.9	334	40.5	52.7	173 40.1	46.2
8	19	19.3	319	05.4	37.1		328	41.0	12.4	349	42.5	52.8	188 42.6	46.2
9	34	21.7	334	04.7	37.8		343	41.6	12.8	4	44.5	53.0	203 45.1	46.2
10	49	24.2	349	04.0	38.5		358	42.2	13.3	19	46.5	53.2	218 47.6	46.2
11	64	26.6	4	03.3	+19 39.1		13	42.8	+18 13.8	34	48.5	+10 53.3	233 50.0	-1 46.2
12	79	29.1	19	02.6	+19 39.8		28	43.5	+18 14.3	49	50.5	+10 53.5	248 52.5	-1 46.2
13	94	31.6	34	02.0	40.5		43	44.1	14.8	64	52.5	53.7	263 55.0	46.2
14	109	34.0	49	01.3	41.2		58	44.7	15.3	79	54.5	53.8	278 57.5	46.2
15	124	36.5	64	00.6	41.9		73	45.3	15.7	94	56.5	54.0	293 59.9	46.2
16	139	39.0	78	59.9	42.6		88	46.0	16.2	109	58.5	54.2	309 02.4	46.2
17	154	41.4	93	59.2	+19 43.2		103	46.6	+18 16.7	125	00.5	+10 54.3	324 04.9	-1 46.2
18	169	43.9	108	58.5	+19 43.9		118	47.2	+18 17.2	140	02.4	+10 54.5	339 07.4	-1 46.2
19	184	46.4	123	57.8	44.6		133	47.8	17.7	155	04.4	54.7	354 09.8	46.2
20	199	48.8	138	57.1	45.3		148	48.5	18.1	170	06.4	54.8	9 12.3	46.2
21	214	51.3	153	56.4	45.9		163	49.1	18.6	185	08.4	55.0	24 14.8	46.2
22	229	53.8	168	55.7	46.6		178	49.7	19.1	200	10.4	55.1	39 17.3	46.3
23	244	56.2	183	55.1	47.3		193	50.3	19.6	215	12.4	55.3	54 19.7	46.3
24	259	58.7	198	54.4	+19 48.0		208	50.9	+18 20.1	230	14.4	+10 55.5	69 22.2	-1 46.3
Dif	—	—	-7	+7	+6	+5		+20	+2		+25			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 8			Edad: 10 ^d 1 PHE { 4 ^h : 59/7 12 ^h : 59/7 20 ^h : 59/7 PMG: 21 ^h 12 ^m R°: 58 ^m														
	hG ☉	Dec		hG ☾	Dif		Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m
0	180	04.5	+23	06.8	53	56.6	-15	20.4	60 N	** **	0 59	2 38	17 25	92	0 30	18		
1	195	04.4		06.9	68	23.4	78	31.4	58	** **	1 44	2 58		12 88	39	23		
2	210	04.3		07.1	82	50.2	78	42.3	56	** **	2 13	3 14	17 01	85	48	26		
3	225	04.1		07.2	97	16.9	77	-15 53.2	54	0 54	34	28	16 51	82	0 55	29		
4	240	04.0		07.4	111	43.6	77	-16 03.9	52	1 36	2 52	40	42 81		1 02	31		
5	255	03.9	+23	07.6	126	10.2	76	-16 14.5	50	2 02	3 07	3 51	16 35	78	1 08	33		
6	270	03.7	+23	07.7	140	36.7	75	-16 25.1	45	2 47	3 36	4 13	16 18	75	1 21	38		
7	285	03.6		07.9	155	03.2	75	35.5	40	3 17	3 58	31	16 05	71	32	41		
8	300	03.5		08.1	169	29.6	74	45.8	35	39	4 16	45	15 53	70	42	43		
9	315	03.4		08.2	183	56.0	74	-16 56.1	30	3 58	31	4 58	44 67		1 50	46		
10	330	03.2		08.4	198	22.2	72	-17 06.2	20	4 26	4 56	5 20	27 63		2 05	50		
11	345	03.1	+23	08.5	212	48.4	72	-17 16.2	10 N	4 49	5 16	5 39	15 12	61	2 17	54		
12	0	03.0	+23	08.7	227	14.6	72	-17 26.1	0	5 07	5 34	5 56	14 58	58	2 29	57		
13	15	02.8		08.9	241	40.7	71	35.9	10 S	24	5 51	6 13	45 55		41	60		
14	30	02.7		09.0	256	06.7	70	45.6	20	40	6 08	32	31 52		2 54	63		
15	45	02.6		09.2	270	32.6	69	-17 55.1	30	5 56	26	6 53	14 49		3 08	68		
16	60	02.5		09.3	284	58.5	69	-18 04.6	35	6 05	37	7 05	14 05	46	17	70		
17	75	02.3	+23	09.5	299	24.3	68	-18 13.9	40	6 14	6 48	7 19	13 54	44	3 27	72		
18	90	02.2	+23	09.6	313	50.1	68	-18 23.2	45	6 24	7 02	7 35	13 41	41	3 38	76		
19	105	02.1		09.8	328	15.8	67	32.3	50	36	17	7 56	26 37		52	80		
20	120	02.0		09.9	342	41.4	66	41.2	52	41	25	8 05	19 35		3 58	83		
21	135	01.8		10.1	357	07.0	66	50.1	54	47	33	16	11 33		4 06	84		
22	150	01.7		10.2	11	32.5	65	-18 58.8	56	53	42	29	13 02	31	14	87		
23	165	01.6		10.4	25	58.0	65	-19 07.5	58	6 59	7 52	8 43	12 53	27	23	91		
24	180	01.4	+23	10.5	40	23.4	64	-19 16.0	60 S	7 07	8 03	9 00	12 41	24	4 33	95		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG 6 ^h 39 ^m 0		Mag: -3.8 PMG: 10 ^h 45 ^m			Mag: +1.3 PMG: 10 ^h 04 ^m			Mag: -2.2 PMG: 8 ^h 38 ^m			Mag: +0.8 PMG: 19 ^h 19 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	259	58.7	198	54.4	+19	48.0	208	50.9	+18	20.1	230	14.4	+10	55.5	69	22.2	-1	46.3
1	275	01.1	213	53.7		48.6	223	51.6		20.5	245	16.4		55.6	84	24.7		46.3
2	290	03.6	228	53.0		49.3	238	52.2		21.0	260	18.4		55.8	99	27.1		46.3
3	305	06.1	243	52.3		50.0	253	52.8		21.5	275	20.4		56.0	114	29.6		46.3
4	320	08.5	258	51.6		50.6	268	53.4		22.0	290	22.4		56.1	129	32.1		46.3
5	335	11.0	273	50.9	+19	51.3	283	54.1	+18	22.5	305	24.4	+10	56.3	144	34.6	-1	46.3
6	350	13.5	288	50.2	+19	52.0	298	54.7	+18	22.9	320	26.4	+10	56.5	159	37.0	-1	46.3
7	5 15.9		303	49.5		52.6	313	55.3		23.4	335	28.4		56.6	174	39.5		46.3
8	20 18.4		318	48.8		53.3	328	55.9		23.9	350	30.4		56.8	189	42.0		46.3
9	35 20.9		333	48.1		54.0	343	56.6		24.4	5 32.4			56.9	204	44.4		46.3
10	50 23.3		348	47.4		54.6	358	57.2		24.8	20 34.4			57.1	219	46.9		46.3
11	65 25.8		3 46.7	+19	55.3		13 57.8	+18	25.3		35 36.4	+10	57.3		234	49.4	-1	46.4
12	80 28.2		18 46.0	+19	55.9		28 58.4	+18	25.8		50 38.4	+10	57.4		249	51.9	-1	46.4
13	95 30.7		33 45.3		56.6		43 59.1		26.3		65 40.4		57.6		264	54.3		46.4
14	110 33.2		48 44.6		57.3		58 59.7		26.7		80 42.4		57.8		279	56.8		46.4
15	125 35.6		63 43.9		57.9		74 00.3		27.2		95 44.4		57.9		294	59.3		46.4
16	140 38.1		78 43.2		58.6		89 00.9		27.7		110 46.4		58.1		310	01.7		46.4
17	155 40.6		93 42.5	+19	59.2		104 01.6	+18	28.2		125 48.3	+10	58.3		325	04.2	-1	46.4
18	170 43.0		108 41.8	+19	59.9		119 02.2	+18	28.6		140 50.3	+10	58.4		340	06.7	-1	46.4
19	185 45.5		123 41.1	+20	00.6		134 02.8		29.1		155 52.3		58.6		355	09.1		46.4
20	200 48.0		138 40.4		01.2		149 03.4		29.6		170 54.3		58.7		10 11.6			46.4
21	215 50.4		153 39.7		01.9		164 04.0		30.0		185 56.3		58.9		25 14.1			46.4
22	230 52.9		168 39.0		02.5		179 04.7		30.5		200 58.3		59.1		40 16.6			46.5
23	245 55.4		183 38.3		03.2		194 05.3		31.0		216 00.3		59.2		55 19.0			46.5
24	260 57.8		198 37.6	+20	03.8		209 05.9	+18	31.5		231 02.3	+10	59.4		70 21.5	-1		46.5
Dif	—		-7 +7			+6 +5			+20 +2			+25 0						

UT	SOL			LUNA						Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15'7 PMG: 12 ^h 00 ^m 0			Edad: 11 ^d 1 PHE { 4 ^h : 59'6 12 ^h : 59'6 20 ^h : 59'5 Rº: 60 ^m SD: 16'2 PMG: 22 ^h 10 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec	Dif					Civil	Náutico	Hora	Rº	Hora	Rº
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m	m	h m	m	
0	180	01.4	+23	10.5	40	23.4	-19	16.0	60 N	21 23	23 05	** **	18 57	80	0 48	29	
1	195	01.3		10.7	54	48.7	63	24.3	58	21 03	22 18	** **	40	77	1 02	33	
2	210	01.2		10.8	69	14.0	63	32.6	56	20 47	21 49	** **	26	75	14	35	
3	225	01.1		11.0	83	39.2	62	40.7	54	33	27	23 09	13	74	24	38	
4	240	00.9		11.1	98	04.4	62	48.6	52	20	21 09	22 26	18 03	72	33	40	
5	255	00.8	+23	11.3	112	29.5	61	-19 56.5	50	20 10	20 54	21 59	17 53	71	1 41	42	
6	270	00.7	+23	11.4	126	54.6	61	-20 04.2	45	19 47	20 25	21 14	17 33	69	1 59	45	
7	285	00.5		11.6	141	19.6	60	11.8	40	30	20 02	20 44	16	68	2 13	48	
8	300	00.4		11.7	155	44.5	59	19.3	35	15	19 44	21	17 03	66	25	50	
9	315	00.3		11.9	170	09.4	59	26.6	30	19 02	29	20 02	16 51	65	36	52	
10	330	00.1		12.0	184	34.3	59	33.8	20	18 40	19 04	19 34	30	63	2 55	54	
11	345	00.0	+23	12.2	198	59.1	58	-20 40.8	10 N	18 21	18 44	19 11	16 13	61	3 11	56	
12	359	59.9	+23	12.3	213	23.8	57	-20 47.7	0	18 04	18 26	18 52	15 56	60	3 26	59	
13	14	59.8		12.4	227	48.5	57	-20 54.5	10 S	17 46	18 09	36	40	58	41	61	
14	29	59.6		12.6	242	13.2	57	-21 01.1	20	28	17 52	19	23	56	3 57	64	
15	44	59.5		12.7	256	37.8	56	07.6	30	17 07	33	18 03	15 03	54	4 16	66	
16	59	59.4		12.9	271	02.4	56	13.9	35	16 55	23	17 55	14 51	53	27	67	
17	74	59.2	+23	13.0	285	26.9	55	-21 20.1	40	16 41	17 11	17 45	14 38	51	4 39	70	
18	89	59.1	+23	13.1	299	51.4	55	-21 26.2	45	16 24	16 58	17 35	14 22	50	4 54	72	
19	104	59.0		13.3	314	15.9	55	32.1	50	16 04	42	23	14 03	47	5 12	75	
20	119	58.8		13.4	328	40.3	54	37.8	52	15 54	35	18	13 54	46	21	76	
21	134	58.7		13.5	343	04.7	54	43.5	54	43	27	13	44	44	30	79	
22	149	58.6		13.7	357	29.0	53	48.9	54	30	18	07	33	42	41	81	
23	164	58.5		13.8	11	53.3	53	54.3	54	15 16	16 07	17 00	20	40	5 54	83	
24	179	58.3	+23	13.9	26	17.6	53	-21 59.4	60 S	14 59	15 56	16 53	13 05	36	6 08	87	

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 6 ^h 35 ^m 1		Mag: -3.8 PMG: 10 ^h 46 ^m			Mag: +1.4 PMG: 10 ^h 03 ^m			Mag: -2.2 PMG: 8 ^h 35 ^m			Mag: +0.8 PMG: 19 ^h 15 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	260	57.8	198	37.6	+20	03.8	209	05.9	+18	31.5	231	02.3	+10	59.4	70	21.5	-1	46.5
1	276	00.3	213	36.9		04.5	224	06.5		31.9	246	04.3		59.6	85	24.0		46.5
2	291	02.7	228	36.2		05.1	239	07.2		32.4	261	06.3		59.7	100	26.4		46.5
3	306	05.2	243	35.5		05.8	254	07.8		32.9	276	08.3	+10	59.9	115	28.9		46.5
4	321	07.7	258	34.8		06.4	269	08.4		33.3	291	10.3	+11	00.0	130	31.4		46.5
5	336	10.1	273	34.0	+20	07.0	284	09.0	+18	33.8	306	12.3	+11	00.2	145	33.8	-1	46.5
6	351	12.6	288	33.3	+20	07.7	299	09.6	+18	34.3	321	14.3	+11	00.4	160	36.3	-1	46.5
7	6	15.1	303	32.6		08.3	314	10.3		34.8	336	16.3		00.5	175	38.8		46.5
8	21	17.5	318	31.9		09.0	329	10.9		35.2	351	18.3		00.7	190	41.2		46.5
9	36	20.0	333	31.2		09.6	344	11.5		35.7	6	20.3		00.9	205	43.7		46.6
10	51	22.5	348	30.5		10.3	359	12.1		36.2	21	22.3		01.0	220	46.2		46.6
11	66	24.9	3	29.8	+20	10.9	14	12.8	+18	36.6	36	24.3	+11	01.2	235	48.6	-1	46.6
12	81	27.4	18	29.1	+20	11.5	29	13.4	+18	37.1	51	26.3	+11	01.3	250	51.1	-1	46.6
13	96	29.9	33	28.4		12.2	44	14.0		37.6	66	28.3		01.5	265	53.6		46.6
14	111	32.3	48	27.7		12.8	59	14.6		38.0	81	30.3		01.7	280	56.0		46.6
15	126	34.8	63	27.0		13.5	74	15.2		38.5	96	32.3		01.8	295	58.5		46.6
16	141	37.2	78	26.2		14.1	89	15.9		39.0	111	34.3		02.0	311	01.0		46.6
17	156	39.7	93	25.5	+20	14.7	104	16.5	+18	39.4	126	36.3	+11	02.2	326	03.4	-1	46.6
18	171	42.2	108	24.8	+20	15.4	119	17.1	+18	39.9	141	38.3	+11	02.3	341	05.9	-1	46.6
19	186	44.6	123	24.1		16.0	134	17.7		40.4	156	40.3		02.5	356	08.4		46.7
20	201	47.1	138	23.4		16.6	149	18.4		40.8	171	42.3		02.6	11	10.8		46.7
21	216	49.6	153	22.7		17.3	164	19.0		41.3	186	44.3		02.8	26	13.3		46.7
22	231	52.0	168	22.0		17.9	179	19.6		41.7	201	46.3		03.0	41	15.8		46.7
23	246	54.5	183	21.2		18.5	194	20.2		42.2	216	48.3		03.1	56	18.2		46.7
24	261	57.0	198	20.5	+20	19.1	209	20.8	+18	42.7	231	50.3	+11	03.3	71	20.7	-1	46.7
Dif	—		-7 +6			+6 +5			+20 +2			+25 0						

UT	SOL				LUNA							Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna			Puesta de Luna					
	SD: 15/7 PMG: 12 ^h 00 ^m 2				Edad: 12 ^d 1 PHE { SD: 16/2 PMG: 23 ^h 10 ^m R°: 60 ^m 4 ^h : 59/4 12 ^h : 59/2 20 ^h : 59/1																			
	hG ☉		Dec		hG ☾		Dif		Dec		Dif		Náutico	Civil		Hora	R°	Hora	R°					
h	°	'	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	m			
0	179	58.3	+23	13.9	26	17.6			-21	59.4			60 N	** **	0 55	2 37	20 17	60	1 17	45				
1	194	58.2		14.1	40	41.8	52		-22	04.5	51		58	** **	1 43	2 57	19 57	60	35	47				
2	209	58.1		14.2	55	06.1	53			09.3	48		56	** **	2 12	3 13		41	60	1 49	49			
3	224	57.9		14.3	69	30.3	52			14.1	48		54	0 51	33	27		27	60	2 02	50			
4	239	57.8		14.5	83	54.4	51			18.6	45		52	1 34	2 51	40		15	60	13	51			
5	254	57.7	+23	14.6	98	18.6	52		-22	23.0	44		50	2 01	3 06	3 50	19 04	60	2 23	52				
6	269	57.5	+23	14.7	112	42.7	51		-22	27.3	43		45	2 46	3 35	4 13	18 42	60	2 44	54				
7	284	57.4		14.8	127	06.8	51			31.4	41		40	3 16	3 58	31		24	60	3 01	55			
8	299	57.3		15.0	141	30.9	51			35.4	40		35	39	4 16	45	18 09	60		15	56			
9	314	57.2		15.1	155	54.9	50			39.2	38		30	3 58	31	4 58	17 56	60		28	56			
10	329	57.0		15.2	170	19.0	51			42.9	37		20	4 27	4 56	5 20		33	60	3 49	58			
11	344	56.9	+23	15.3	184	43.0	50		-22	46.4	35		10 N	4 49	5 16	5 39	17 14	60	4 07	59				
12	359	56.8	+23	15.5	199	07.0	50		-22	49.7	33		0	5 08	5 34	5 57	16 56	60	4 25	60				
13	14	56.6		15.6	213	31.0	50			52.9	32		10 S	25	5 51	6 14		38	60	4 42	61			
14	29	56.5		15.7	227	55.0	50			55.9	30		20	41	6 08	32	16 19	59		5 01	61			
15	44	56.4		15.8	242	19.0	50		-22	58.8	29		30	5 57	27	6 53	15 57	59		22	63			
16	59	56.2		16.0	256	43.0	50		-23	01.5	27		35	6 06	37	7 06		44	59		34 64			
17	74	56.1	+23	16.1	271	07.0	50		-23	04.1	26		40	6 15	6 49	7 20	15 29	59	5 49	64				
18	89	56.0	+23	16.2	285	31.0	50		-23	06.5	24		45	6 25	7 03	7 36	15 12	58	6 06	65				
19	104	55.8		16.3	299	55.0	50			08.7	22		50	37	18	7 57	14 50	57		27	66			
20	119	55.7		16.4	314	18.9	49			10.8	21		52	42	26	8 07		40	57		37 67			
21	134	55.6		16.6	328	42.9	50			12.8	20		54	48	34	18		28	57	6 49	67			
22	149	55.4		16.7	343	06.9	50			14.5	17		56	6 54	43	30		15	56		7 02 68			
23	164	55.3		16.8	357	30.9	50			16.2	17		58	7 01	7 53	8 45	14 00	55		17	69			
24	179	55.2	+23	16.9	11	55.0	51		-23	17.6	14		60 S	7 08	8 05	9 02	13 41	54	7 35	71				
UT	ARIES				VENUS				MARTE				JÚPITER				SATURNO							
	PMG 6 ^h 31 ^m 1				Mag: -3.8 PMG: 10 ^h 47 ^m				Mag: +1.4 PMG: 10 ^h 02 ^m				Mag: -2.2 PMG: 8 ^h 32 ^m				Mag: +0.8 PMG: 19 ^h 11 ^m							
	hG ♈		Dec		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	261	57.0	198	20.5	+20	19.1			209	20.8	+18	42.7	231	50.3	+11	03.3	71	20.7	-1	46.7				
1	276	59.4	213	19.8		19.8			224	21.5		43.1	246	52.3		03.4	86	23.2		46.7				
2	292	01.9	228	19.1		20.4			239	22.1		43.6	261	54.3		03.6	101	25.6		46.7				
3	307	04.4	243	18.4		21.0			254	22.7		44.1	276	56.3		03.8	116	28.1		46.7				
4	322	06.8	258	17.7		21.6			269	23.3		44.5	291	58.3		03.9	131	30.6		46.8				
5	337	09.3	273	16.9	+20	22.3			284	23.9	+18	45.0	307	00.3	+11	04.1	146	33.0	-1	46.8				
6	352	11.7	288	16.2	+20	22.9			299	24.6	+18	45.4	322	02.3	+11	04.2	161	35.5	-1	46.8				
7	7	14.2	303	15.5		23.5			314	25.2		45.9	337	04.3		04.4	176	38.0		46.8				
8	22	16.7	318	14.8		24.1			329	25.8		46.4	352	06.3		04.6	191	40.4		46.8				
9	37	19.1	333	14.1		24.7			344	26.4		46.8	7	08.3		04.7	206	42.9		46.8				
10	52	21.6	348	13.4		25.4			359	27.0		47.3	22	10.3		04.9	221	45.3		46.8				
11	67	24.1	3	12.6	+20	26.0			14	27.7	+18	47.8	37	12.3	+11	05.1	236	47.8	-1	46.8				
12	82	26.5	18	11.9	+20	26.6			29	28.3	+18	48.2	52	14.3	+11	05.2	251	50.3	-1	46.8				
13	97	29.0	33	11.2		27.2			44	28.9		48.7	67	16.4		05.4	266	52.7		46.9				
14	112	31.5	48	10.5		27.8			59	29.5		49.1	82	18.4		05.5	281	55.2		46.9				
15	127	33.9	63	09.7		28.4			74	30.1		49.6	97	20.4		05.7	296	57.7		46.9				
16	142	36.4	78	09.0		29.1			89	30.8		50.0	112	22.4		05.9	312	00.1		46.9				
17	157	38.9	93	08.3	+20	29.7			104	31.4	+18	50.5	127	24.4	+11	06.0	327	02.6	-1	46.9				
18	172	41.3	108	07.6	+20	30.3			119	32.0	+18	51.0	142	26.4	+11	06.2	342	05.0	-1	46.9				
19	187	43.8	123	06.9		30.9			134	32.6		51.4	157	28.4		06.3	357	07.5		46.9				
20	202	46.2	138	06.1		31.5			149	33.2		51.9	172	30.4		06.5	12	10.0		46.9				
21	217	48.7	153	05.4		32.1			164	33.9		52.3	187	32.4		06.7	27	12.4		46.9				
22	232	51.2	168	04.7		32.7			179	34.5		52.8	202	34.4		06.8	42	14.9		47.0				
23	247	53.6	183	04.0		33.3			194	35.1		53.2	217	36.4		07.0	57	17.4		47.0				
24	262	56.1	198	03.2	+20	33.9			209	35.7	+18	53.7	232	38.4	+11	07.1	72	19.8	-1	47.0				
Dif	—				-7				+6				+20				+2				+25			

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 15 ^h 7			Edad: 13 ^d 1 PHE	SD: 16 ^h 1				Civil		Náutico		Hora R°		
	PMG: 12 ^h 00 ^m 4				PMG: ***h ***m										
	hG ☉	Dec		hG ☾	Dif	Dec	Dif					Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	m	h m m	m
0	179	55.2	+23 16.9	11	55.0	-23 17.6	13	60 N	21 25	23 09	*** **	21 17 39		2 02 64	
1	194	55.1	17.0	26	19.0	18.9	12	58	21 05	22 20	*** **	20 57 42		22 63	
2	209	54.9	17.1	40	43.0	20.1	10	56	20 48	21 50	*** **	41 44		38 63	
3	224	54.8	17.3	55	07.1	21.1	8	54	34	28	23 13	27 46		2 52 66	
4	239	54.7	17.4	69	31.2	21.9	7	52	22	21 10	22 28	15 47		3 04 63	
5	254	54.5	+23 17.5	83	55.3	-23 22.6	5	50	20 11	20 55	22 01	20 04 48		3 15 62	
6	269	54.4	+23 17.6	98	19.4	-23 23.1	4	45	19 48	20 26	21 15	19 42 50		3 38 61	
7	284	54.3	17.7	112	43.5	23.5	2	40	30	20 03	20 45	24 51		3 56 61	
8	299	54.1	17.8	127	07.7	23.7	0	35	15	19 45	22	19 09 53		4 11 61	
9	314	54.0	17.9	141	31.9	23.7	1	30	19 02	30	20 03	18 56 53		24 61	
10	329	53.9	18.0	155	56.1	23.6	2	20	18 41	19 05	19 34	33 56		4 47 60	
11	344	53.7	+23 18.1	170	20.3	-23 23.4	4	10 N	18 22	18 45	19 12	18 14 56		5 06 60	
12	359	53.6	+23 18.2	184	44.6	-23 23.0	6	0	18 04	18 27	18 53	17 56 58		5 25 59	
13	14	53.5	18.4	199	08.9	22.4	7	10 S	17 47	18 10	36	38 59		5 43 58	
14	29	53.3	18.5	213	33.3	21.7	9	20	28	17 52	20	17 18 60		6 02 58	
15	44	53.2	18.6	227	57.7	20.8	10	30	17 07	34	18 03	16 56 61		25 57	
16	59	53.1	18.7	242	22.1	19.8	12	35	16 55	23	17 55	43 62		38 57	
17	74	52.9	+23 18.8	256	46.6	-23 18.6	13	40	16 41	17 11	17 45	16 28 63		6 53 56	
18	89	52.8	+23 18.9	271	11.1	-23 17.3	15	45	16 24	16 58	17 35	16 10 64		7 11 55	
19	104	52.7	19.0	285	35.7	15.8	16	50	16 03	42	23	15 47 67		33 55	
20	119	52.5	19.1	300	00.3	14.2	18	52	15 54	34	18	37 67		44 54	
21	134	52.4	19.2	314	24.9	12.4	19	54	43	26	12	25 68		7 56 53	
22	149	52.3	19.3	328	49.6	10.5	20	56	30	17	06	15 11 69		8 10 52	
23	164	52.1	19.4	343	14.4	08.5	23	58	15 15	16 07	17 00	14 55 70		26 51	
24	179	52.0	+23 19.5	357	39.2	-23 06.2		60 S	14 58	15 55	16 52	14 35 73		8 46 49	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 6 ^h 27 ^m 2		Mag: -3.8 PMG: 10 ^h 48 ^m		Mag: +1.4 PMG: 10 ^h 01 ^m		Mag: -2.2 PMG: 8 ^h 28 ^m		Mag: +0.8 PMG: 19 ^h 08 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	262	56.1	198 03.2	+20 33.9	209 35.7	+18 53.7	232 38.4	+11 07.1	72 19.8	-1 47.0
1	277	58.6	213 02.5	34.5	224 36.3	54.2	247 40.4	07.3	87 22.3	47.0
2	293	01.0	228 01.8	35.1	239 37.0	54.6	262 42.4	07.4	102 24.7	47.0
3	308	03.5	243 01.0	35.7	254 37.6	55.1	277 44.4	07.6	117 27.2	47.0
4	323	06.0	258 00.3	36.3	269 38.2	55.5	292 46.4	07.8	132 29.7	47.0
5	338	08.4	272 59.6	+20 36.9	284 38.8	+18 56.0	307 48.4	+11 07.9	147 32.1	-1 47.0
6	353	10.9	287 58.9	+20 37.5	299 39.4	+18 56.4	322 50.4	+11 08.1	162 34.6	-1 47.1
7	8	13.4	302 58.1	38.1	314 40.1	56.9	337 52.4	08.2	177 37.0	47.1
8	23	15.8	317 57.4	38.7	329 40.7	57.3	352 54.4	08.4	192 39.5	47.1
9	38	18.3	332 56.7	39.3	344 41.3	57.8	7 56.4	08.6	207 42.0	47.1
10	53	20.7	347 55.9	39.9	359 41.9	58.2	22 58.4	08.7	222 44.4	47.1
11	68	23.2	2 55.2	+20 40.5	14 42.5	+18 58.7	38 00.5	+11 08.9	237 46.9	-1 47.1
12	83	25.7	17 54.5	+20 41.1	29 43.2	+18 59.1	53 02.5	+11 09.0	252 49.3	-1 47.1
13	98	28.1	32 53.7	41.7	44 43.8	+18 59.6	68 04.5	09.2	267 51.8	47.2
14	113	30.6	47 53.0	42.3	59 44.4	+19 00.0	83 06.5	09.4	282 54.3	47.2
15	128	33.1	62 52.3	42.9	74 45.0	+19 00.5	98 08.5	09.5	297 56.7	47.2
16	143	35.5	77 51.5	43.5	89 45.6	01.0	113 10.5	09.7	312 59.2	47.2
17	158	38.0	92 50.8	+20 44.1	104 46.2	+19 01.4	128 12.5	+11 09.8	328 01.6	-1 47.2
18	173	40.5	107 50.1	+20 44.7	119 46.9	+19 01.9	143 14.5	+11 10.0	343 04.1	-1 47.2
19	188	42.9	122 49.3	45.2	134 47.5	02.3	158 16.5	10.1	358 06.5	47.2
20	203	45.4	137 48.6	45.8	149 48.1	02.7	173 18.5	10.3	13 09.0	47.2
21	218	47.8	152 47.9	46.4	164 48.7	03.2	188 20.5	10.5	28 11.5	47.3
22	233	50.3	167 47.1	47.0	179 49.3	03.6	203 22.5	10.6	43 13.9	47.3
23	248	52.8	182 46.4	47.6	194 50.0	04.1	218 24.5	10.8	58 16.4	47.3
24	263	55.2	197 45.7	+20 48.2	209 50.6	+19 04.5	233 26.5	+11 10.9	73 18.8	-1 47.3
Dif	—	-7	+6		+6	+5	+20	+2	+25	0

UT	SOL				LUNA							Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna			Puesta de Luna		
	SD: 15'7 PMG: 12 ^h 00 ^m 6				Edad: 14 ^d 1 PHE { 4 ^h : 58'3 12 ^h : 58'1 20 ^h : 57'9 PMG: 0 ^h 10 ^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	h m m	h m m	h m m		
0	179	52.0	+23	19.5	357	39.2			-23	06.2		60 N	** **	0 52	2 36	21 56	24	3 06	79		
1	194	51.9		19.6	12	04.1	59			03.9	23	58	** **	1 41	2 56	39 28		25	76		
2	209	51.7		19.7	26	29.0	59		-23	01.4	25	56	** **	2 11	3 13	25 31		41	74		
3	224	51.6		19.8	40	54.0	60		-22	58.7	27	54	0 48	33	27	13 33	3	55	72		
4	239	51.5		19.9	55	19.0	60			55.9	28	52	1 33	2 51	39	21 02	35	4 07	70		
5	254	51.3	+23	20.0	69	44.1	61		-22	53.0	29	50	2 00	3 06	3 50	20 52	37	4 17	70		
6	269	51.2	+23	20.1	84	09.3	62		-22	49.9	31	45	2 46	3 35	4 13	20 32	40	4 39	67		
7	284	51.1		20.2	98	34.5	62			46.6	33	40	3 16	3 58	31	15 43		4 57	65		
8	299	50.9		20.2	112	59.8	63			43.3	33	35	39	4 16	46	20 02	45	5 12	63		
9	314	50.8		20.3	127	25.1	63			39.8	35	30	3 58	31	4 59	19 49	47	25	62		
10	329	50.7		20.4	141	50.6	65			36.1	37	20	4 27	4 56	5 21	29 49		5 47	60		
11	344	50.5	+23	20.5	156	16.0	64		-22	32.3	38	10 N	4 49	5 16	5 39	19 10	53	6 06	58		
12	359	50.4	+23	20.6	170	41.6	66		-22	28.4	39	0	5 08	5 34	5 57	18 54	54	6 24	56		
13	14	50.3		20.7	185	07.2	66			24.4	40	10 S	25	5 52	6 14	37 56		6 41	55		
14	29	50.1		20.8	199	32.9	67			20.2	42	20	41	6 09	33	18 18	59	7 00	53		
15	44	50.0		20.9	213	58.7	68			15.8	44	30	5 58	28	6 54	17 57	62	22	50		
16	59	49.9		21.0	228	24.6	69			11.4	44	35	6 06	38	7 06	45 64		35	48		
17	74	49.7	+23	21.0	242	50.5	69		-22	06.8	46	40	6 16	6 50	7 20	17 31	66	7 49	47		
18	89	49.6	+23	21.1	257	16.5	70		-22	02.1	47	45	6 26	7 03	7 37	17 14	68	8 06	45		
19	104	49.5		21.2	271	42.6	71		-21	57.2	49	50	38	19	7 58	16 54	71	28	42		
20	119	49.3		21.3	286	08.8	72			52.2	50	52	43	27	8 08	44 72		38	41		
21	134	49.2		21.4	300	35.0	72			47.1	51	54	49	35	19	33 74		8 49	39		
22	149	49.1		21.5	315	01.3	73			41.9	52	56	6 55	44	31	20 77		9 02	37		
23	164	48.9		21.6	329	27.7	74			36.5	54	58	7 02	7 54	8 46	16 05	79	17	35		
24	179	48.8	+23	21.6	343	54.2	75		-21	31.1	54	60 S	7 09	8 06	9 03	15 48	82	9 35	31		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO								
	PMG 6 ^h 23 ^m 3		Mag: -3.8 PMG: 10 ^h 49 ^m		Mag: +1.4 PMG: 10 ^h 00 ^m		Mag: -2.2 PMG: 8 ^h 25 ^m		Mag: +0.8 PMG: 19 ^h 04 ^m								
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄								
h	°	'	°	'	°	'	°	'	°	'							
0	263	55.2	197	45.7	+20	209	50.6	+19	04.5	233	26.5	+11	10.9	73	18.8	-1	47.3
1	278	57.7	212	44.9		224	51.2		05.0	248	28.6		11.1	88	21.3		47.3
2	294	00.2	227	44.2		239	51.8		05.4	263	30.6		11.3	103	23.7		47.3
3	309	02.6	242	43.5		254	52.4		05.9	278	32.6		11.4	118	26.2		47.3
4	324	05.1	257	42.7		269	53.0		06.3	293	34.6		11.6	133	28.7		47.4
5	339	07.6	272	42.0	+20	284	53.7	+19	06.8	308	36.6	+11	11.7	148	31.1	-1	47.4
6	354	10.0	287	41.2	+20	299	54.3	+19	07.2	323	38.6	+11	11.9	163	33.6	-1	47.4
7	9	12.5	302	40.5		314	54.9		07.7	338	40.6		12.0	178	36.0		47.4
8	24	15.0	317	39.8		329	55.5		08.1	353	42.6		12.2	193	38.5		47.4
9	39	17.4	332	39.0		344	56.1		08.6	8	44.6		12.4	208	40.9		47.4
10	54	19.9	347	38.3		359	56.8		09.0	23	46.6		12.5	223	43.4		47.5
11	69	22.3	2	37.5	+20	14	57.4	+19	09.4	38	48.6	+11	12.7	238	45.9	-1	47.5
12	84	24.8	17	36.8	+20	29	58.0	+19	09.9	53	50.6	+11	12.8	253	48.3	-1	47.5
13	99	27.3	32	36.0		44	58.6		10.3	68	52.7		13.0	268	50.8		47.5
14	114	29.7	47	35.3		59	59.2		10.8	83	54.7		13.1	283	53.2		47.5
15	129	32.2	62	34.6		74	59.8		11.2	98	56.7		13.3	298	55.7		47.5
16	144	34.7	77	33.8		90	00.5		11.7	113	58.7		13.5	313	58.1		47.5
17	159	37.1	92	33.1	+20	105	01.1	+19	12.1	129	00.7	+11	13.6	329	00.6	-1	47.6
18	174	39.6	107	32.3	+20	120	01.7	+19	12.5	144	02.7	+11	13.8	344	03.0	-1	47.6
19	189	42.1	122	31.6		135	02.3		13.0	159	04.7		13.9	359	05.5		47.6
20	204	44.5	137	30.8	+20	150	02.9		13.4	174	06.7		14.1	14	07.9		47.6
21	219	47.0	152	30.1	+21	165	03.5		13.9	189	08.7		14.2	29	10.4		47.6
22	234	49.5	167	29.3		180	04.2		14.3	204	10.7		14.4	44	12.9		47.6
23	249	51.9	182	28.6		195	04.8		14.8	219	12.8		14.5	59	15.3		47.6
24	264	54.4	197	27.9	+21	210	05.4	+19	15.2	234	14.8	+11	14.7	74	17.8	-1	47.7
Dif	—		-7		+6	+6		+4		+20		+2		+25		0	

UT	SOL				☾ LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15 ^h 7				Edad: 15 ^d 1 PHE { 4 ^h : 57 ^m 7 12 ^h : 57 ^m 4 20 ^h : 57 ^m 2												
	PMG: 12 ^h 00 ^m 9				SD: 15 ^h 7 PMG: 1 ^h 07 ^m R°: 53 ^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	179	48.8	+23	21.6	343	54.2	-21	31.1	60 N	21 26	23 12	** **	22 20 17	4 25 86			
1	194	48.7		21.7	358	20.8		25.5	58	21 06	22 21	** **	22 07 20	41 82			
2	209	48.5		21.8	12	47.5		19.7	56	20 49	21 52	** **	21 56 23	4 55 79			
3	224	48.4		21.9	27	14.2		13.9	54	35	29	23 16	46 25	5 07 76			
4	239	48.3		22.0	41	41.0		07.9	52	23	21 11	22 30	37 28	17 74			
5	254	48.1	+23	22.0	56	08.0	-21	01.9	50	20 12	20 56	22 02	21 29 29	5 27 72			
6	269	48.0	+23	22.1	70	35.0	-20	55.7	45	19 49	20 27	21 16	21 12 33	5 46 69			
7	284	47.9		22.2	85	02.0		49.4	40	31	20 04	20 46	20 58 36	6 02 66			
8	299	47.7		22.3	99	29.2		42.9	35	16	19 46	23	47 38	15 64			
9	314	47.6		22.3	113	56.5		36.4	30	19 03	31	20 04	36 41	27 62			
10	329	47.5		22.4	128	23.8		29.8	20	18 41	19 06	19 35	18 45	6 47 58			
11	344	47.3	+23	22.5	142	51.3	-20	23.0	10 N	18 22	18 45	19 12	20 03 47	7 04 55			
12	359	47.2	+23	22.6	157	18.8	-20	16.1	0	18 05	18 27	18 53	19 48 51	7 20 53			
13	14	47.1		22.6	171	46.4		09.2	10 S	17 47	18 10	36	33 54	36 50			
14	29	46.9		22.7	186	14.2	-20	02.1	20	29	17 53	20	19 17 57	7 53 47			
15	44	46.8		22.8	200	42.0	-19	54.9	30	17 07	34	18 04	18 59 61	8 12 44			
16	59	46.7		22.8	215	09.9		47.6	35	16 55	23	17 55	49 62	23 42			
17	74	46.5	+23	22.9	229	37.9	-19	40.2	40	16 41	17 11	17 46	18 37 65	8 36 40			
18	89	46.4	+23	23.0	244	05.9	-19	32.7	45	16 24	16 58	17 35	18 22 69	8 51 37			
19	104	46.3		23.1	258	34.1		25.1	50	16 03	42	23	18 05 72	9 10 33			
20	119	46.1		23.1	273	02.4		17.5	52	15 54	34	18	17 56 74	19 31			
21	134	46.0		23.2	287	30.7		09.7	54	42	26	12	47 76	28 30			
22	149	45.9		23.3	301	59.2	-19	01.8	56	30	17	06	37 78	39 27			
23	164	45.7		23.3	316	27.7	-18	53.8	58	15 15	16 07	17 00	24 82	9 52 24			
24	179	45.6	+23	23.4	330	56.4	-18	45.7	60 S	14 58	15 55	16 52	17 10 86	10 06 21			
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO				
	PMG: 6 ^h 19 ^m 3			Mag: -3.8 PMG: 10 ^h 51 ^m			Mag: +1.4 PMG: 9 ^h 59 ^m			Mag: -2.2 PMG: 8 ^h 22 ^m			Mag: +0.8 PMG: 19 ^h 00 ^m				
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec						
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	264	54.4	197	27.9	+21	01.8	210	05.4	+19	15.2	234	14.8	+11	14.7	74	17.8	
1	279	56.8	212	27.1		02.4	225	06.0		15.6	249	16.8		14.9	89	20.2	
2	294	59.3	227	26.4		02.9	240	06.6		16.1	264	18.8		15.0	104	22.7	
3	310	01.8	242	25.6		03.5	255	07.2		16.5	279	20.8		15.2	119	25.1	
4	325	04.2	257	24.9		04.1	270	07.9		16.9	294	22.8		15.3	134	27.6	
5	340	06.7	272	24.1	+21	04.6	285	08.5	+19	17.4	309	24.8	+11	15.5	149	30.0	
6	355	09.2	287	23.4	+21	05.2	300	09.1	+19	17.8	324	26.8	+11	15.6	164	32.5	
7	10	11.6	302	22.6		05.7	315	09.7		18.3	339	28.9		15.8	179	34.9	
8	25	14.1	317	21.9		06.3	330	10.3		18.7	354	30.9		16.0	194	37.4	
9	40	16.6	332	21.1		06.8	345	10.9		19.1	9	32.9		16.1	209	39.8	
10	55	19.0	347	20.4		07.4	0	11.6		19.6	24	34.9		16.3	224	42.3	
11	70	21.5	2	19.6	+21	07.9	15	12.2	+19	20.0	39	36.9	+11	16.4	239	44.7	
12	85	24.0	17	18.9	+21	08.5	30	12.8	+19	20.4	54	38.9	+11	16.6	254	47.2	
13	100	26.4	32	18.1		09.0	45	13.4		20.9	69	40.9		16.7	269	49.6	
14	115	28.9	47	17.3		09.5	60	14.0		21.3	84	42.9		16.9	284	52.1	
15	130	31.3	62	16.6		10.1	75	14.6		21.8	99	45.0		17.0	299	54.5	
16	145	33.8	77	15.8		10.6	90	15.2		22.2	114	47.0		17.2	314	57.0	
17	160	36.3	92	15.1	+21	11.2	105	15.9	+19	22.6	129	49.0	+11	17.3	329	59.4	
18	175	38.7	107	14.3	+21	11.7	120	16.5	+19	23.1	144	51.0	+11	17.5	345	01.9	
19	190	41.2	122	13.6		12.2	135	17.1		23.5	159	53.0		17.7	0	04.3	
20	205	43.7	137	12.8		12.8	150	17.7		23.9	174	55.0		17.8	15	06.8	
21	220	46.1	152	12.1		13.3	165	18.3		24.4	189	57.0		18.0	30	09.2	
22	235	48.6	167	11.3		13.9	180	18.9		24.8	204	59.1		18.1	45	11.7	
23	250	51.1	182	10.6		14.4	195	19.6		25.2	220	01.1		18.3	60	14.1	
24	265	53.5	197	09.8	+21	14.9	210	20.2	+19	25.7	235	03.1	+11	18.4	75	16.6	
Dif	—			-8	+5	+6			+4	+20			+2	+25			

UT	SOL				LUNA							Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna			Puesta de Luna		
	SD: 15 ^h 7				Edad: 16 ^d 1 PHE { 4 ^h : 56 ^m 9 12 ^h : 56 ^m 7 20 ^h : 56 ^m 5 SD: 15 ^h 5 PMG: 2 ^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	45.6	+23	23.4	330	56.4		-18	45.7	81	60 N	** **	0 50	2 36	22 37	11	5 51	85			
1	194	45.5		23.4	345	25.1	97		37.6	81	58	** **	1 41	2 56		27 15	6 03	82			
2	209	45.3		23.5	359	53.9	98		29.3	83	56	** **	2 10	3 13		19 17	14	78			
3	224	45.2		23.6	14	22.8	99		21.0	83	54	0 46	33	27		11 20	23	76			
4	239	45.1		23.6	28	51.8	100		12.6	84	52	1 32	2 51	39	22 05	21	31	74			
5	254	44.9	+23	23.7	43	20.9	101	-18	04.0	86	50	2 00	3 06	3 50	21 58	24	6 39	72			
6	269	44.8	+23	23.8	57	50.1	102	-17	55.4	86	45	2 46	3 35	4 13	21 45	28	6 55	68			
7	284	44.6		23.8	72	19.4	103		46.8	86	40	3 16	3 58	31	34 31		7 08	64			
8	299	44.5		23.9	86	48.8	104		38.0	88	35	39	4 16	46	25 34		19	62			
9	314	44.4		23.9	101	18.2	104		29.1	89	30	3 58	31	4 59	17 36		29	59			
10	329	44.2		24.0	115	47.8	106		20.2	89	20	4 27	4 56	5 21	21 03	40	45	55			
11	344	44.1	+23	24.0	130	17.4	106	-17	11.2	90	10 N	4 50	5 17	5 40	20 50	44	7 59	52			
12	359	44.0	+23	24.1	144	47.2	108	-17	02.1	91	0	5 09	5 35	5 57	20 39	46	8 13	48			
13	14	43.8		24.2	159	17.0	108	-16	53.0	91	10 S	26	5 52	6 15	27 50		26	46			
14	29	43.7		24.2	173	46.9	109		43.7	93	20	42	6 09	33	14 54		40	42			
15	44	43.6		24.3	188	16.9	110		34.4	93	30	5 58	28	6 55	20 00	58	8 56	38			
16	59	43.4		24.3	202	47.0	111		25.0	94	35	6 07	39	7 07	19 51	61	9 05	36			
17	74	43.3	+23	24.4	217	17.2	112	-16	15.6	94	40	6 16	6 51	7 21	19 42	63	9 16	33			
18	89	43.2	+23	24.4	231	47.5	113	-16	06.0	96	45	6 27	7 04	7 38	19 31	66	9 28	30			
19	104	43.0		24.5	246	17.8	113	-15	56.4	96	50	39	20	7 59	17 71		43	26			
20	119	42.9		24.5	260	48.3	115		46.8	96	52	44	28	8 09	10 73		50	24			
21	134	42.8		24.6	275	18.8	115		37.0	98	54	50	36	20	19 03	75	9 58	22			
22	149	42.6		24.6	289	49.4	116		27.2	98	56	6 56	45	32	18 55	78	10 06	20			
23	164	42.5		24.7	304	20.1	117		17.4	98	58	7 02	7 55	8 47	46 81		16	17			
24	179	42.4	+23	24.7	318	50.9	118	-15	07.5	99	60 S	7 10	8 07	9 05	18 36	84	10 27	14			

UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO					
	PMG 6 ^h 15 ^m 4		Mag: -3.8 PMG: 10 ^h 52 ^m				Mag: +1.4 PMG: 9 ^h 58 ^m				Mag: -2.2 PMG: 8 ^h 19 ^m				Mag: +0.8 PMG: 18 ^h 56 ^m					
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	265	53.5	197	09.8	+21	14.9		210	20.2	+19	25.7		235	03.1	+11	18.4	75	16.6	-1	48.1
1	280	56.0	212	09.0		15.5		225	20.8		26.1		250	05.1		18.6	90	19.0		48.1
2	295	58.5	227	08.3		16.0		240	21.4		26.5		265	07.1		18.7	105	21.5		48.1
3	311	00.9	242	07.5		16.5		255	22.0		26.9		280	09.1		18.9	120	23.9		48.1
4	326	03.4	257	06.8		17.1		270	22.6		27.4		295	11.1		19.0	135	26.4		48.1
5	341	05.8	272	06.0	+21	17.6		285	23.2	+19	27.8		310	13.2	+11	19.2	150	28.8	-1	48.1
6	356	08.3	287	05.2	+21	18.1		300	23.9	+19	28.2		325	15.2	+11	19.4	165	31.3	-1	48.2
7	11	10.8	302	04.5		18.6		315	24.5		28.7		340	17.2		19.5	180	33.7		48.2
8	26	13.2	317	03.7		19.2		330	25.1		29.1		355	19.2		19.7	195	36.2		48.2
9	41	15.7	332	03.0		19.7		345	25.7		29.5		10	21.2		19.8	210	38.6		48.2
10	56	18.2	347	02.2		20.2		0	26.3		30.0		25	23.2		20.0	225	41.1		48.2
11	71	20.6	2	01.4	+21	20.7		15	26.9	+19	30.4		40	25.3	+11	20.1	240	43.5	-1	48.3
12	86	23.1	17	00.7	+21	21.3		30	27.5	+19	30.8		55	27.3	+11	20.3	255	46.0	-1	48.3
13	101	25.6	31	59.9		21.8		45	28.2		31.2		70	29.3		20.4	270	48.4		48.3
14	116	28.0	46	59.1		22.3		60	28.8		31.7		85	31.3		20.6	285	50.9		48.3
15	131	30.5	61	58.4		22.8		75	29.4		32.1		100	33.3		20.7	300	53.3		48.3
16	146	33.0	76	57.6		23.3		90	30.0		32.5		115	35.3		20.9	315	55.8		48.3
17	161	35.4	91	56.9	+21	23.9		105	30.6	+19	32.9		130	37.4	+11	21.0	330	58.2	-1	48.4
18	176	37.9	106	56.1	+21	24.4		120	31.2	+19	33.4		145	39.4	+11	21.2	346	00.7	-1	48.4
19	191	40.3	121	55.3		24.9		135	31.8		33.8		160	41.4		21.4	1	03.1		48.4
20	206	42.8	136	54.6		25.4		150	32.5		34.2		175	43.4		21.5	16	05.6		48.4
21	221	45.3	151	53.8		25.9		165	33.1		34.6		190	45.4		21.7	31	08.0		48.4
22	236	47.7	166	53.0		26.4		180	33.7		35.1		205	47.4		21.8	46	10.5		48.5
23	251	50.2	181	52.3		26.9		195	34.3		35.5		220	49.5		22.0	61	12.9		48.5
24	266	52.7	196	51.5	+21	27.5		210	34.9	+19	35.9		235	51.5	+11	22.1	76	15.3	-1	48.5
Dif	—		-8		+5				+6		+4		+20		+2		+24		0	

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15 ^h 7			Edad: 17 ^d 1	PHE {	4 ^h : 56 ^m /2 12 ^h : 56 ^m /0 20 ^h : 55 ^m /8			Final del crepúsculo			Salida de Luna		Puesta de Luna	
	PMG: 12 ^h 01 ^m 3								R°: 46 ^m						
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	m	h m m	m
0	179	42.4	+23 24.7	318	50.9	-15 07.5		60 N	21 27	23 14	** **	22 48	9	7 16	83
1	194	42.2		333	21.8 ¹¹⁹	-14 57.5 ¹⁰⁰		58	21 07	22 23	** **	42	11	25	79
2	209	42.1		347	52.8 ¹²⁰	47.4 ¹⁰¹		56	20 50	21 53	** **	36	14	32	77
3	224	41.9		2	23.8 ¹²⁰	37.3 ¹⁰¹		54	36	30	23 18	31	16	39	74
4	239	41.8		16	55.0 ¹²²	27.1 ¹⁰²		52	23	21 12	22 31	26	19	45	72
5	254	41.7	+23 24.9	31	26.2 ¹²²	-14 16.9 ¹⁰²		50	20 12	20 57	22 03	22 22	20	7 51	70
6	269	41.5	+23 25.0	45	57.5 ¹²³	-14 06.6 ¹⁰³		45	19 50	20 27	21 17	22 13	24	8 03	65
7	284	41.4		60	28.9 ¹²⁴	-13 56.3 ¹⁰³		40	32	20 05	20 46	22 05	28	12	63
8	299	41.3		75	00.3 ¹²⁴	45.9 ¹⁰⁴		35	17	19 46	23	21 59	30	21	59
9	314	41.1		89	31.9 ¹²⁶	35.5 ¹⁰⁴		30	19 04	31	20 04	53	32	28	57
10	329	41.0		104	03.5 ¹²⁶	25.0 ¹⁰⁵		20	18 42	19 06	19 35	43	36	40	53
11	344	40.9	+23 25.2	118	35.2 ¹²⁷	-13 14.4 ¹⁰⁶		10 N	18 23	18 46	19 13	21 34	40	8 51	49
12	359	40.7	+23 25.2	133	07.0 ¹²⁸	-13 03.8 ¹⁰⁶		0	18 05	18 28	18 54	21 25	44	9 01	46
13	14	40.6		147	38.8 ¹²⁸	-12 53.2 ¹⁰⁶		10 S	17 48	18 10	37	17	48	12	42
14	29	40.5		162	10.7 ¹²⁹	42.5 ¹⁰⁷		20	29	17 53	20	21	08 51	22	39
15	44	40.3		176	42.7 ¹³⁰	31.8 ¹⁰⁷		30	17 08	34	18 04	20 58	56	34	34
16	59	40.2		191	14.8 ¹³¹	21.0 ¹⁰⁸		35	16 55	24	17 55	52	58	41	32
17	74	40.1	+23 25.4	205	47.0 ¹³²	-12 10.2 ¹⁰⁸		40	16 41	17 12	17 46	20 45	61	9 49	29
18	89	39.9	+23 25.4	220	19.2 ¹³²	-11 59.3 ¹⁰⁹		45	16 24	16 58	17 35	20 37	65	9 58	26
19	104	39.8		234	51.5 ¹³³	48.4 ¹⁰⁹		50	16 04	42	24	28	68	10 09	22
20	119	39.6		249	23.9 ¹³⁴	37.4 ¹¹⁰		52	15 54	35	18	23	71	14	20
21	134	39.5		263	56.3 ¹³⁴	26.4 ¹¹⁰		54	43	26	13	18	73	20	18
22	149	39.4		278	28.8 ¹³⁵	15.4 ¹¹⁰		56	30	17	06	13	75	26	16
23	164	39.2		293	01.4 ¹³⁶	-11 04.3 ¹¹¹		58	15 15	16 07	17 00	07	78	33	13
24	179	39.1	+23 25.6	307	34.1 ¹³⁷	-10 53.2 ¹¹¹		60 S	14 58	15 55	16 52	20 00	81	10 41	10
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 6 ^h 11 ^m 5		Mag: -3.8 PMG: 10 ^h 53 ^m			Mag: +1.4 PMG: 9 ^h 57 ^m			Mag: -2.2 PMG: 8 ^h 15 ^m			Mag: +0.8 PMG: 18 ^h 52 ^m			
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec		
h	°	°	'	°	°	'	'	°	°	°	'	°	°		
0	266	52.7	196 51.5	+21 27.5	210 34.9	+19 35.9		235 51.5	+11 22.1	76 15.3	-1 48.5				
1	281	55.1	211 50.7	28.0	225 35.5	36.3		250 53.5	22.3	91 17.8	48.5				
2	296	57.6	226 50.0	28.5	240 36.1	36.8		265 55.5	22.4	106 20.2	48.5				
3	312	00.1	241 49.2	29.0	255 36.8	37.2		280 57.5	22.6	121 22.7	48.6				
4	327	02.5	256 48.4	29.5	270 37.4	37.6		295 59.6	22.7	136 25.1	48.6				
5	342	05.0	271 47.6	+21 30.0	285 38.0	+19 38.0		311 01.6	+11 22.9	151 27.6	-1 48.6				
6	357	07.4	286 46.9	+21 30.5	300 38.6	+19 38.5		326 03.6	+11 23.0	166 30.0	-1 48.6				
7	12	09.9	301 46.1	31.0	315 39.2	38.9		341 05.6	23.2	181 32.5	48.6				
8	27	12.4	316 45.3	31.5	330 39.8	39.3		356 07.6	23.3	196 34.9	48.7				
9	42	14.8	331 44.6	32.0	345 40.4	39.7		11 09.6	23.5	211 37.3	48.7				
10	57	17.3	346 43.8	32.5	0 41.0	40.1		26 11.7	23.6	226 39.8	48.7				
11	72	19.8	1 43.0	+21 33.0	15 41.7	+19 40.6		41 13.7	+11 23.8	241 42.2	-1 48.7				
12	87	22.2	16 42.3	+21 33.5	30 42.3	+19 41.0		56 15.7	+11 23.9	256 44.7	-1 48.7				
13	102	24.7	31 41.5	34.0	45 42.9	41.4		71 17.7	24.1	271 47.1	48.8				
14	117	27.2	46 40.7	34.5	60 43.5	41.8		86 19.7	24.2	286 49.6	48.8				
15	132	29.6	61 39.9	35.0	75 44.1	42.2		101 21.8	24.4	301 52.0	48.8				
16	147	32.1	76 39.2	35.5	90 44.7	42.7		116 23.8	24.6	316 54.5	48.8				
17	162	34.6	91 38.4	+21 36.0	105 45.3	+19 43.1		131 25.8	+11 24.7	331 56.9	-1 48.8				
18	177	37.0	106 37.6	+21 36.5	120 45.9	+19 43.5		146 27.8	+11 24.9	346 59.3	-1 48.9				
19	192	39.5	121 36.8	36.9	135 46.6	43.9		161 29.9	25.0	2 01.8	48.9				
20	207	41.9	136 36.1	37.4	150 47.2	44.3		176 31.9	25.2	17 04.2	48.9				
21	222	44.4	151 35.3	37.9	165 47.8	44.7		191 33.9	25.3	32 06.7	48.9				
22	237	46.9	166 34.5	38.4	180 48.4	45.2		206 35.9	25.5	47 09.1	48.9				
23	252	49.3	181 33.7	38.9	195 49.0	45.6		221 37.9	25.6	62 11.6	49.0				
24	267	51.8	196 33.0	+21 39.4	210 49.6	+19 46.0		236 40.0	+11 25.8	77 14.0	-1 49.0				
Dif	—	—	-8	+5	+6	+4		+20	+2	+24	0				

UT	SOL				LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna			Puesta de Luna			
	SD: 15 ^h 7				Edad: 18 ^d 1 PHE { 4 ^h : 55 ^m /6 12 ^h : 55 ^m /4 20 ^h : 55 ^m /2					Principio del crepúsculo			Salida de Luna			Puesta de Luna			
	PMG: 12 ^h 01 ^m 5				SD: 15 ^h 2 PMG: 3 ^h 36 ^m R°: 44 ^m					Principio del crepúsculo			Salida de Luna			Puesta de Luna			
	hG ☉ Dec				hG ☾ Dif Dec Dif					Náutico	Civil		Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	m	h	m	m
0	179	39.1	+23	25.6	307	34.1	-10	53.2	60 N	** **	0 49	2 36	22 57	7	8 39	79			
1	194	39.0		25.7	322	06.8 ¹³⁷		42.1 ¹¹¹	58	** **	1 40	2 56	53 10		44 77				
2	209	38.8		25.7	336	39.6 ¹³⁸		30.9 ¹¹²	56	** **	2 10	3 13	50 12		49 74				
3	224	38.7		25.7	351	12.4 ¹³⁸		19.7 ¹¹²	54	0 45	33	27	47 15		53 72				
4	239	38.6		25.7	5	45.3 ¹³⁹	-10	08.4 ¹¹³	52	1 32	2 51	40	45 16		8 57 70				
5	254	38.4	+23	25.8	20	18.3 ¹⁴⁰	-9	57.1 ¹¹³	50	2 00	3 06	3 50	22 42	18	9 01	67			
6	269	38.3	+23	25.8	34	51.4 ¹⁴¹	-9	45.8 ¹¹³	45	2 46	3 36	4 13	22 37	22	9 08	64			
7	284	38.2		25.8	49	24.5 ¹⁴¹		34.5 ¹¹³	40	3 16	3 58	31	33 25		15 60				
8	299	38.0		25.8	63	57.6 ¹⁴¹		23.1 ¹¹⁴	35	40	4 16	46	29 28		20 57				
9	314	37.9		25.9	78	30.9 ¹⁴³		11.7 ¹¹⁴	30	3 58	32	4 59	25 31		25 55				
10	329	37.8		25.9	93	04.1 ¹⁴²	-9	00.3 ¹¹⁴	20	4 27	4 57	5 21	19 35		33 50				
11	344	37.6	+23	25.9	107	37.5 ¹⁴⁴	-8	48.8 ¹¹⁵	10 N	4 50	5 17	5 40	22 14	39	9 40	47			
12	359	37.5	+23	25.9	122	10.9 ¹⁴⁴	-8	37.3 ¹¹⁵	0	5 09	5 35	5 58	22 09	43	9 47	43			
13	14	37.3		26.0	136	44.4 ¹⁴⁵		25.8 ¹¹⁵	10 S	26	5 52	6 15	22 05	45	9 54	39			
14	29	37.2		26.0	151	17.9 ¹⁴⁵		14.3 ¹¹⁵	20	42	6 10	34	21 59	50	10 01	35			
15	44	37.1		26.0	165	51.4 ¹⁴⁵	-8	02.7 ¹¹⁶	30	5 59	29	6 55	54 53		08 32				
16	59	36.9		26.0	180	25.1 ¹⁴⁷	-7	51.1 ¹¹⁶	35	6 08	39	7 07	50 56		13 29				
17	74	36.8	+23	26.0	194	58.7 ¹⁴⁶	-7	39.5 ¹¹⁶	40	6 17	6 51	7 22	21 46	59	10 18	26			
18	89	36.7	+23	26.1	209	32.5 ¹⁴⁸	-7	27.9 ¹¹⁶	45	6 27	7 05	7 39	21 42	62	10 24	23			
19	104	36.5		26.1	224	06.3 ¹⁴⁸		16.3 ¹¹⁶	50	39	21	7 59	36 67		31 19				
20	119	36.4		26.1	238	40.1 ¹⁴⁸	-7	04.6 ¹¹⁷	52	44	28	8 09	34 68		34 18				
21	134	36.3		26.1	253	14.0 ¹⁴⁹	-6	52.9 ¹¹⁷	54	50	36	20	31 71		38 15				
22	149	36.1		26.1	267	47.9 ¹⁴⁹		41.2 ¹¹⁷	56	6 56	46	33	28 73		42 13				
23	164	36.0		26.1	282	21.9 ¹⁵⁰		29.5 ¹¹⁷	58	7 03	7 56	8 48	25 75		46 11				
24	179	35.9	+23	26.1	296	55.9 ¹⁵⁰	-6	17.8 ¹¹⁷	60 S	7 11	8 08	9 05	21 21	78	10 51	8			

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 6 ^h 07 ^m 5		Mag: -3.8 PMG: 10 ^h 54 ^m			Mag: +1.4 PMG: 9 ^h 56 ^m			Mag: -2.2 PMG: 8 ^h 12 ^m			Mag: +0.8 PMG: 18 ^h 48 ^m						
	hG ♈		hG ♀ Dec			hG ♂ Dec			hG ♃ Dec			hG ♄ Dec						
h	°	'	°	'	°	°	'	°	°	'	°	°	'	°	'			
0	267	51.8	196	33.0	+21	210	49.6	+19	236	40.0	+11	25.8	77	14.0	-1	49.0		
1	282	54.3	211	32.2		225	50.2		251	42.0		25.9	92	16.4		49.0		
2	297	56.7	226	31.4		240	50.8		266	44.0		26.1	107	18.9		49.0		
3	312	59.2	241	30.6		255	51.5		281	46.0		26.2	122	21.3		49.0		
4	328	01.7	256	29.8		270	52.1		296	48.0		26.4	137	23.8		49.1		
5	343	04.1	271	29.1	+21	285	52.7	+19	311	50.1	+11	26.5	152	26.2	-1	49.1		
6	358	06.6	286	28.3	+21	300	53.3	+19	326	52.1	+11	26.7	167	28.6	-1	49.1		
7	13	09.1	301	27.5		315	53.9		341	54.1		26.8	182	31.1		49.1		
8	28	11.5	316	26.7		330	54.5		356	56.1		27.0	197	33.5		49.1		
9	43	14.0	331	25.9		345	55.1		11	58.2		27.1	212	36.0		49.2		
10	58	16.4	346	25.2		0	55.7		27	00.2		27.3	227	38.4		49.2		
11	73	18.9	1	24.4	+21	15	56.4	+19	42	02.2	+11	27.4	242	40.8	-1	49.2		
12	88	21.4	16	23.6	+21	30	57.0	+19	57	04.2	+11	27.6	257	43.3	-1	49.2		
13	103	23.8	31	22.8		45	57.6		72	06.3		27.7	272	45.7		49.2		
14	118	26.3	46	22.0		60	58.2		87	08.3		27.9	287	48.2		49.3		
15	133	28.8	61	21.3		75	58.8		102	10.3		28.0	302	50.6		49.3		
16	148	31.2	76	20.5		90	59.4		117	12.3		28.2	317	53.0		49.3		
17	163	33.7	91	19.7	+21	106	00.0	+19	132	14.3	+11	28.3	332	55.5	-1	49.3		
18	178	36.2	106	18.9	+21	121	00.6	+19	147	16.4	+11	28.5	347	57.9	-1	49.4		
19	193	38.6	121	18.1		136	01.2		162	18.4		28.6	3	00.4		49.4		
20	208	41.1	136	17.3		151	01.9		177	20.4		28.8	18	02.8		49.4		
21	223	43.5	151	16.6		166	02.5		192	22.4		28.9	33	05.2		49.4		
22	238	46.0	166	15.8		181	03.1		207	24.5		29.1	48	07.7		49.4		
23	253	48.5	181	15.0		196	03.7		222	26.5		29.2	63	10.1		49.5		
24	268	50.9	196	14.2	+21	211	04.3	+19	237	28.5	+11	29.4	78	12.6	-1	49.5		
Dif	—		-8			+5			+20			+2			+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 1 PHE { 4 ^h : 55 ^h 0 12 ^h : 54 ^h 8 20 ^h : 54 ^h 7											
	PMG: 12 ^h 01 ^m 7				SD: 15 ^h 0 PMG: 4 ^h 20 ^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	
0	179	35.9	+23 26.1	296	55.9	-6 17.8		60 N	21 28	23 14	** **	23 04 7		9 58 78	
1	194	35.7	26.2	311	30.0 ¹⁵¹	-6 06.0 ¹¹⁸		58	21 07	22 23	** **	03 10		10 01 75	
2	209	35.6	26.2	326	04.1 ¹⁵¹	-5 54.2 ¹¹⁸		56	20 50	21 53	** **	02 12		03 72	
3	224	35.4	26.2	340	38.3 ¹⁵²	42.5 ¹¹⁷		54	36	31	23 19	02 14		05 70	
4	239	35.3	26.2	355	12.5 ¹⁵²	30.7 ¹¹⁸		52	24	21 13	22 31	01 16		07 68	
5	254	35.2	+23 26.2	9	46.7 ¹⁵²	-5 18.9 ¹¹⁸		50	20 13	20 58	22 03	23 00 18		10 08 66	
6	269	35.0	+23 26.2	24	21.0 ¹⁵³	-5 07.0 ¹¹⁹		45	19 50	20 28	21 18	22 59 21		10 12 62	
7	284	34.9	26.2	38	55.3 ¹⁵³	-4 55.2 ¹¹⁸		40	32	20 05	20 47	58 24		15 59	
8	299	34.8	26.2	53	29.7 ¹⁵⁴	43.4 ¹¹⁸		35	17	19 47	24	57 27		17 56	
9	314	34.6	26.2	68	04.1 ¹⁵⁴	31.5 ¹¹⁹		30	19 04	32	20 05	56 29		20 53	
10	329	34.5	26.2	82	38.5 ¹⁵⁴	19.7 ¹¹⁸		20	18 42	19 07	19 36	54 34		23 49	
11	344	34.4	+23 26.2	97	13.0 ¹⁵⁵	-4 07.8 ¹¹⁹		10 N	18 23	18 46	19 13	22 53 37		10 27 45	
12	359	34.2	+23 26.2	111	47.5 ¹⁵⁵	-3 55.9 ¹¹⁹		0	18 05	18 28	18 54	22 52 41		10 30 41	
13	14	34.1	26.2	126	22.0 ¹⁵⁵	44.0 ¹¹⁹		10 S	17 48	18 11	37	50 45		33 38	
14	29	34.0	26.2	140	56.6 ¹⁵⁶	32.2 ¹¹⁸		20	29	17 53	21	49 48		36 34	
15	44	33.8	26.2	155	31.2 ¹⁵⁶	20.3 ¹¹⁹		30	17 08	34	18 04	47 53		40 30	
16	59	33.7	26.2	170	05.8 ¹⁵⁶	-3 08.4 ¹¹⁹		35	16 56	24	17 56	46 56		42 27	
17	74	33.5	+23 26.2	184	40.5 ¹⁵⁷	-2 56.5 ¹¹⁹		40	16 42	17 12	17 46	22 45 59		10 44 25	
18	89	33.4	+23 26.2	199	15.2 ¹⁵⁷	-2 44.6 ¹¹⁹		45	16 25	16 59	17 36	22 44 62		10 47 22	
19	104	33.3	26.2	213	49.9 ¹⁵⁷	32.7 ¹¹⁹		50	16 04	42	24	43 65		50 18	
20	119	33.1	26.2	228	24.6 ¹⁵⁷	20.8 ¹¹⁹		52	15 54	35	19	42 67		52 16	
21	134	33.0	26.2	242	59.4 ¹⁵⁸	-2 08.8 ¹²⁰		54	43	27	13	42 69		53 14	
22	149	32.9	26.2	257	34.2 ¹⁵⁸	-1 56.9 ¹¹⁹		56	30	18	07	41 71		55 12	
23	164	32.7	26.2	272	09.0 ¹⁵⁸	45.0 ¹¹⁹		58	15 15	16 07	17 00	40 74		57 10	
24	179	32.6	+23 26.2	286	43.9 ¹⁵⁹	-1 33.1 ¹¹⁹		60 S	14 58	15 56	16 52	22 39 77		10 59 7	
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 6 ^h 03 ^m 6			Mag: -3.8 PMG: 10 ^h 56 ^m			Mag: +1.4 PMG: 9 ^h 55 ^m			Mag: -2.2 PMG: 8 ^h 09 ^m			Mag: +0.9 PMG: 18 ^h 44 ^m		
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°
0	268	50.9	196	14.2	+21 50.7	211	04.3	+19 55.9	237	28.5	+11 29.4	78	12.6	-1 49.5	
1	283	53.4	211	13.4	51.2	226	04.9	56.3	252	30.5	29.5	93	15.0	49.5	
2	298	55.9	226	12.6	51.6	241	05.5	56.7	267	32.6	29.7	108	17.4	49.5	
3	313	58.3	241	11.8	52.1	256	06.1	57.1	282	34.6	29.8	123	19.9	49.6	
4	329	00.8	256	11.0	52.5	271	06.7	57.5	297	36.6	30.0	138	22.3	49.6	
5	344	03.3	271	10.3	+21 53.0	286	07.4	+19 57.9	312	38.7	+11 30.1	153	24.7	-1 49.6	
6	359	05.7	286	09.5	+21 53.5	301	08.0	+19 58.3	327	40.7	+11 30.3	168	27.2	-1 49.6	
7	14	08.2	301	08.7	53.9	316	08.6	58.7	342	42.7	30.4	183	29.6	49.6	
8	29	10.7	316	07.9	54.4	331	09.2	59.1	357	44.7	30.6	198	32.1	49.7	
9	44	13.1	331	07.1	54.8	346	09.8	59.5	12	46.8	30.7	213	34.5	49.7	
10	59	15.6	346	06.3	55.3	1	10.4	+19 59.9	27	48.8	30.9	228	36.9	49.7	
11	74	18.0	1	05.5	+21 55.7	16	11.0	+20 00.3	42	50.8	+11 31.0	243	39.4	-1 49.7	
12	89	20.5	16	04.7	+21 56.2	31	11.6	+20 00.7	57	52.8	+11 31.2	258	41.8	-1 49.8	
13	104	23.0	31	03.9	56.6	46	12.2	01.1	72	54.9	31.3	273	44.2	49.8	
14	119	25.4	46	03.1	57.0	61	12.8	01.5	87	56.9	31.4	288	46.7	49.8	
15	134	27.9	61	02.4	57.5	76	13.5	01.9	102	58.9	31.6	303	49.1	49.8	
16	149	30.4	76	01.6	57.9	91	14.1	02.3	118	00.9	31.7	318	51.5	49.9	
17	164	32.8	91	00.8	+21 58.4	106	14.7	+20 02.7	133	03.0	+11 31.9	333	54.0	-1 49.9	
18	179	35.3	106	00.0	+21 58.8	121	15.3	+20 03.1	148	05.0	+11 32.0	348	56.4	-1 49.9	
19	194	37.8	120	59.2	59.3	136	15.9	03.5	163	07.0	32.2	3	58.9	49.9	
20	209	40.2	135	58.4	+21 59.7	151	16.5	03.9	178	09.1	32.3	19	01.3	49.9	
21	224	42.7	150	57.6	+22 00.1	166	17.1	04.4	193	11.1	32.5	34	03.7	50.0	
22	239	45.2	165	56.8	00.6	181	17.7	04.8	208	13.1	32.6	49	06.2	50.0	
23	254	47.6	180	56.0	01.0	196	18.3	05.1	223	15.1	32.8	64	08.6	50.0	
24	269	50.1	195	55.2	+22 01.4	211	18.9	+20 05.5	238	17.2	+11 32.9	79	11.0	-1 50.0	
Dif	—		-8	+4		+6	+4		+20	+1		+24		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 9			Edad: 20 ^d 1 PHE { 4 ^h : 54'6 12 ^h : 54'5 20 ^h : 54'4 R°: 42 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m		
0	179	32.6	+23	26.2	286	43.9	-1	33.1	60 N	** **	0 49	2 36	23 11	8	11 16	76		
1	194	32.5		26.2	301	18.8 ¹⁵⁹		21.2 ¹¹⁹	58	** **	1 41	2 56	13 10		16 73			
2	209	32.3		26.2	315	53.6 ¹⁵⁸	-1	09.3 ¹¹⁹	56	** **	2 11	3 13	14 13		15 71			
3	224	32.2		26.2	330	28.6 ¹⁶⁰	-0	57.4 ¹¹⁹	54	0 45	33	28	16 14		15 69			
4	239	32.1		26.2	345	03.5 ¹⁵⁹		45.5 ¹¹⁹	52	1 32	2 51	40	17 16		15 67			
5	254	31.9	+23	26.2	359	38.4 ¹⁵⁹	-0	33.6 ¹¹⁹	50	2 00	3 06	3 51	23 18	18	11 14	66		
6	269	31.8	+23	26.2	14	13.4 ¹⁶⁰	-0	21.7 ¹¹⁹	45	2 46	3 36	4 13	23 20	22	11 14	61		
7	284	31.6		26.2	28	48.4 ¹⁶⁰	-0	09.8 ¹¹⁹	40	3 17	3 59	31	22 25		14 57			
8	299	31.5		26.2	43	23.4 ¹⁶⁰	+0	02.1 ¹¹⁹	35	40	4 17	4 47	24 27		13 55			
9	314	31.4		26.2	57	58.4 ¹⁶⁰		14.0 ¹¹⁹	30	3 59	32	5 00	25 30		13 52			
10	329	31.2		26.1	72	33.4 ¹⁶⁰		25.8 ¹¹⁸	20	4 28	4 57	22	28 34		12 49			
11	344	31.1	+23	26.1	87	08.4 ¹⁶⁰	+0	37.7 ¹¹⁹	10 N	4 50	5 18	5 41	23 30	38	11 12	44		
12	359	31.0	+23	26.1	101	43.5 ¹⁶¹	+0	49.5 ¹¹⁸	0	5 09	5 36	5 58	23 33	41	11 11	41		
13	14	30.8		26.1	116	18.5 ¹⁶⁰	+1	01.4 ¹¹⁹	10 S	27	5 53	6 16	35 45		11 37			
14	29	30.7		26.1	130	53.6 ¹⁶¹		13.2 ¹¹⁸	20	43	6 10	34	37 49		10 34			
15	44	30.6		26.1	145	28.7 ¹⁶¹		25.0 ¹¹⁸	30	5 59	29	6 56	40 53		10 29			
16	59	30.4		26.1	160	03.7 ¹⁶⁰		36.9 ¹¹⁹	35	6 08	40	7 08	42 55		09 28			
17	74	30.3	+23	26.0	174	38.8 ¹⁶¹	+1	48.7 ¹¹⁸	40	6 17	6 52	7 22	23 44	57	11 09	25		
18	89	30.2	+23	26.0	189	13.9 ¹⁶¹	+2	00.5 ¹¹⁸	45	6 28	7 05	7 39	23 46	61	11 09	21		
19	104	30.0		26.0	203	49.0 ¹⁶¹		12.2 ¹¹⁷	50	40	21	8 00	48 65		08 18			
20	119	29.9		26.0	218	24.1 ¹⁶¹		24.0 ¹¹⁸	52	45	29	10	49 67		08 16			
21	134	29.8		26.0	232	59.2 ¹⁶¹		35.8 ¹¹⁸	54	51	37	21	51 69		07 14			
22	149	29.6		26.0	247	34.3 ¹⁶¹		47.5 ¹¹⁷	56	6 57	46	34	52 71		07 12			
23	164	29.5		25.9	262	09.4 ¹⁶¹	+2	59.2 ¹¹⁷	58	7 04	7 56	8 48	54 73		07 10			
24	179	29.3	+23	25.9	276	44.5 ¹⁶¹	+3	10.9 ¹¹⁷	60 S	7 11	8 08	9 06	23 56	76	11 06	8		
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO					
	PMG 5 ^h 59 ^m 7			Mag: -3.8 PMG: 10 ^h 57 ^m			Mag: +1.4 PMG: 9 ^h 54 ^m			Mag: -2.2 PMG: 8 ^h 06 ^m			Mag: +0.9 PMG: 18 ^h 40 ^m					
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	269	50.1	195	55.2	+22	01.4	211	18.9	+20	05.5	238	17.2	+11	32.9	79	11.0	-1	50.0
1	284	52.5	210	54.4		01.9	226	19.6		05.9	253	19.2		33.1	94	13.5		50.1
2	299	55.0	225	53.6		02.3	241	20.2		06.3	268	21.2		33.2	109	15.9		50.1
3	314	57.5	240	52.8		02.7	256	20.8		06.7	283	23.3		33.4	124	18.3		50.1
4	329	59.9	255	52.0		03.2	271	21.4		07.1	298	25.3		33.5	139	20.8		50.1
5	345	02.4	270	51.2	+22	03.6	286	22.0	+20	07.5	313	27.3	+11	33.7	154	23.2	-1	50.2
6	0	04.9	285	50.4	+22	04.0	301	22.6	+20	07.9	328	29.4	+11	33.8	169	25.6	-1	50.2
7	15	07.3	300	49.6		04.4	316	23.2		08.3	343	31.4		34.0	184	28.1		50.2
8	30	09.8	315	48.8		04.9	331	23.8		08.7	358	33.4		34.1	199	30.5		50.2
9	45	12.3	330	48.0		05.3	346	24.4		09.1	13	35.4		34.2	214	32.9		50.3
10	60	14.7	345	47.2		05.7	1	25.0		09.5	28	37.5		34.4	229	35.4		50.3
11	75	17.2	0	46.4	+22	06.1	16	25.6	+20	09.9	43	39.5	+11	34.5	244	37.8	-1	50.3
12	90	19.6	15	45.6	+22	06.6	31	26.3	+20	10.3	58	41.5	+11	34.7	259	40.2	-1	50.3
13	105	22.1	30	44.8		07.0	46	26.9		10.7	73	43.6		34.8	274	42.7		50.4
14	120	24.6	45	44.0		07.4	61	27.5		11.1	88	45.6		35.0	289	45.1		50.4
15	135	27.0	60	43.2		07.8	76	28.1		11.5	103	47.6		35.1	304	47.5		50.4
16	150	29.5	75	42.4		08.2	91	28.7		11.9	118	49.7		35.3	319	50.0		50.4
17	165	32.0	90	41.6	+22	08.7	106	29.3	+20	12.3	133	51.7	+11	35.4	334	52.4	-1	50.5
18	180	34.4	105	40.8	+22	09.1	121	29.9	+20	12.7	148	53.7	+11	35.6	349	54.8	-1	50.5
19	195	36.9	120	40.0		09.5	136	30.5		13.1	163	55.8		35.7	4	57.2		50.5
20	210	39.4	135	39.2		09.9	151	31.1		13.5	178	57.8		35.9	19	59.7		50.5
21	225	41.8	150	38.4		10.3	166	31.7		13.9	193	59.8		36.0	35	02.1		50.6
22	240	44.3	165	37.6		10.7	181	32.3		14.2	209	01.9		36.2	50	04.5		50.6
23	255	46.8	180	36.8		11.1	196	32.9		14.6	224	03.9		36.3	65	07.0		50.6
24	270	49.2	195	36.0	+22	11.5	211	33.6	+20	15.0	239	05.9	+11	36.4	80	09.4	-1	50.6
Dif	—			-8 +4			+6 +4			+20 +1			+1			+24		

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 15 ^h 7			Edad: 21 ^d 1 PHE { 4 ^h : 54/3 12 ^h : 54/3 20 ^h : 54/2												
	PMG: 12 ^h 02 ^m 2				PMG: 5 ^h 43 ^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	h m	h m	
0	179	29.3	+23	25.9	276	44.5	+3	10.9	60 N	21 28	23 14	** **	23 19	9	12 32	77
1	194	29.2		25.9	291	19.6 ¹⁶¹		22.6 ¹¹⁷	58	21 07	22 23	** **	23 12		29 74	
2	209	29.1		25.9	305	54.7 ¹⁶¹		34.3 ¹¹⁷	56	20 51	21 53	** **	27 14		26 72	
3	224	28.9		25.8	320	29.8 ¹⁶¹		46.0 ¹¹⁷	54	36	31	23 18	30 16		24 69	
4	239	28.8		25.8	335	04.9 ¹⁶¹	+3	57.6 ¹¹⁶	52	24	21 13	22 31	33 18		22 67	
5	254	28.7	+23	25.8	349	40.0 ¹⁶¹	+4	09.2 ¹¹⁶	50	20 13	20 58	22 03	23 36	20	12 20	65
6	269	28.5	+23	25.8	4	15.1 ¹⁶¹	+4	20.8 ¹¹⁶	45	19 51	20 28	21 18	23 42	23	12 15	61
7	284	28.4		25.7	18	50.1 ¹⁶⁰		32.4 ¹¹⁶	40	33	20 05	20 47	47 26		11 58	
8	299	28.3		25.7	33	25.2 ¹⁶¹		44.0 ¹¹⁶	35	18	19 47	24	51 29		08 55	
9	314	28.1		25.7	48	00.3 ¹⁶¹	+4	55.5 ¹¹⁵	30	19 04	32	20 05	23 55	32	05 53	
10	329	28.0		25.7	62	35.3 ¹⁶⁰	+5	07.1 ¹¹⁶	20	18 42	19 07	19 36	** **	**	12 01	48
11	344	27.9	+23	25.6	77	10.3 ¹⁶⁰	+5	18.6 ¹¹⁵	10 N	18 23	18 47	19 14	** **	**	11 56	45
12	359	27.7	+23	25.6	91	45.4 ¹⁶¹	+5	30.0 ¹¹⁴	0	18 06	18 28	18 55	** **	**	11 52	42
13	14	27.6		25.6	106	20.4 ¹⁶⁰		41.5 ¹¹⁵	10 S	17 48	18 11	38	** **	**	48 39	
14	29	27.5		25.5	120	55.4 ¹⁶⁰	+5	52.9 ¹¹⁴	20	30	17 54	21	** **	**	44 35	
15	44	27.3		25.5	135	30.4 ¹⁶⁰	+6	04.3 ¹¹⁴	30	17 09	35	18 05	** **	**	39 31	
16	59	27.2		25.5	150	05.3 ¹⁵⁹		15.7 ¹¹⁴	35	16 56	24	17 56	** **	**	37 28	
17	74	27.1	+23	25.4	164	40.3 ¹⁶⁰	+6	27.1 ¹¹⁴	40	16 42	17 13	17 47	** **	**	11 34	25
18	89	26.9	+23	25.4	179	15.2 ¹⁵⁹	+6	38.4 ¹¹³	45	16 25	16 59	17 36	** **	**	11 30	22
19	104	26.8		25.4	193	50.1 ¹⁵⁹	+6	49.7 ¹¹³	50	16 04	43	24	** **	**	26 18	
20	119	26.6		25.3	208	25.0 ¹⁵⁹	+7	01.0 ¹¹³	52	15 54	35	19	** **	**	24 17	
21	134	26.5		25.3	222	59.9 ¹⁵⁹		12.2 ¹¹²	54	43	27	14	** **	**	21 16	
22	149	26.4		25.2	237	34.7 ¹⁵⁸		23.5 ¹¹³	56	31	18	07	** **	**	19 13	
23	164	26.2		25.2	252	09.6 ¹⁵⁹		34.7 ¹¹²	58	15 16	16 08	17 01	** **	**	17 10	
24	179	26.1	+23	25.2	266	44.4 ¹⁵⁸	+7	45.8 ¹¹¹	60 S	14 58	15 56	16 53	** **	**	11 14	8
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO				
	PMG: 5 ^h 55 ^m 7		Mag: -3.8 PMG: 10 ^h 58 ^m			Mag: +1.4 PMG: 9 ^h 53 ^m			Mag: -2.3 PMG: 8 ^h 03 ^m			Mag: +0.9 PMG: 18 ^h 36 ^m				
	hG ♈		hG ♀			hG ♂			hG ♃			hG ♄				
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	270	49.2	195	36.0	+22	11.5	211	33.6	+20	15.0	239	05.9	+11	36.4	80	09.4
1	285	51.7	210	35.2		12.0	226	34.2		15.4	254	08.0		36.6	95	11.8
2	300	54.1	225	34.4		12.4	241	34.8		15.8	269	10.0		36.7	110	14.3
3	315	56.6	240	33.6		12.8	256	35.4		16.2	284	12.0		36.9	125	16.7
4	330	59.1	255	32.8		13.2	271	36.0		16.6	299	14.1		37.0	140	19.1
5	346	01.5	270	32.0	+22	13.6	286	36.6	+20	17.0	314	16.1	+11	37.2	155	21.6
6	1	04.0	285	31.2	+22	14.0	301	37.2	+20	17.4	329	18.1	+11	37.3	170	24.0
7	16	06.5	300	30.4		14.4	316	37.8		17.8	344	20.2		37.5	185	26.4
8	31	08.9	315	29.6		14.8	331	38.4		18.1	359	22.2		37.6	200	28.8
9	46	11.4	330	28.8		15.2	346	39.0		18.5	14	24.2		37.8	215	31.3
10	61	13.9	345	28.0		15.6	1	39.6		18.9	29	26.3		37.9	230	33.7
11	76	16.3	0	27.2	+22	16.0	16	40.2	+20	19.3	44	28.3	+11	38.0	245	36.1
12	91	18.8	15	26.4	+22	16.4	31	40.9	+20	19.7	59	30.3	+11	38.2	260	38.6
13	106	21.3	30	25.5		16.8	46	41.5		20.1	74	32.4		38.3	275	41.0
14	121	23.7	45	24.7		17.2	61	42.1		20.5	89	34.4		38.5	290	43.4
15	136	26.2	60	23.9		17.5	76	42.7		20.9	104	36.4		38.6	305	45.8
16	151	28.6	75	23.1		17.9	91	43.3		21.2	119	38.5		38.8	320	48.3
17	166	31.1	90	22.3	+22	18.3	106	43.9	+20	21.6	134	40.5	+11	38.9	335	50.7
18	181	33.6	105	21.5	+22	18.7	121	44.5	+20	22.0	149	42.5	+11	39.1	350	53.1
19	196	36.0	120	20.7		19.1	136	45.1		22.4	164	44.6		39.2	5	55.6
20	211	38.5	135	19.9		19.5	151	45.7		22.8	179	46.6		39.3	20	58.0
21	226	41.0	150	19.1		19.9	166	46.3		23.2	194	48.6		39.5	36	00.4
22	241	43.4	165	18.3		20.3	181	46.9		23.5	209	50.7		39.6	51	02.8
23	256	45.9	180	17.4		20.6	196	47.5		23.9	224	52.7		39.8	66	05.3
24	271	48.4	195	16.6	+22	21.0	211	48.1	+20	24.3	239	54.8	+11	39.9	81	07.7
Dif	—		-8			+4	+6			+4	+20		+1		+24	

UT	SOL				☾ LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15 ^h 7 PMG: 12 ^h 02 ^m 4				Edad: 22 ^d 1 PHE { 4 ^h : 54/2 12 ^h : 54/2 20 ^h : 54/3 PMG: 6 ^h 24 ^m R°: 42 ^m													
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m
0	179	26.1	+23	25.2	266	44.4	+7	45.8	60 N	** **	0 50	2 37	23 28	11	13 49	77		
1	194	26.0		25.1	281	19.2 ¹⁵⁸	+7	57.0 ¹¹²	58	** **	1 41	2 57	35 14		43 74			
2	209	25.8		25.1	295	53.9 ¹⁵⁷	+8	08.1 ¹¹¹	56	** **	2 11	3 14	41 16		38 71			
3	224	25.7		25.1	310	28.7 ¹⁵⁸		19.1 ¹¹⁰	54	0 46	34	28	46 19		33 66			
4	239	25.6		25.0	325	03.4 ¹⁵⁷		30.2 ¹¹¹	52	1 33	2 52	40	51 21		29 67			
5	254	25.4	+23	25.0	339	38.1 ¹⁵⁷	+8	41.2 ¹¹⁰	50	2 01	3 07	3 51	23 56	22	13 25	65		
6	269	25.3	+23	24.9	354	12.7 ¹⁵⁶	+8	52.2 ¹¹⁰	45	2 47	3 36	4 14	** **	**	13 16	62		
7	284	25.2		24.9	8	47.3 ¹⁵⁶	+9	03.1 ¹⁰⁹	40	3 17	3 59	32	** **	**	09 59			
8	299	25.0		24.8	23	21.9 ¹⁵⁶		14.0 ¹⁰⁹	35	41	4 17	4 47	** **	**	13 03	56		
9	314	24.9		24.8	37	56.5 ¹⁵⁶		24.9 ¹⁰⁹	30	3 59	33	5 00	** **	**	12 58	54		
10	329	24.8		24.7	52	31.0 ¹⁵⁵		35.7 ¹⁰⁸	20	4 28	4 58	22	0 02	35	49 50			
11	344	24.6	+23	24.7	67	05.5 ¹⁵⁵	+9	46.5 ¹⁰⁸	10 N	4 51	5 18	5 41	0 08	39	12 41	46		
12	359	24.5	+23	24.6	81	40.0 ¹⁵⁵	+9	57.3 ¹⁰⁸	0	5 10	5 36	5 59	0 14	42	12 34	43		
13	14	24.4		24.6	96	14.4 ¹⁵⁴	+10	08.0 ¹⁰⁷	10 S	27	5 53	6 16	20 45		27 39			
14	29	24.2		24.6	110	48.8 ¹⁵⁴		18.7 ¹⁰⁷	20	5 43	6 11	35	26 49		19 36			
15	44	24.1		24.5	125	23.2 ¹⁵⁴		29.3 ¹⁰⁶	30	6 00	30	6 56	33 53		10 32			
16	59	24.0		24.5	139	57.5 ¹⁵³		39.9 ¹⁰⁶	35	08	40	7 08	37 55		12 05	30		
17	74	23.8	+23	24.4	154	31.8 ¹⁵³	+10	50.5 ¹⁰⁶	40	6 18	6 52	7 22	0 41	59	11 59	28		
18	89	23.7	+23	24.3	169	06.1 ¹⁵³	+11	01.0 ¹⁰⁵	45	6 28	7 05	7 39	0 47	61	11 52	25		
19	104	23.6		24.3	183	40.3 ¹⁵²		11.5 ¹⁰⁵	50	40	22	8 00	53 66		44 21			
20	119	23.4		24.2	198	14.5 ¹⁵²		22.0 ¹⁰⁵	52	45	29	10	0 56	68	41 19			
21	134	23.3		24.2	212	48.6 ¹⁵¹		32.4 ¹⁰⁴	54	51	37	21	1 00	69	37 17			
22	149	23.2		24.1	227	22.7 ¹⁵¹		42.7 ¹⁰³	56	6 57	46	34	03 72		32 15			
23	164	23.0		24.1	241	56.7 ¹⁵⁰	+11	53.0 ¹⁰³	58	7 04	7 57	8 48	07 75		27 13			
24	179	22.9	+23	24.0	256	30.7 ¹⁵⁰	+12	03.3 ¹⁰³	60 S	7 11	8 08	9 06	1 12	77	11 22	9		
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG 5 ^h 51 ^m 8		Mag: -3.8 PMG: 10 ^h 59 ^m				Mag: +1.4 PMG: 9 ^h 52 ^m				Mag: -2.3 PMG: 7 ^h 59 ^m				Mag: +0.9 PMG: 18 ^h 32 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	271	48.4	195	16.6	+22	21.0	211	48.1	+20	24.3	239	54.8	+11	39.9	81	07.7	-1	51.3
1	286	50.8	210	15.8		21.4	226	48.7		24.7	254	56.8		40.1	96	10.1		51.3
2	301	53.3	225	15.0		21.8	241	49.4		25.1	269	58.8		40.2	111	12.5		51.3
3	316	55.7	240	14.2		22.2	256	50.0		25.5	285	00.9		40.3	126	15.0		51.4
4	331	58.2	255	13.4		22.6	271	50.6		25.8	300	02.9		40.5	141	17.4		51.4
5	347	00.7	270	12.6	+22	22.9	286	51.2	+20	26.2	315	04.9	+11	40.6	156	19.8	-1	51.4
6	2	03.1	285	11.8	+22	23.3	301	51.8	+20	26.6	330	07.0	+11	40.8	171	22.2	-1	51.4
7	17	05.6	300	10.9		23.7	316	52.4		27.0	345	09.0		40.9	186	24.7		51.5
8	32	08.1	315	10.1		24.1	331	53.0		27.4	0	11.1		41.1	201	27.1		51.5
9	47	10.5	330	09.3		24.4	346	53.6		27.7	15	13.1		41.2	216	29.5		51.5
10	62	13.0	345	08.5		24.8	1	54.2		28.1	30	15.1		41.4	231	31.9		51.5
11	77	15.5	0	07.7	+22	25.2	16	54.8	+20	28.5	45	17.2	+11	41.5	246	34.4	-1	51.6
12	92	17.9	15	06.9	+22	25.5	31	55.4	+20	28.9	60	19.2	+11	41.6	261	36.8	-1	51.6
13	107	20.4	30	06.0		25.9	46	56.0		29.3	75	21.2		41.8	276	39.2		51.6
14	122	22.9	45	05.2		26.3	61	56.6		29.6	90	23.3		41.9	291	41.6		51.7
15	137	25.3	60	04.4		26.6	76	57.2		30.0	105	25.3		42.1	306	44.1		51.7
16	152	27.8	75	03.6		27.0	91	57.9		30.4	120	27.4		42.2	321	46.5		51.7
17	167	30.2	90	02.8	+22	27.4	106	58.5	+20	30.8	135	29.4	+11	42.4	336	48.9	-1	51.7
18	182	32.7	105	02.0	+22	27.7	121	59.1	+20	31.1	150	31.4	+11	42.5	351	51.3	-1	51.8
19	197	35.2	120	01.1		28.1	136	59.7		31.5	165	33.5		42.6	6	53.8		51.8
20	212	37.6	135	00.3		28.5	152	00.3		31.9	180	35.5		42.8	21	56.2		51.8
21	227	40.1	149	59.5		28.8	167	00.9		32.3	195	37.6		42.9	36	58.6		51.9
22	242	42.6	164	58.7		29.2	182	01.5		32.7	210	39.6		43.1	52	01.0		51.9
23	257	45.0	179	57.9		29.5	197	02.1		33.0	225	41.6		43.2	67	03.5		51.9
24	272	47.5	194	57.0	+22	29.9	212	02.7	+20	33.4	240	43.7	+11	43.3	82	05.9	-1	51.9
Dif	—		-8 +4				+6 +4				+20 +1				+24 0			

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna			Puesta de Luna				
	SD: 15 ^h 7			Edad: 23 ^d 1 PHE	SD: 14 ^h 8				R°: 45 ^m	Civil			Náutico			Hora		R°	
	hG ☉	Dec			hG ☾	Dif				Dec	Dif								
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	h	m	
0	179	22.9	+23	24.0	256	30.7	+12	03.3	60 N	21	28	23	13	**	**	23	39	15	
1	194	22.8		24.0	271	04.7 ¹⁵⁰		13.5 ¹⁰²	58	21	07	22	23	**	**	49	18	14	
2	209	22.6		23.9	285	38.6 ¹⁴⁹		23.7 ¹⁰²	56	20	51	21	53	**	**	23	57	22	
3	224	22.5		23.9	300	12.5 ¹⁴⁹		33.8 ¹⁰¹	54		36		31	23	17	**	**	**	
4	239	22.4		23.8	314	46.3 ¹⁴⁸		43.9 ¹⁰¹	52		24		21	22	31	**	**	**	
5	254	22.2	+23	23.7	329	20.1 ¹⁴⁸	+12	54.0 ¹⁰¹	50	20	13	20	58	22	03	**	**	**	
6	269	22.1	+23	23.7	343	53.8 ¹⁴⁷	+13	03.9 ⁹⁹	45	19	51	20	28	21	18	0	05	26	
7	284	22.0		23.6	358	27.5 ¹⁴⁷		13.9 ¹⁰⁰	40		33	20	06	20	47	13	30	14	
8	299	21.8		23.5	13	01.2 ¹⁴⁷		23.8 ⁹⁹	35		18	19	48	24		20	32	13	
9	314	21.7		23.5	27	34.8 ¹⁴⁶		33.6 ⁹⁸	30	19	05		32	20	06	27	34	52	
10	329	21.6		23.4	42	08.3 ¹⁴⁵		43.4 ⁹⁸	20	18	43	19	07	19	37	37	38	39	
11	344	21.4	+23	23.4	56	41.8 ¹⁴⁵	+13	53.1 ⁹⁷	10 N	18	24	18	47	19	14	0	47	41	
12	359	21.3	+23	23.3	71	15.2 ¹⁴⁴	+14	02.8 ⁹⁷	0	18	06	18	29	18	55	0	56	44	
13	14	21.2		23.2	85	48.6 ¹⁴⁴		12.4 ⁹⁶	10 S	17	49	18	12	38		1	05	47	
14	29	21.0		23.2	100	21.9 ¹⁴³		22.0 ⁹⁶	20		30	17	54	22		15	50	12	
15	44	20.9		23.1	114	55.2 ¹⁴³		31.5 ⁹⁵	30	17	09		35	18	05	26	54	42	
16	59	20.8		23.0	129	28.4 ¹⁴²		40.9 ⁹⁴	35	16	57		25	17	57	32	57	35	
17	74	20.6	+23	23.0	144	01.6 ¹⁴²	+14	50.3 ⁹⁴	40	16	43	17	13	17	47	1	40	59	
18	89	20.5	+23	22.9	158	34.7 ¹⁴¹	+14	59.7 ⁹⁴	45	16	26	17	00	17	37	1	48	62	
19	104	20.4		22.8	173	07.7 ¹⁴⁰	+15	09.0 ⁹³	50	16	05	16	44	25		1	59	66	
20	119	20.2		22.8	187	40.7 ¹⁴⁰		18.2 ⁹²	52	15	55		36	20		2	04	67	
21	134	20.1		22.7	202	13.7 ¹⁴⁰		27.4 ⁹²	54		44		28	14		09	70	11	
22	149	20.0		22.6	216	46.6 ¹³⁹		36.5 ⁹¹	56		31		19	08		15	72	47	
23	164	19.8		22.5	231	19.4 ¹³⁸		45.5 ⁹⁰	58	15	17	16	09	17	01	22	75	40	
24	179	19.7	+23	22.5	245	52.2 ¹³⁸	+15	54.5 ⁹⁰	60 S	14	59	15	57	16	54	2	29	79	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO							
	PMG: 5 ^h 47 ^m 9		Mag: -3.8 PMG: 11 ^h 01 ^m			Mag: +1.4 PMG: 9 ^h 51 ^m			Mag: -2.3 PMG: 7 ^h 56 ^m			Mag: +0.9 PMG: 18 ^h 29 ^m							
	hG ♈		hG ♀			hG ♂			hG ♃			hG ♄							
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'					
0	272	47.5	194	57.0	+22	29.9	212	02.7	+20	33.4	240	43.7	+11	43.3	82	05.9	-1	51.9	
1	287	50.0	209	56.2		30.2	227	03.3		33.8	255	45.7		43.5	97	08.3		52.0	
2	302	52.4	224	55.4		30.6	242	03.9		34.1	270	47.8		43.6	112	10.7		52.0	
3	317	54.9	239	54.6		30.9	257	04.5		34.5	285	49.8		43.8	127	13.1		52.0	
4	332	57.4	254	53.8		31.3	272	05.1		34.9	300	51.8		43.9	142	15.6		52.1	
5	347	59.8	269	52.9	+22	31.7	287	05.7	+20	35.3	315	53.9	+11	44.1	157	18.0	-1	52.1	
6	3	02.3	284	52.1	+22	32.0	302	06.3	+20	35.6	330	55.9	+11	44.2	172	20.4	-1	52.1	
7	18	04.7	299	51.3		32.3	317	06.9		36.0	345	58.0		44.3	187	22.8		52.1	
8	33	07.2	314	50.5		32.7	332	07.5		36.4	1	00.0		44.5	202	25.3		52.2	
9	48	09.7	329	49.7		33.0	347	08.2		36.8	16	02.1		44.6	217	27.7		52.2	
10	63	12.1	344	48.8		33.4	2	08.8		37.1	31	04.1		44.8	232	30.1		52.2	
11	78	14.6	359	48.0	+22	33.7	17	09.4	+20	37.5	46	06.1	+11	44.9	247	32.5	-1	52.3	
12	93	17.1	14	47.2	+22	34.1	32	10.0	+20	37.9	61	08.2	+11	45.0	262	34.9	-1	52.3	
13	108	19.5	29	46.4		34.4	47	10.6		38.2	76	10.2		45.2	277	37.4		52.3	
14	123	22.0	44	45.5		34.8	62	11.2		38.6	91	12.3		45.3	292	39.8		52.3	
15	138	24.5	59	44.7		35.1	77	11.8		39.0	106	14.3		45.5	307	42.2		52.4	
16	153	26.9	74	43.9		35.4	92	12.4		39.3	121	16.4		45.6	322	44.6		52.4	
17	168	29.4	89	43.1	+22	35.8	107	13.0	+20	39.7	136	18.4	+11	45.8	337	47.0	-1	52.4	
18	183	31.8	104	42.2	+22	36.1	122	13.6	+20	40.1	151	20.4	+11	45.9	352	49.5	-1	52.5	
19	198	34.3	119	41.4		36.4	137	14.2		40.4	166	22.5		46.0	7	51.9		52.5	
20	213	36.8	134	40.6		36.8	152	14.8		40.8	181	24.5		46.2	22	54.3		52.5	
21	228	39.2	149	39.8		37.1	167	15.4		41.2	196	26.6		46.3	37	56.7		52.6	
22	243	41.7	164	38.9		37.4	182	16.0		41.5	211	28.6		46.5	52	59.1		52.6	
23	258	44.2	179	38.1		37.8	197	16.6		41.9	226	30.7		46.6	68	01.6		52.6	
24	273	46.6	194	37.3	+22	38.1	212	17.2	+20	42.3	241	32.7	+11	46.7	83	04.0	-1	52.6	
Dif	—		-8			+3	+6		+4		+20		+1		+24			0	

UT	SOL				☾ LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna			Puesta de Luna				
	SD: 15 ^h 7 PMG: 12 ^h 02 ^m 8				Edad: 24 ^d 1 PHE { SD: 14 ^h 8 PMG: 7 ^h 51 ^m R°: 47 ^m															
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°				
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m		
0	179	19.7	+23	22.5	245	52.2	+15	54.5	60 N	** **	0 53	2 38	23 54	23	16 25	77				
1	194	19.6		22.4	260	24.9 ¹³⁷	+16	03.4 ⁸⁹	58	** **	1 43	2 58	** **	**	12 74					
2	209	19.4		22.3	274	57.5 ¹³⁶		12.3 ⁸⁹	56	** **	2 12	3 15	** **	**	16 02	71				
3	224	19.3		22.2	289	30.1 ¹³⁶		21.0 ⁸⁷	54	0 48	35	29	0 05	23	15 52	69				
4	239	19.2		22.2	304	02.6 ¹³⁵		29.8 ⁸⁸	52	1 34	2 52	41	12 25		44 67					
5	254	19.0	+23	22.1	318	35.1 ¹³⁵	+16	38.4 ⁸⁶	50	2 02	3 08	3 52	0 18	27	15 36	66				
6	269	18.9	+23	22.0	333	07.5 ¹³⁴	+16	47.0 ⁸⁶	45	2 48	3 37	4 15	0 31	31	15 20	63				
7	284	18.8		21.9	347	39.8 ¹³³	+16	55.5 ⁸⁵	40	3 18	4 00	33	43 33		15 07	60				
8	299	18.6		21.8	2	12.1 ¹³³	+17	04.0 ⁸⁵	35	3 41	18	4 48	0 52	36	14 56	58				
9	314	18.5		21.8	16	44.3 ¹³²		12.4 ⁸⁴	30	4 00	33	5 01	1 01	37	47 55					
10	329	18.4		21.7	31	16.4 ¹³¹		20.7 ⁸³	20	29	4 58	23	15 41		30 53					
11	344	18.2	+23	21.6	45	48.5 ¹³¹	+17	28.9 ⁸²	10 N	4 51	5 19	5 42	1 28	44	14 16	50				
12	359	18.1	+23	21.5	60	20.5 ¹³⁰	+17	37.1 ⁸²	0	5 10	5 37	5 59	1 40	46	14 02	48				
13	14	18.0		21.4	74	52.5 ¹³⁰		45.2 ⁸¹	10 S	27	5 54	6 17	1 52	49	13 49	45				
14	29	17.8		21.4	89	24.4 ¹²⁹	+17	53.2 ⁸⁰	20	5 44	6 11	35	2 05	52	34 43					
15	44	17.7		21.3	103	56.2 ¹²⁸	+18	01.2 ⁸⁰	30	6 00	30	6 56	20 55		18 40					
16	59	17.6		21.2	118	27.9 ¹²⁷		09.0 ⁷⁸	35	09	40	7 09	29 57		13 08	38				
17	74	17.4	+23	21.1	132	59.6 ¹²⁷	+18	16.8 ⁷⁸	40	6 18	6 52	7 23	2 39	59	12 58	35				
18	89	17.3	+23	21.0	147	31.3 ¹²⁷	+18	24.6 ⁷⁸	45	6 28	7 06	7 39	2 50	63	12 45	33				
19	104	17.2		20.9	162	02.8 ¹²⁵		32.2 ⁷⁶	50	40	22	8 00	3 05	66	30 30					
20	119	17.0		20.8	176	34.3 ¹²⁵		39.8 ⁷⁶	52	45	29	10	11 68		22 29					
21	134	16.9		20.8	191	05.7 ¹²⁴		47.2 ⁷⁴	54	51	37	21	19 70		14 27					
22	149	16.8		20.7	205	37.1 ¹²⁴	+18	54.7 ⁷⁵	56	6 57	46	34	27 72		12 06	24				
23	164	16.7		20.6	220	08.3 ¹²²	+19	02.0 ⁷³	58	7 04	7 57	8 48	37 75		11 55	22				
24	179	16.5	+23	20.5	234	39.6 ¹²³	+19	09.2 ⁷²	60 S	7 11	8 08	9 06	3 48	78	11 44	18				
UT	ARIES				VENUS				MARTE				JÚPITER				SATURNO			
	PMG 5 ^h 43 ^m 9				Mag: -3.8 PMG: 11 ^h 02 ^m				Mag: +1.4 PMG: 9 ^h 50 ^m				Mag: -2.3 PMG: 7 ^h 53 ^m				Mag: +0.9 PMG: 18 ^h 25 ^m			
h	hG ♈		Dec		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
0	273	46.6	194	37.3	+22	38.1	212	17.2	+20	42.3	241	32.7	+11	46.7	83	04.0	-1	52.6		
1	288	49.1	209	36.5		38.4	227	17.8		42.6	256	34.8		46.9	98	06.4		52.7		
2	303	51.6	224	35.6		38.8	242	18.4		43.0	271	36.8		47.0	113	08.8		52.7		
3	318	54.0	239	34.8		39.1	257	19.0		43.4	286	38.8		47.2	128	11.2		52.7		
4	333	56.5	254	34.0		39.4	272	19.7		43.7	301	40.9		47.3	143	13.7		52.8		
5	348	59.0	269	33.1	+22	39.7	287	20.3	+20	44.1	316	42.9	+11	47.4	158	16.1	-1	52.8		
6	4	01.4	284	32.3	+22	40.1	302	20.9	+20	44.5	331	45.0	+11	47.6	173	18.5	-1	52.8		
7	19	03.9	299	31.5		40.4	317	21.5		44.8	346	47.0		47.7	188	20.9		52.9		
8	34	06.3	314	30.7		40.7	332	22.1		45.2	1	49.1		47.9	203	23.3		52.9		
9	49	08.8	329	29.8		41.0	347	22.7		45.6	16	51.1		48.0	218	25.7		52.9		
10	64	11.3	344	29.0		41.3	2	23.3		45.9	31	53.2		48.1	233	28.2		53.0		
11	79	13.7	359	28.2	+22	41.7	17	23.9	+20	46.3	46	55.2	+11	48.3	248	30.6	-1	53.0		
12	94	16.2	14	27.3	+22	42.0	32	24.5	+20	46.6	61	57.3	+11	48.4	263	33.0	-1	53.0		
13	109	18.7	29	26.5		42.3	47	25.1		47.0	76	59.3		48.6	278	35.4		53.0		
14	124	21.1	44	25.7		42.6	62	25.7		47.4	92	01.4		48.7	293	37.8		53.1		
15	139	23.6	59	24.8		42.9	77	26.3		47.7	107	03.4		48.8	308	40.3		53.1		
16	154	26.1	74	24.0		43.2	92	26.9		48.1	122	05.4		49.0	323	42.7		53.1		
17	169	28.5	89	23.2	+22	43.5	107	27.5	+20	48.5	137	07.5	+11	49.1	338	45.1	-1	53.2		
18	184	31.0	104	22.3	+22	43.8	122	28.1	+20	48.8	152	09.5	+11	49.2	353	47.5	-1	53.2		
19	199	33.5	119	21.5		44.2	137	28.7		49.2	167	11.6		49.4	8	49.9		53.2		
20	214	35.9	134	20.7		44.5	152	29.3		49.5	182	13.6		49.5	23	52.3		53.3		
21	229	38.4	149	19.8		44.8	167	29.9		49.9	197	15.7		49.7	38	54.7		53.3		
22	244	40.8	164	19.0		45.1	182	30.5		50.2	212	17.7		49.8	53	57.2		53.3		
23	259	43.3	179	18.2		45.4	197	31.1		50.6	227	19.8		49.9	68	59.6		53.4		
24	274	45.8	194	17.3	+22	45.7	212	31.7	+20	51.0	242	21.8	+11	50.1	84	02.0	-1	53.4		
Dif	—		-8		+3		+6		+4		+20		+1		+24		0			

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15 ^h 7			Edad: 25 ^d 1 PHE { 4 ^h : 55/0 12 ^h : 55/1 20 ^h : 55/3										
	PMG: 12 ^h 03 ^m 0			SD: 14 ^h 9 PMG: 8 ^h 38 ^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	m	h m m	m
0	179	16.5	+23 20.5	234	39.6	+19 09.2	72	21 27	23 10	*** **	*** **		17 42	72
1	194	16.4	20.4	249	10.7 ¹²¹	16.4	71	21 07	22 22	*** **	0 07	26	26	69
2	209	16.3	20.3	263	41.8 ¹²¹	23.5	69	20 50	21 53	*** **	19 28		13	67
3	224	16.1	20.2	278	12.8 ¹²⁰	30.4	69	36	31	23 15	28 31	17	01	66
4	239	16.0	20.1	292	43.7 ¹¹⁹	37.3	69	24	21 13	22 30	37 33	16	51	64
5	254	15.9	+23 20.0	307	14.6 ¹¹⁹	+19 44.2	69	20 13	20 58	22 03	0 45	34	16	42 63
6	269	15.7	+23 19.9	321	45.4 ¹¹⁸	+19 50.9	67	19 51	20 28	21 18	1 02	37	16	23 60
7	284	15.6	19.8	336	16.1 ¹¹⁷	+19 57.5	66	33	20 06	20 47	16 39		16	07 59
8	299	15.5	19.7	350	46.8 ¹¹⁷	+20 04.1	66	18	19 48	24	28 41		15	54 57
9	314	15.3	19.6	5	17.4 ¹¹⁶	10.6	65	19 05	32	20 06	38 43		42	57
10	329	15.2	19.5	19	47.9 ¹¹⁵	16.9	63	18 43	19 08	19 37	1 56	45	23	54
11	344	15.1	+23 19.4	34	18.3 ¹¹⁴	+20 23.2	63	18 24	18 47	19 14	2 12	47	15	06 52
12	359	14.9	+23 19.3	48	48.7 ¹¹⁴	+20 29.4	62	18 07	18 29	18 55	2 26	50	14	50 51
13	14	14.8	19.2	63	19.0 ¹¹³	35.5	61	17 49	18 12	38	41 52		34	49
14	29	14.7	19.1	77	49.3 ¹¹³	41.5	60	31	17 55	22	2 57	54	14	17 47
15	44	14.6	19.0	92	19.5 ¹¹²	47.4	59	17 10	36	18 06	3 15	57	13	58 45
16	59	14.4	18.9	106	49.6 ¹¹¹	53.2	58	16 57	26	17 57	26 58		46	44
17	74	14.3	+23 18.8	121	19.6 ¹¹⁰	+20 58.9	57	16 43	17 14	17 48	3 38	60	13	33 43
18	89	14.2	+23 18.7	135	49.6 ¹¹⁰	+21 04.6	57	16 27	17 00	17 38	3 53	62	13	18 41
19	104	14.0	18.6	150	19.5 ¹⁰⁹	10.1	55	16 06	16 44	26	4 11	65	13	00 37
20	119	13.9	18.5	164	49.3 ¹⁰⁸	15.5	54	15 56	37	21	19 66		12	51 36
21	134	13.8	18.4	179	19.1 ¹⁰⁸	20.8	53	54	45	29 15	29 68		41	35
22	149	13.6	18.3	193	48.8 ¹⁰⁷	26.0	52	56	32	20 09	39 70		30	33
23	164	13.5	18.2	208	18.4 ¹⁰⁶	31.2	52	58	18	16 10	4 52	72	17	31
24	179	13.4	+23 18.1	222	48.0 ¹⁰⁶	+21 36.2	50	15 00	15 58	16 55	5 06	76	12	02 28

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 5 ^h 40 ^m 0		Mag: -3.8 PMG: 11 ^h 03 ^m		Mag: +1.4 PMG: 9 ^h 49 ^m		Mag: -2.3 PMG: 7 ^h 49 ^m		Mag: +0.9 PMG: 18 ^h 21 ^m	
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄	
h	°	'	°	'	°	'	°	'	°	'
0	274	45.8	194	17.3	212	31.7	242	21.8	84	02.0
1	289	48.2	209	16.5	227	32.3	257	23.9	99	04.4
2	304	50.7	224	15.7	242	32.9	272	25.9	114	06.8
3	319	53.2	239	14.8	257	33.6	287	28.0	129	09.2
4	334	55.6	254	14.0	272	34.2	302	30.0	144	11.7
5	349	58.1	269	13.2	287	34.8	317	32.1	159	14.1
6	5	00.6	284	12.3	302	35.4	332	34.1	174	16.5
7	20	03.0	299	11.5	317	36.0	347	36.2	189	18.9
8	35	05.5	314	10.7	332	36.6	2	38.2	204	21.3
9	50	07.9	329	09.8	347	37.2	17	40.3	219	23.7
10	65	10.4	344	09.0	2	37.8	32	42.3	234	26.1
11	80	12.9	359	08.2	17	38.4	47	44.4	249	28.6
12	95	15.3	14	07.3	32	39.0	62	46.4	264	31.0
13	110	17.8	29	06.5	47	39.6	77	48.5	279	33.4
14	125	20.3	44	05.6	62	40.2	92	50.5	294	35.8
15	140	22.7	59	04.8	77	40.8	107	52.6	309	38.2
16	155	25.2	74	04.0	92	41.4	122	54.6	324	40.6
17	170	27.7	89	03.1	107	42.0	137	56.7	339	43.0
18	185	30.1	104	02.3	122	42.6	152	58.7	354	45.4
19	200	32.6	119	01.4	137	43.2	168	00.8	9	47.9
20	215	35.1	134	00.6	152	43.8	183	02.8	24	50.3
21	230	37.5	148	59.8	167	44.4	198	04.9	39	52.7
22	245	40.0	163	58.9	182	45.0	213	06.9	54	55.1
23	260	42.4	178	58.1	197	45.6	228	09.0	69	57.5
24	275	44.9	193	57.2	212	46.2	243	11.0	84	59.9
Dif	—		-8		+3		+21		+24	

UT	SOL				● LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15 ^h 7 ^m PMG: 12 ^h 03 ^m 2				Edad: 26 ^d 1 PHE { SD: 15 ^h 1 ^m PMG: 9 ^h 28 ^m												4 ^h : 55 ^m 5 12 ^h : 55 ^m 7 20 ^h : 55 ^m 8 R°: 53 ^m	
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m
0	179	13.4	+23	18.1	222	48.0	+21	36.2	60 N	** **	0 56	2 39	0 17	35	18 54	60		
1	194	13.3		18.0	237	17.5 ¹⁰⁵		41.1 ⁴⁹	58	** **	1 44	2 59	33	37	35	60		
2	209	13.1		17.9	251	46.9 ¹⁰⁴		45.9 ⁴⁸	56	** **	2 14	3 16	47	39	20	59		
3	224	13.0		17.8	266	16.2 ¹⁰³		50.6 ⁴⁷	54	0 51	36	30	0 59	40	18 07	58		
4	239	12.9		17.7	280	45.5 ¹⁰³		55.2 ⁴⁶	52	1 36	2 54	42	1 10	41	17 55	58		
5	254	12.7	+23	17.6	295	14.8 ¹⁰³	+21	59.7 ⁴⁵	50	2 03	3 09	3 53	1 19	43	17 45	57		
6	269	12.6	+23	17.4	309	43.9 ¹⁰¹	+22	04.1 ⁴⁴	45	2 49	3 38	4 15	1 39	44	17 23	57		
7	284	12.5		17.3	324	13.0 ¹⁰¹		08.3 ⁴²	40	3 19	4 01	33	1 55	46	17 06	56		
8	299	12.4		17.2	338	42.1 ¹⁰¹		12.5 ⁴²	35	3 42	19	4 48	2 09	47	16 51	56		
9	314	12.2		17.1	353	11.1 ¹⁰⁰		16.5 ⁴⁰	30	4 00	34	5 01	21	48	39	55		
10	329	12.1		17.0	7	40.0 ⁹⁹		20.5 ⁴⁰	20	29	4 59	23	41	50	16 17	55		
11	344	12.0	+23	16.9	22	08.8 ⁹⁸	+22	24.3 ³⁸	10 N	4 52	5 19	5 42	2 59	51	15 58	54		
12	359	11.8	+23	16.8	36	37.6 ⁹⁸	+22	28.0 ³⁷	0	5 11	5 37	6 00	3 16	52	15 41	53		
13	14	11.7		16.6	51	06.3 ⁹⁷		31.6 ³⁶	10 S	28	5 54	17	33	53	23	53		
14	29	11.6		16.5	65	35.0 ⁹⁷		35.1 ³⁵	20	5 44	6 11	35	3 51	54	15 04	52		
15	44	11.4		16.4	80	03.6 ⁹⁶		38.5 ³⁴	30	6 00	30	6 56	4 12	56	14 43	51		
16	59	11.3		16.3	94	32.1 ⁹⁵		41.8 ³³	35	09	41	7 09	24	57	30	51		
17	74	11.2	+23	16.2	109	00.6 ⁹⁵	+22	44.9 ³¹	40	6 18	6 52	7 23	4 38	58	14 16	49		
18	89	11.1	+23	16.0	123	29.1 ⁹⁵	+22	47.9 ³⁰	45	6 29	7 06	7 39	4 55	59	13 59	48		
19	104	10.9		15.9	137	57.4 ⁹³		50.9 ³⁰	50	40	22	8 00	5 16	60	37	48		
20	119	10.8		15.8	152	25.7 ⁹³		53.6 ²⁷	52	45	29	10	25	62	27	47		
21	134	10.7		15.7	166	54.0 ⁹³		56.3 ²⁷	54	51	37	21	37	62	16	46		
22	149	10.5		15.6	181	22.2 ⁹²	+22	58.9 ²⁶	56	6 57	46	33	5 49	64	13 03	45		
23	164	10.4		15.4	195	50.3 ⁹¹	+23	01.3 ²⁴	58	7 04	7 56	8 48	6 04	65	12 48	43		
24	179	10.3	+23	15.3	210	18.4 ⁹¹	+23	03.6 ²³	60 S	7 11	8 08	9 05	6 22	67	12 30	42		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 5 ^h 36 ^m 1		Mag: -3.8 PMG: 11 ^h 05 ^m		Mag: +1.4 PMG: 9 ^h 49 ^m		Mag: -2.3 PMG: 7 ^h 46 ^m		Mag: +0.9 PMG: 18 ^h 17 ^m	
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄	
h	°	'	°	'	°	'	°	'	°	'
0	275	44.9	193	57.2	+22	52.6	212	46.2	+20	59.4
1	290	47.4	208	56.4		52.9	227	46.8	+20	59.8
2	305	49.8	223	55.6		53.1	242	47.4	+21	00.1
3	320	52.3	238	54.7		53.4	257	48.0		00.5
4	335	54.8	253	53.9		53.7	272	48.6		00.8
5	350	57.2	268	53.0	+22	54.0	287	49.2	+21	01.2
6	5	59.7	283	52.2	+22	54.2	302	49.8	+21	01.5
7	21	02.2	298	51.4		54.5	317	50.4		01.9
8	36	04.6	313	50.5		54.8	332	51.0		02.2
9	51	07.1	328	49.7		55.0	347	51.7		02.6
10	66	09.6	343	48.8		55.3	2	52.3		02.9
11	81	12.0	358	48.0	+22	55.6	17	52.9	+21	03.3
12	96	14.5	13	47.1	+22	55.8	32	53.5	+21	03.6
13	111	16.9	28	46.3		56.1	47	54.1		03.9
14	126	19.4	43	45.5		56.3	62	54.7		04.3
15	141	21.9	58	44.6		56.6	77	55.3		04.6
16	156	24.3	73	43.8		56.9	92	55.9		05.0
17	171	26.8	88	42.9	+22	57.1	107	56.5	+21	05.3
18	186	29.3	103	42.1	+22	57.4	122	57.1	+21	05.7
19	201	31.7	118	41.2		57.6	137	57.7		06.0
20	216	34.2	133	40.4		57.9	152	58.3		06.3
21	231	36.7	148	39.5		58.1	167	58.9		06.7
22	246	39.1	163	38.7		58.4	182	59.5		07.0
23	261	41.6	178	37.8		58.6	198	00.1		07.4
24	276	44.1	193	37.0	+22	58.9	213	00.7	+21	07.7
Dif	—		-8 +3		+3		+6 +3		+21 +1	

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna			Puesta de Luna		
	SD: 15 ^h 7 PMG: 12 ^h 03 ^m 4			Edad: 27 ^d 1 PHE { 4 ^h : 56/0 12 ^h : 56/3 20 ^h : 56/5 PMG: 10 ^h 21 ^m R°: 55 ^m SD: 15/2													
	hG ☉	Dec		hG ☾	Dif	Dec			Dif		Civil	Náutico		Hora	R°		Hora
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m m	m	h m m	m	m	
0	179	10.3	+23	15.3	210	18.4	+23	03.6	60 N	21 26	23 07	** **	0 52	51	19 54	45	
1	194	10.2		15.2	224	46.5		05.8	58	21 06	22 21	** **	1 10	52	35	46	
2	209	10.0		15.1	239	14.5		07.9	56	20 50	21 52	** **	26	52	19	47	
3	224	09.9		14.9	253	42.4		09.8	54	36	30	23 12	39	53	19 05	49	
4	239	09.8		14.8	268	10.3		11.6	52	24	21 12	22 29	1 51	53	18 53	49	
5	254	09.7	+23	14.7	282	38.2	+23	13.3	50	20 13	20 57	22 02	2 02	52	18 42	50	
6	269	09.5	+23	14.5	297	06.0	+23	14.9	45	19 51	20 28	21 17	2 23	54	18 20	51	
7	284	09.4		14.4	311	33.7		16.3	40	33	20 06	20 47	41	54	18 02	52	
8	299	09.3		14.3	326	01.4		17.7	35	18	19 48	24	2 56	54	17 47	52	
9	314	09.1		14.2	340	29.1		18.9	30	19 05	33	20 06	3 09	54	34	53	
10	329	09.0		14.0	354	56.7		19.9	20	18 43	19 08	19 37	31	54	17 12	53	
11	344	08.9	+23	13.9	9	24.2	+23	20.9	10 N	18 25	18 48	19 15	3 50	54	16 52	54	
12	359	08.8	+23	13.8	23	51.8	+23	21.7	0	18 07	18 30	18 56	4 08	54	16 34	55	
13	14	08.6		13.6	38	19.3		22.4	10 S	17 50	18 13	39	26	54	16 16	55	
14	29	08.5		13.5	52	46.7		22.9	20	31	17 55	23	4 45	55	15 56	56	
15	44	08.4		13.4	67	14.1		23.3	30	17 10	37	18 07	5 08	54	34	56	
16	59	08.3		13.2	81	41.5		23.6	35	16 58	26	17 58	21	54	21	56	
17	74	08.1	+23	13.1	96	08.8	+23	23.8	40	16 44	17 15	17 49	5 36	54	15 05	58	
18	89	08.0	+23	12.9	110	36.1	+23	23.8	45	16 27	17 01	17 38	5 54	54	14 47	58	
19	104	07.9		12.8	125	03.4		23.7	50	16 07	16 45	27	6 16	54	25	58	
20	119	07.8		12.7	139	30.6		23.5	52	15 57	38	22	27	54	14	58	
21	134	07.6		12.5	153	57.8		23.1	54	46	30	16	39	54	14 02	58	
22	149	07.5		12.4	168	25.0		22.6	56	34	21	10	6 53	54	13 48	59	
23	164	07.4		12.2	182	52.1		22.0	58	19	16 11	17 03	7 09	54	31	60	
24	179	07.2	+23	12.1	197	19.3	+23	21.3	60 S	15 02	15 59	16 56	7 29	53	13 12	60	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 5 ^h 32 ^m 2		Mag: -3.8 PMG: 11 ^h 06 ^m		Mag: +1.4 PMG: 9 ^h 48 ^m		Mag: -2.3 PMG: 7 ^h 43 ^m		Mag: +0.9 PMG: 18 ^h 13 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	276	44.1	193	37.0	+22	58.9	213	00.7	+21	07.7
1	291	46.5	208	36.2		59.1	228	01.3		08.1
2	306	49.0	223	35.3		59.4	243	01.9		08.4
3	321	51.4	238	34.5		59.6	258	02.5		08.7
4	336	53.9	253	33.6	+22	59.8	273	03.1		09.1
5	351	56.4	268	32.8	+23	00.1	288	03.7	+21	09.4
6	6	58.8	283	31.9	+23	00.3	303	04.3	+21	09.7
7	22	01.3	298	31.1		00.6	318	04.9		10.1
8	37	03.8	313	30.2		00.8	333	05.5		10.4
9	52	06.2	328	29.4		01.0	348	06.1		10.8
10	67	08.7	343	28.5		01.3	3	06.7		11.1
11	82	11.2	358	27.7	+23	01.5	18	07.3	+21	11.4
12	97	13.6	13	26.8	+23	01.8	33	07.9	+21	11.8
13	112	16.1	28	26.0		02.0	48	08.5		12.1
14	127	18.6	43	25.1		02.2	63	09.1		12.4
15	142	21.0	58	24.3		02.5	78	09.7		12.8
16	157	23.5	73	23.4		02.7	93	10.3		13.1
17	172	25.9	88	22.6	+23	02.9	108	10.9	+21	13.4
18	187	28.4	103	21.7	+23	03.1	123	11.5	+21	13.8
19	202	30.9	118	20.9		03.4	138	12.1		14.1
20	217	33.3	133	20.0		03.6	153	12.7		14.5
21	232	35.8	148	19.2		03.8	168	13.3		14.8
22	247	38.3	163	18.3		04.0	183	13.9		15.1
23	262	40.7	178	17.5		04.3	198	14.5		15.4
24	277	43.2	193	16.6	+23	04.5	213	15.1	+21	15.8
Dif	—		-8		+2		+6		+3	

UT	SOL				● LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 15 ^h 7 ^m PMG: 12 ^h 03 ^m 6				Edad: 28 ^d 1 PHE { 4 ^h : 56 ^m 7 ^s 12 ^h : 56 ^m 9 ^s 20 ^h : 57 ^m 1 ^s Rº: 55 ^m															
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	Rº	Hora	Rº				
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m			
0	179	07.2	+23	12.1	197	19.3	+23	21.3	60 N	** **	1 00	2 41	1 43	69	20 39	31				
1	194	07.1		12.0	211	46.3		20.4	58	** *	1 47	3 01	2 02	67	21	34				
2	209	07.0		11.8	226	13.4		19.3	56	** *	2 16	17	18	66	20 06	37				
3	224	06.9		11.7	240	40.4		18.2	54	0 55	37	31	32	65	19 54	38				
4	239	06.7		11.5	255	07.5		16.9	52	1 38	2 55	43	44	64	42	40				
5	254	06.6	+23	11.4	269	34.4	+23	15.5	50	2 05	3 10	3 54	2 54	64	19 32	42				
6	269	06.5	+23	11.2	284	01.4	+23	13.9	45	2 50	3 39	4 16	3 17	61	19 11	44				
7	284	06.4		11.1	298	28.4		12.2	40	3 20	4 01	34	35	60	18 54	46				
8	299	06.2		10.9	312	55.3		10.4	35	3 43	19	4 49	3 50	59	39	48				
9	314	06.1		10.8	327	22.2		08.4	30	4 01	35	5 02	4 03	58	27	49				
10	329	06.0		10.7	341	49.1		06.3	20	30	4 59	24	25	57	18 05	52				
11	344	05.9	+23	10.5	356	16.0	+23	04.1	10 N	4 52	5 20	5 43	4 44	56	17 46	54				
12	359	05.7	+23	10.4	10	42.9	+23	01.7	0	5 11	5 37	6 00	5 02	55	17 29	55				
13	14	05.6		10.2	25	09.7	+22	59.2	10 S	28	5 54	17	20	54	17 11	57				
14	29	05.5		10.1	39	36.6		56.6	20	5 44	6 12	36	5 40	52	16 52	59				
15	44	05.4		09.9	54	03.4		53.8	30	6 00	30	6 57	6 02	51	30	61				
16	59	05.2		09.7	68	30.2		50.9	35	09	41	7 09	15	50	17	62				
17	74	05.1	+23	09.6	82	57.1	+22	47.8	40	6 18	6 52	7 23	6 30	49	16 03	63				
18	89	05.0	+23	09.4	97	23.9	+22	44.7	45	6 28	7 06	7 39	6 48	48	15 45	65				
19	104	04.9		09.3	111	50.7		41.3	50	40	22	8 00	7 10	46	23	67				
20	119	04.8		09.1	126	17.5		37.9	52	45	29	10	21	45	12	69				
21	134	04.6		09.0	140	44.3		34.3	54	51	37	20	33	43	15 00	71				
22	149	04.5		08.8	155	11.1		30.6	56	6 57	46	33	7 47	42	14 47	72				
23	164	04.4		08.7	169	37.9		26.7	58	7 04	7 56	8 47	8 03	40	31	74				
24	179	04.3	+23	08.5	184	04.7	+22	22.8	60 S	7 11	8 07	9 05	8 22	37	14 12	77				
UT	ARIES				VENUS				MARTE				JÚPITER				SATURNO			
	PMG 5 ^h 28 ^m 2				Mag: -3.9 PMG: 11 ^h 08 ^m				Mag: +1.4 PMG: 9 ^h 47 ^m				Mag: -2.3 PMG: 7 ^h 40 ^m				Mag: +0.9 PMG: 18 ^h 09 ^m			
	hG ♈		Dec		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	277	43.2	193	16.6	+23	04.5	213	15.1	+21	15.8	244	49.8	+11	59.8	86	55.5	-1	55.9		
1	292	45.7	208	15.8		04.7	228	15.7		16.1	259	51.9	+12	00.0	101	57.9		55.9		
2	307	48.1	223	14.9		04.9	243	16.3		16.4	274	53.9	+12	00.1	117	00.3		55.9		
3	322	50.6	238	14.1		05.1	258	16.9		16.8	289	56.0		00.2	132	02.7		56.0		
4	337	53.0	253	13.2		05.3	273	17.5		17.1	304	58.0		00.4	147	05.1		56.0		
5	352	55.5	268	12.4	+23	05.6	288	18.1	+21	17.4	320	00.1	+12	00.5	162	07.5	-1	56.1		
6	7	58.0	283	11.5	+23	05.8	303	18.7	+21	17.8	335	02.2	+12	00.6	177	09.9	-1	56.1		
7	23	00.4	298	10.7		06.0	318	19.3		18.1	350	04.2		00.8	192	12.3		56.1		
8	38	02.9	313	09.8		06.2	333	19.9		18.4	5	06.3		00.9	207	14.7		56.2		
9	53	05.4	328	09.0		06.4	348	20.6		18.8	20	08.4		01.0	222	17.1		56.2		
10	68	07.8	343	08.1		06.6	3	21.2		19.1	35	10.4		01.2	237	19.5		56.2		
11	83	10.3	358	07.2	+23	06.8	18	21.8	+21	19.4	50	12.5	+12	01.3	252	21.9	-1	56.3		
12	98	12.8	13	06.4	+23	07.0	33	22.4	+21	19.7	65	14.5	+12	01.4	267	24.3	-1	56.3		
13	113	15.2	28	05.5		07.2	48	23.0		20.1	80	16.6		01.6	282	26.7		56.4		
14	128	17.7	43	04.7		07.4	63	23.6		20.4	95	18.7		01.7	297	29.1		56.4		
15	143	20.2	58	03.8		07.6	78	24.2		20.7	110	20.7		01.8	312	31.5		56.4		
16	158	22.6	73	03.0		07.8	93	24.8		21.0	125	22.8		02.0	327	33.9		56.5		
17	173	25.1	88	02.1	+23	08.0	108	25.4	+21	21.4	140	24.9	+12	02.1	342	36.3	-1	56.5		
18	188	27.5	103	01.3	+23	08.2	123	26.0	+21	21.7	155	26.9	+12	02.2	357	38.7	-1	56.5		
19	203	30.0	118	00.4		08.4	138	26.6		22.0	170	29.0		02.4	12	41.1		56.6		
20	218	32.5	132	59.5		08.6	153	27.2		22.3	185	31.1		02.5	27	43.5		56.6		
21	233	34.9	147	58.7		08.8	168	27.8		22.7	200	33.1		02.6	42	45.9		56.7		
22	248	37.4	162	57.8		09.0	183	28.4		23.0	215	35.2		02.7	57	48.3		56.7		
23	263	39.9	177	57.0		09.2	198	29.0		23.3	230	37.3		02.9	72	50.7		56.7		
24	278	42.3	192	56.1	+23	09.4	213	29.6	+21	23.6	245	39.3	+12	03.0	87	53.1	-1	56.8		
Dif	—				-9 +2				+6 +3				+21 +1				+24 0			

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna		
	SD: 15/7 PMG: 12 ^h 03 ^m 8			Edad: 29 ^d 1 PHE { SD: 15/6 PMG: 12 ^h 11 ^m 4 ^h : 57/3 12 ^h : 57/5 20 ^h : 57/7 R°: 54 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°	
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m	h m	h m	h m	m
0	179	04.3	+23 08.5	184	04.7	+22 22.8	42	60 N	21 25	23 03	** **	2 52 83	21 10 21			
1	194	04.1	08.3	198	31.5	78	18.6	58	21 05	22 19	** **	3 09 80	20 55 25			
2	209	04.0	08.2	212	58.3	78	14.4	56	20 49	21 50	** **	24 77	43 27			
3	224	03.9	08.0	227	25.1	78	10.0	54	35	29	23 08	37 74	32 30			
4	239	03.8	07.9	241	52.0	79	05.5	52	23	21 11	22 27	48 73	22 32			
5	254	03.6	+23 07.7	256	18.8	78	+22 00.8	50	20 13	20 57	22 01	3 58 71	20 14 33			
6	269	03.5	+23 07.5	270	45.6	78	+21 56.1	45	19 50	20 28	21 17	4 18 69	19 55 38			
7	284	03.4	07.4	285	12.5	79	51.1	40	33	20 05	20 47	35 66	40 41			
8	299	03.3	07.2	299	39.3	78	46.1	35	18	19 48	24	4 49 64	27 43			
9	314	03.2	07.0	314	06.2	79	40.9	30	19 05	33	20 06	5 01 63	19 16 45			
10	329	03.0	06.9	328	33.1	79	35.6	20	18 43	19 08	19 37	22 60	18 57 48			
11	344	02.9	+23 06.7	343	00.0	79	+21 30.2	10 N	18 25	18 48	19 15	5 40 57	18 40 51			
12	359	02.8	+23 06.5	357	26.9	79	+21 24.6	0	18 07	18 30	18 56	5 57 55	18 24 54			
13	14	02.7	06.4	11	53.8	79	18.9	10 S	17 50	18 13	39	6 14 53	18 08 57			
14	29	02.5	06.2	26	20.7	79	13.1	20	32	17 56	23	32 50	17 51 59			
15	44	02.4	06.0	40	47.7	80	07.1	30	17 11	37	18 07	6 53 47	31 63			
16	59	02.3	05.9	55	14.7	80	+21 01.0	35	16 59	27	17 59	7 05 46	19 65			
17	74	02.2	+23 05.7	69	41.7	80	+20 54.8	40	16 45	17 15	17 49	7 19 44	17 06 67			
18	89	02.1	+23 05.5	84	08.7	80	+20 48.5	45	16 29	17 02	17 39	7 36 40	16 50 71			
19	104	01.9	05.4	98	35.7	80	42.0	50	16 08	16 46	28	7 56 37	30 75			
20	119	01.8	05.2	113	02.8	81	35.4	52	15 58	39	23	8 06 35	21 76			
21	134	01.7	05.0	127	29.9	81	28.7	54	48	31	17	16 34	16 11 78			
22	149	01.6	04.8	141	57.0	81	21.9	56	35	22	11	29 31	15 59 81			
23	164	01.4	04.7	156	24.1	81	14.9	58	21	12	17 05	43 28	45 84			
24	179	01.3	+23 04.5	170	51.3	82	+20 07.8	60 S	15 04	16 01	16 57	8 59 25	15 29 88			

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 5 ^h 24 ^m 3		Mag: -3.9 PMG: 11 ^h 09 ^m		Mag: +1.4 PMG: 9 ^h 46 ^m		Mag: -2.3 PMG: 7 ^h 36 ^m		Mag: +0.9 PMG: 18 ^h 06 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	278	42.3	192 56.1	+23 09.4	213 29.6	+21 23.6	245 39.3	+12 03.0	87 53.1	-1 56.8
1	293	44.8	207 55.3	09.6	228 30.2	24.0	260 41.4	03.1	102 55.5	56.8
2	308	47.3	222 54.4	09.8	243 30.8	24.3	275 43.5	03.3	117 57.9	56.8
3	323	49.7	237 53.6	10.0	258 31.4	24.6	290 45.5	03.4	133 00.3	56.9
4	338	52.2	252 52.7	10.2	273 32.0	24.9	305 47.6	03.5	148 02.7	56.9
5	353	54.7	267 51.8	+23 10.4	288 32.6	+21 25.3	320 49.7	+12 03.7	163 05.1	-1 57.0
6	8	57.1	282 51.0	+23 10.5	303 33.2	+21 25.6	335 51.7	+12 03.8	178 07.5	-1 57.0
7	23	59.6	297 50.1	10.7	318 33.8	25.9	350 53.8	03.9	193 09.9	57.0
8	39	02.0	312 49.3	10.9	333 34.4	26.2	5 55.9	04.1	208 12.3	57.1
9	54	04.5	327 48.4	11.1	348 35.0	26.5	20 57.9	04.2	223 14.7	57.1
10	69	07.0	342 47.5	11.3	3 35.6	26.9	36 00.0	04.3	238 17.1	57.2
11	84	09.4	357 46.7	+23 11.5	18 36.2	+21 27.2	51 02.1	+12 04.4	253 19.5	-1 57.2
12	99	11.9	12 45.8	+23 11.6	33 36.8	+21 27.5	66 04.1	+12 04.6	268 21.9	-1 57.2
13	114	14.4	27 45.0	11.8	48 37.4	27.8	81 06.2	04.7	283 24.3	57.3
14	129	16.8	42 44.1	12.0	63 38.0	28.1	96 08.3	04.8	298 26.7	57.3
15	144	19.3	57 43.3	12.2	78 38.6	28.5	111 10.3	05.0	313 29.1	57.4
16	159	21.8	72 42.4	12.3	93 39.2	28.8	126 12.4	05.1	328 31.5	57.4
17	174	24.2	87 41.5	+23 12.5	108 39.8	+21 29.1	141 14.5	+12 05.2	343 33.9	-1 57.4
18	189	26.7	102 40.7	+23 12.7	123 40.4	+21 29.4	156 16.5	+12 05.4	358 36.3	-1 57.5
19	204	29.2	117 39.8	12.9	138 41.0	29.7	171 18.6	05.5	13 38.7	57.5
20	219	31.6	132 39.0	13.0	153 41.6	30.0	186 20.7	05.6	28 41.1	57.5
21	234	34.1	147 38.1	13.2	168 42.2	30.4	201 22.7	05.7	43 43.5	57.6
22	249	36.5	162 37.2	13.4	183 42.8	30.7	216 24.8	05.9	58 45.9	57.6
23	264	39.0	177 36.4	13.5	198 43.4	31.0	231 26.9	06.0	73 48.3	57.7
24	279	41.5	192 35.5	+23 13.7	213 44.0	+21 31.3	246 29.0	+12 06.1	88 50.7	-1 57.7
Dif	—		-9	+2	+6	+3	+21	+1	+24	0

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15 ^h 7 PMG: 12 ^h 04 ^m 0			Edad: 0 ^d 6 SD: 15 ^h 7 PMG: 13 ^h 05 ^m	PHE { 4 ^h : 57 ^m 9 12 ^h : 58 ^m 0 20 ^h : 58 ^m 2 R°: 53 ^m										
	hG ☉	Dec				hG ☾		Dif	Dec		Dif	Náutico	Civil	Hora	R°
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	m
0	179	01.3	+23	04.5	170	51.3	+20	07.8	72	60 N	** **	1 05	2 43	4 15	90
1	194	01.2		04.3	185	18.4	81	+20	00.6	72	58	** **	1 49	3 03	29 86
2	209	01.1		04.1	199	45.6	82	+19	53.3	73	56	** **	2 18	19	41 83
3	224	01.0		04.0	214	12.9	83		45.8	75	54	0 59	39	33	4 51 81
4	239	00.8		03.8	228	40.2	83		38.2	76	52	1 41	2 57	45	5 01 78
5	254	00.7	+23	03.6	243	07.4	82	+19	30.5	77	50	2 07	3 11	3 55	5 09 76
6	269	00.6	+23	03.4	257	34.8	84	+19	22.7	78	45	2 51	3 40	4 17	5 27 72
7	284	00.5		03.2	272	02.1	83		14.8	79	40	3 21	4 02	35	41 69
8	299	00.4		03.1	286	29.5	84	+19	06.7	81	35	3 44	20	4 50	5 53 66
9	314	00.2		02.9	300	56.9	84	+18	58.6	81	30	4 02	4 35	5 03	6 04 63
10	329	00.1		02.7	315	24.4	85		50.3	83	20	31	5 00	24	22 60
11	344	00.0	+23	02.5	329	51.9	85	+18	41.9	84	10 N	4 53	5 20	5 43	6 37 57
12	358	59.9	+23	02.3	344	19.4	85	+18	33.4	85	0	5 12	5 38	6 00	6 52 54
13	13	59.8		02.1	358	46.9	85		24.8	86	10 S	28	5 55	17	7 07 50
14	28	59.7		02.0	13	14.5	86		16.0	88	20	5 44	6 12	36	22 47
15	43	59.5		01.8	27	42.1	86	+18	07.2	88	30	6 00	30	6 57	40 43
16	58	59.4		01.6	42	09.8	87	+17	58.2	90	35	09	41	7 09	7 51 40
17	73	59.3	+23	01.4	56	37.5	87	+17	49.2	90	40	6 18	6 52	7 23	8 03 38
18	88	59.2	+23	01.2	71	05.2	87	+17	40.0	92	45	6 28	7 05	7 39	8 16 35
19	103	59.1		01.0	85	33.0	88		30.7	93	50	40	21	7 59	33 31
20	118	58.9		00.8	100	00.8	88		21.3	94	52	45	28	8 09	41 29
21	133	58.8		00.6	114	28.6	88		11.8	95	54	50	36	20	8 50 27
22	148	58.7		00.4	128	56.5	89	+17	02.2	96	56	6 56	45	32	9 00 24
23	163	58.6		00.3	143	24.4	89	+16	52.5	97	58	7 03	7 55	8 46	11 21
24	178	58.5	+23	00.1	157	52.3	89	+16	42.7	98	60 S	7 10	8 07	9 03	9 24 17

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 5 ^h 20 ^m 4		Mag: -3.9 PMG: 11 ^h 10 ^m		Mag: +1.4 PMG: 9 ^h 45 ^m		Mag: -2.3 PMG: 7 ^h 33 ^m		Mag: +0.9 PMG: 18 ^h 02 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	279	41.5	192	35.5	+23	13.7	213	44.0	+21	31.3
1	294	43.9	207	34.7		13.8	228	44.6		31.6
2	309	46.4	222	33.8		14.0	243	45.2		31.9
3	324	48.9	237	32.9		14.2	258	45.8		32.2
4	339	51.3	252	32.1		14.3	273	46.4		32.6
5	354	53.8	267	31.2	+23	14.5	288	47.0	+21	32.9
6	9	56.3	282	30.3	+23	14.6	303	47.6	+21	33.2
7	24	58.7	297	29.5		14.8	318	48.2		33.5
8	40	01.2	312	28.6		15.0	333	48.8		33.8
9	55	03.7	327	27.8		15.1	348	49.4		34.1
10	70	06.1	342	26.9		15.3	3	50.0		34.4
11	85	08.6	357	26.0	+23	15.4	18	50.6	+21	34.7
12	100	11.0	12	25.2	+23	15.6	33	51.2	+21	35.1
13	115	13.5	27	24.3		15.7	48	51.8		35.4
14	130	16.0	42	23.4		15.9	63	52.4		35.7
15	145	18.4	57	22.6		16.0	78	53.0		36.0
16	160	20.9	72	21.7		16.2	93	53.6		36.3
17	175	23.4	87	20.9	+23	16.3	108	54.2	+21	36.6
18	190	25.8	102	20.0	+23	16.4	123	54.8	+21	36.9
19	205	28.3	117	19.1		16.6	138	55.4		37.2
20	220	30.8	132	18.3		16.7	153	56.0		37.5
21	235	33.2	147	17.4		16.9	168	56.6		37.8
22	250	35.7	162	16.5		17.0	183	57.2		38.1
23	265	38.2	177	15.7		17.1	198	57.8		38.4
24	280	40.6	192	14.8	+23	17.3	213	58.4	+21	38.8
Dif	—		-9		+1		+6		+3	
							+21		+1	
									+24	
									0	

UT	SOL		● LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15 ^h 7		Edad: 1 ^d 6	PHE { 4 ^h : 58'4 12 ^h : 58'5 20 ^h : 58'6 R°: 52 ^m										
	PMG: 12 ^h 04 ^m 2	PMG: 13 ^h 58 ^m												
	hG ☉	Dec	hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	h m	h m	h m	h m m		h m m	
0	178	58.5	+23	00.1	157	52.3	+16 42.7	60 N	21 24	22 59	** **	5 45 93	21 46 11	
1	193	58.3	+22	59.9	172	20.3	32.8	58	21 04	22 16	** **	5 55 89	38 15	
2	208	58.2		59.7	186	48.3	22.8	56	20 48	21 49	** **	6 04 86	32 17	
3	223	58.1		59.5	201	16.4	12.7	54	34	28	23 04	12 83	26 20	
4	238	58.0		59.3	215	44.5	+16 02.5	52	22	21 10	22 25	19 81	20 23	
5	253	57.9	+22	59.1	230	12.6	+15 52.2	50	20 12	20 56	21 59	6 25 79	21 16 24	
6	268	57.8	+22	58.9	244	40.8	+15 41.8	45	19 50	20 27	21 16	6 39 74	21 05 29	
7	283	57.6		58.7	259	09.0	31.3	40	33	20 05	20 46	50 70	20 56 33	
8	298	57.5		58.5	273	37.3	20.8	35	18	19 47	24	6 59 67	49 35	
9	313	57.4		58.3	288	05.6	+15 10.1	30	19 05	32	20 06	7 07 65	42 38	
10	328	57.3		58.1	302	33.9	+14 59.3	20	18 44	19 08	19 37	22 59	30 43	
11	343	57.2	+22	57.9	317	02.3	+14 48.5	10 N	18 25	18 48	19 15	7 34 56	20 20 47	
12	358	57.1	+22	57.7	331	30.7	+14 37.5	0	18 08	18 30	18 56	7 46 51	20 10 52	
13	13	56.9		57.5	345	59.1	26.5	10 S	17 51	18 14	40	7 57 48	20 01 55	
14	28	56.8		57.3	0	27.6	15.4	20	33	17 57	24	8 09 45	19 50 59	
15	43	56.7		57.1	14	56.2	+14 04.1	30	12	38	18 08	23 40	38 64	
16	58	56.6		56.9	29	24.7	+13 52.9	35	17 00	28	17 59	31 37	31 67	
17	73	56.5	+22	56.7	43	53.3	+13 41.5	40	16 46	17 16	17 50	8 41 33	19 23 70	
18	88	56.4	+22	56.5	58	22.0	+13 30.0	45	16 30	17 03	17 40	8 51 31	19 14 74	
19	103	56.3		56.3	72	50.6	18.5	50	09	16 48	29	9 04 26	19 02 79	
20	118	56.1		56.1	87	19.3	+13 06.9	52	16 00	40	24	10 24	18 57 81	
21	133	56.0		55.9	101	48.1	+12 55.2	54	15 49	33	18	17 21	51 84	
22	148	55.9		55.7	116	16.9	43.4	56	37	24	12	24 19	45 86	
23	163	55.8		55.5	130	45.7	31.5	58	23	14	17 06	32 16	37 89	
24	178	55.7	+22	55.2	145	14.6	+12 19.6	60 S	15 06	16 03	16 59	9 41 13	18 29 93	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO							
	PMG: 5 ^h 16 ^m 4	Mag: -3.9 PMG: 11 ^h 12 ^m		Mag: +1.4 PMG: 9 ^h 44 ^m		Mag: -2.3 PMG: 7 ^h 30 ^m		Mag: +0.9 PMG: 17 ^h 58 ^m								
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec							
h	°	'	°	'	°	'	°	'	°	'						
0	280	40.6	192	14.8	213	58.4	+21	38.8	247	18.7	+12	09.2	89	48.2	-1	58.7
1	295	43.1	207	13.9	228	59.0		39.1	262	20.8		09.3	104	50.6		58.7
2	310	45.5	222	13.1	243	59.6		39.4	277	22.8		09.5	119	52.9		58.8
3	325	48.0	237	12.2	259	00.2		39.7	292	24.9		09.6	134	55.3		58.8
4	340	50.5	252	11.4	274	00.8		40.0	307	27.0		09.7	149	57.7		58.8
5	355	52.9	267	10.5	289	01.4	+21	40.3	322	29.1	+12	09.8	165	00.1	-1	58.9
6	10	55.4	282	09.6	304	02.0	+21	40.6	337	31.2	+12	10.0	180	02.5	-1	58.9
7	25	57.9	297	08.8	319	02.6		40.9	352	33.2		10.1	195	04.9		59.0
8	41	00.3	312	07.9	334	03.2		41.2	7	35.3		10.2	210	07.3		59.0
9	56	02.8	327	07.0	349	03.8		41.5	22	37.4		10.3	225	09.7		59.1
10	71	05.3	342	06.2	4	04.4		41.8	37	39.5		10.5	240	12.1		59.1
11	86	07.7	357	05.3	+23	18.7		42.1	52	41.5	+12	10.6	255	14.5	-1	59.1
12	101	10.2	12	04.4	+23	18.8		42.4	67	43.6	+12	10.7	270	16.9	-1	59.2
13	116	12.6	27	03.6		18.9		42.7	82	45.7		10.8	285	19.3		59.2
14	131	15.1	42	02.7		19.1		43.0	97	47.8		11.0	300	21.6		59.3
15	146	17.6	57	01.8		19.2		43.3	112	49.8		11.1	315	24.0		59.3
16	161	20.0	72	01.0		19.3		43.6	127	51.9		11.2	330	26.4		59.4
17	176	22.5	87	00.1	+23	19.4		43.9	142	54.0	+12	11.4	345	28.8	-1	59.4
18	191	25.0	101	59.2	+23	19.5		44.2	157	56.1	+12	11.5	0	31.2	-1	59.4
19	206	27.4	116	58.4		19.6		44.5	172	58.2		11.6	15	33.6		59.5
20	221	29.9	131	57.5		19.8		44.8	188	00.2		11.7	30	36.0		59.5
21	236	32.4	146	56.6		19.9		45.1	203	02.3		11.9	45	38.4		59.6
22	251	34.8	161	55.8		20.0		45.4	218	04.4		12.0	60	40.8		59.6
23	266	37.3	176	54.9		20.1		45.7	233	06.5		12.1	75	43.2		59.7
24	281	39.8	191	54.0	+23	20.2		46.0	248	08.6	+12	12.2	90	45.5	-1	59.7
Dif	—		-9	+1		+6		+3	+21		+1		+24			0

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15 ^h 7			Edad: 2 ^d 6	PHE {	4 ^h : 58 ^m 8 12 ^h : 58 ^m 9 20 ^h : 59 ^m 0					Hora	R°	Hora	R°		
	PMG: 12 ^h 04 ^m 4							R°: 50 ^m								
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico	Civil							
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m
0	178	55.7	+22	55.2	145	14.6	+12	19.6	60 N	** *	1 10	2 45	7 18	93	21 57	10
1	193	55.6		55.0	159	43.5	99	+12 07.6 ¹²⁰	58	** *	1 52	3 05	24	90	53	13
2	208	55.5		54.8	174	12.4	99	+11 55.5 ¹²¹	56	** *	2 20	21	30	86	49	16
3	223	55.3		54.6	188	41.4	100	43.4 ¹²¹	54	1 04	41	34	35	84	46	18
4	238	55.2		54.4	203	10.4	100	31.2 ¹²²	52	1 44	2 58	46	40	81	43	20
5	253	55.1	+22	54.2	217	39.4	100	+11 18.9 ¹²³	50	2 09	3 13	3 57	7 44	79	21 40	22
6	268	55.0	+22	54.0	232	08.5	101	+11 06.6 ¹²³	45	2 53	3 42	4 19	7 53	74	21 34	26
7	283	54.9		53.8	246	37.6	101	+10 54.1 ¹²⁵	40	3 22	4 04	36	8 00	70	29	30
8	298	54.8		53.6	261	06.7	101	41.7 ¹²⁴	35	3 45	21	4 51	06	67	24	34
9	313	54.7		53.3	275	35.9	102	29.1 ¹²⁶	30	4 03	4 36	5 04	12	64	20	37
10	328	54.5		53.1	290	05.1	102	16.5 ¹²⁶	20	32	5 01	25	21	59	13	42
11	343	54.4	+22	52.9	304	34.3	102	+10 03.8 ¹²⁷	10 N	4 54	5 21	5 44	8 30	54	21 07	46
12	358	54.3	+22	52.7	319	03.6	103	+9 51.1 ¹²⁷	0	5 12	5 38	6 01	8 37	51	21 02	50
13	13	54.2		52.5	333	32.9	103	38.3 ¹²⁸	10 S	29	5 55	18	45	47	20 56	54
14	28	54.1		52.3	348	02.2	103	25.5 ¹²⁸	20	5 44	6 12	36	8 54	42	49	59
15	43	54.0		52.0	2	31.6	104	+9 12.6 ¹²⁹	30	6 00	30	6 56	9 03	37	42	64
16	58	53.9		51.8	17	00.9	103	+8 59.6 ¹³⁰	35	09	41	7 09	08	35	38	67
17	73	53.8	+22	51.6	31	30.4	105	+8 46.6 ¹³⁰	40	6 18	6 52	7 22	9 14	32	20 33	71
18	88	53.6	+22	51.4	45	59.8	104	+8 33.6 ¹³⁰	45	6 28	7 05	7 39	9 22	27	20 28	74
19	103	53.5		51.2	60	29.3	105	20.5 ¹³¹	50	39	21	7 59	30	23	21	79
20	118	53.4		50.9	74	58.8	105	+8 07.3 ¹³²	52	44	28	8 08	34	21	18	81
21	133	53.3		50.7	89	28.3	105	+7 54.1 ¹³²	54	50	36	19	38	19	15	83
22	148	53.2		50.5	103	57.8	105	40.8 ¹³³	56	6 56	44	31	43	16	11	86
23	163	53.1		50.3	118	27.4	106	27.5 ¹³³	58	7 02	7 54	8 45	48	14	06	90
24	178	53.0	+22	50.0	132	57.0	106	+7 14.2 ¹³³	60 S	7 09	8 06	9 02	9 54	10	20 02	92

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 5 ^h 12 ^m 5		Mag: -3.9 PMG: 11 ^h 13 ^m		Mag: +1.4 PMG: 9 ^h 43 ^m		Mag: -2.3 PMG: 7 ^h 26 ^m		Mag: +0.9 PMG: 17 ^h 54 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	281	39.8	191	54.0	+23	20.2	214	12.8	+21	46.0	248	08.6	+12	12.2	90	45.5	-1	59.7
1	296	42.2	206	53.2		20.3	229	13.4		46.3	263	10.6		12.4	105	47.9		59.7
2	311	44.7	221	52.3		20.4	244	14.0		46.6	278	12.7		12.5	120	50.3		59.8
3	326	47.1	236	51.4		20.5	259	14.6		46.9	293	14.8		12.6	135	52.7		59.8
4	341	49.6	251	50.6		20.6	274	15.2		47.2	308	16.9		12.7	150	55.1		59.9
5	356	52.1	266	49.7	+23	20.7	289	15.8	+21	47.5	323	19.0	+12	12.9	165	57.5	-1	59.9
6	11	54.5	281	48.8	+23	20.8	304	16.4	+21	47.8	338	21.0	+12	13.0	180	59.9	-2	00.0
7	26	57.0	296	47.9		20.9	319	17.0		48.1	353	23.1		13.1	196	02.3		00.0
8	41	59.5	311	47.1		21.0	334	17.6		48.4	8	25.2		13.2	211	04.7	-2	00.0
9	57	01.9	326	46.2		21.1	349	18.2		48.7	23	27.3		13.3	226	07.0	-2	00.1
10	72	04.4	341	45.3		21.2	4	18.8		48.9	38	29.4		13.5	241	09.4		00.1
11	87	06.9	356	44.5	+23	21.3	19	19.4	+21	49.2	53	31.4	+12	13.6	256	11.8	-2	00.2
12	102	09.3	11	43.6	+23	21.4	34	20.0	+21	49.5	68	33.5	+12	13.7	271	14.2	-2	00.2
13	117	11.8	26	42.7		21.5	49	20.6		49.8	83	35.6		13.8	286	16.6		00.3
14	132	14.3	41	41.9		21.6	64	21.2		50.1	98	37.7		14.0	301	19.0		00.3
15	147	16.7	56	41.0		21.7	79	21.8		50.4	113	39.8		14.1	316	21.4		00.3
16	162	19.2	71	40.1		21.8	94	22.4		50.7	128	41.8		14.2	331	23.7		00.4
17	177	21.6	86	39.3	+23	21.9	109	23.0	+21	51.0	143	43.9	+12	14.3	346	26.1	-2	00.4
18	192	24.1	101	38.4	+23	21.9	124	23.6	+21	51.3	158	46.0	+12	14.5	1	28.5	-2	00.5
19	207	26.6	116	37.5		22.0	139	24.2		51.6	173	48.1		14.6	16	30.9		00.5
20	222	29.0	131	36.7		22.1	154	24.8		51.9	188	50.2		14.7	31	33.3		00.6
21	237	31.5	146	35.8		22.2	169	25.4		52.2	203	52.3		14.8	46	35.7		00.6
22	252	34.0	161	34.9		22.3	184	26.0		52.4	218	54.3		15.0	61	38.1		00.7
23	267	36.4	176	34.0		22.4	199	26.6		52.7	233	56.4		15.1	76	40.5		00.7
24	282	38.9	191	33.2	+23	22.4	214	27.2	+21	53.0	248	58.5	+12	15.2	91	42.8	-2	00.7
Dif	—		-9 +1		+6 +3		+21 +1		+1		+24							

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15 ^h 7			Edad: 3 ^d 6	PHE { 4 ^h : 59/1 12 ^h : 59/1 20 ^h : 59/2 R°: 50 ^m										
	PMG: 12 ^h 04 ^m 6	hG ☉	Dec			hG ☾			Dif	Dec	Dif	Civil	Náutico	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m	m	h m	m
0	178	53.0	+22 50.0	132	57.0	+7 14.2		60 N	21 22	22 54	** **	8 51 92	22 07 9		
1	193	52.9	49.8	147	26.6 ¹⁰⁶	+7 00.8 ¹³⁴		58	21 03	22 14	** **	54 89	06 12		
2	208	52.8	49.6	161	56.2 ¹⁰⁶	+6 47.4 ¹³⁴		56	20 47	21 47	** **	56 87	05 14		
3	223	52.6	49.4	176	25.9 ¹⁰⁷	33.9 ¹³⁵		54	33	26	23 00	8 59 83	04 17		
4	238	52.5	49.1	190	55.6 ¹⁰⁷	20.4 ¹³⁵		52	22	21 09	22 23	9 01 81	03 19		
5	253	52.4	+22 48.9	205	25.3 ¹⁰⁷	+6 06.8 ¹³⁶		50	20 11	20 55	21 58	9 03 79	22 02 22		
6	268	52.3	+22 48.7	219	55.0 ¹⁰⁷	+5 53.3 ¹³⁵		45	19 49	20 26	21 15	9 07 74	22 00 27		
7	283	52.2	48.4	234	24.7 ¹⁰⁷	39.6 ¹³⁷		40	32	20 05	20 46	10 70	21 59 30		
8	298	52.1	48.2	248	54.5 ¹⁰⁸	26.0 ¹³⁶		35	18	19 47	23	13 67	58 33		
9	313	52.0	48.0	263	24.2 ¹⁰⁷	+5 12.3 ¹³⁷		30	19 05	32	20 05	16 63	57 36		
10	328	51.9	47.7	277	54.0 ¹⁰⁸	+4 58.6 ¹³⁷		20	18 44	19 08	19 37	20 59	55 41		
11	343	51.8	+22 47.5	292	23.8 ¹⁰⁸	+4 44.8 ¹³⁸		10 N	18 25	18 48	19 15	9 24 54	21 53 46		
12	358	51.7	+22 47.3	306	53.7 ¹⁰⁹	+4 31.1 ¹³⁷		0	18 08	18 31	18 57	9 28 50	21 52 49		
13	13	51.5	47.0	321	23.5 ¹⁰⁸	17.3 ¹³⁸		10 S	17 51	18 14	40	32 45	50 54		
14	28	51.4	46.8	335	53.3 ¹⁰⁸	+4 03.4 ¹³⁹		20	33	17 57	25	36 41	48 59		
15	43	51.3	46.6	350	23.2 ¹⁰⁹	+3 49.6 ¹³⁸		30	13	39	09	40 36	46 64		
16	58	51.2	46.3	4	53.1 ¹⁰⁹	35.7 ¹³⁹		35	17 01	29	18 00	43 33	45 67		
17	73	51.1	+22 46.1	19	22.9 ¹⁰⁸	+3 21.8 ¹³⁹		40	16 47	17 17	17 51	9 46 30	21 44 70		
18	88	51.0	+22 45.9	33	52.8 ¹⁰⁹	+3 07.9 ¹³⁹		45	16 31	17 04	17 41	9 49 26	21 42 74		
19	103	50.9	45.6	48	22.7 ¹⁰⁹	+2 54.0 ¹³⁹		50	11	16 49	30	53 22	40 79		
20	118	50.8	45.4	62	52.6 ¹⁰⁹	40.0 ¹⁴⁰		52	16 01	42	25	55 20	39 81		
21	133	50.7	45.1	77	22.5 ¹⁰⁹	26.0 ¹⁴⁰		54	15 51	34	20	57 17	38 84		
22	148	50.6	44.9	91	52.4 ¹⁰⁹	+2 12.0 ¹⁴⁰		56	39	25	14	9 59 15	37 86		
23	163	50.5	44.7	106	22.4 ¹¹⁰	+1 58.0 ¹⁴⁰		58	25	16	08	10 02 12	36 89		
24	178	50.4	+22 44.4	120	52.3 ¹⁰⁹	+1 44.0 ¹⁴⁰		60 S	15 08	16 04	17 01	10 04 10	21 34 93		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 5 ^h 08 ^m 6		Mag: -3.9 PMG: 11 ^h 14 ^m			Mag: +1.4 PMG: 9 ^h 42 ^m			Mag: -2.3 PMG: 7 ^h 23 ^m			Mag: +0.9 PMG: 17 ^h 50 ^m			
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec				
h	°	'	°	°	'	°	'	°	'	°	'				
0	282	38.9	191 33.2	+23 22.4	214 27.2	+21 53.0	248 58.5	+12 15.2	91 42.8	-2 00.7					
1	297	41.4	206 32.3	22.5	229 27.8	53.3	264 00.6	15.3	106 45.2	00.8					
2	312	43.8	221 31.4	22.6	244 28.4	53.6	279 02.7	15.5	121 47.6	00.8					
3	327	46.3	236 30.6	22.7	259 29.0	53.9	294 04.8	15.6	136 50.0	00.9					
4	342	48.7	251 29.7	22.7	274 29.6	54.2	309 06.9	15.7	151 52.4	00.9					
5	357	51.2	266 28.8	+23 22.8	289 30.2	+21 54.5	324 08.9	+12 15.8	166 54.8	-2 01.0					
6	12	53.7	281 27.9	+23 22.9	304 30.8	+21 54.7	339 11.0	+12 15.9	181 57.1	-2 01.0					
7	27	56.1	296 27.1	23.0	319 31.4	55.0	354 13.1	16.1	196 59.5	01.1					
8	42	58.6	311 26.2	23.0	334 32.0	55.3	9 15.2	16.2	212 01.9	01.1					
9	58	01.1	326 25.3	23.1	349 32.6	55.6	24 17.3	16.3	227 04.3	01.1					
10	73	03.5	341 24.5	23.2	4 33.2	55.9	39 19.4	16.4	242 06.7	01.2					
11	88	06.0	356 23.6	+23 23.2	19 33.8	+21 56.2	54 21.5	+12 16.6	257 09.1	-2 01.2					
12	103	08.5	11 22.7	+23 23.3	34 34.4	+21 56.5	69 23.5	+12 16.7	272 11.4	-2 01.3					
13	118	10.9	26 21.9	23.4	49 35.0	56.7	84 25.6	16.8	287 13.8	01.3					
14	133	13.4	41 21.0	23.4	64 35.6	57.0	99 27.7	16.9	302 16.2	01.4					
15	148	15.9	56 20.1	23.5	79 36.2	57.3	114 29.8	17.0	317 18.6	01.4					
16	163	18.3	71 19.2	23.5	94 36.8	57.6	129 31.9	17.2	332 21.0	01.5					
17	178	20.8	86 18.4	+23 23.6	109 37.4	+21 57.9	144 34.0	+12 17.3	347 23.4	-2 01.5					
18	193	23.2	101 17.5	+23 23.7	124 38.0	+21 58.2	159 36.1	+12 17.4	2 25.7	-2 01.6					
19	208	25.7	116 16.6	23.7	139 38.6	58.4	174 38.2	17.5	17 28.1	01.6					
20	223	28.2	131 15.8	23.8	154 39.2	58.7	189 40.2	17.6	32 30.5	01.6					
21	238	30.6	146 14.9	23.8	169 39.8	59.0	204 42.3	17.8	47 32.9	01.7					
22	253	33.1	161 14.0	23.9	184 40.4	59.3	219 44.4	17.9	62 35.3	01.7					
23	268	35.6	176 13.1	23.9	199 41.0	59.6	234 46.5	18.0	77 37.7	01.8					
24	283	38.0	191 12.3	+23 24.0	214 41.6	+21 59.8	249 48.6	+12 18.1	92 40.0	-2 01.8					
Dif	—	-9	+1	+6	+3	+21	+1	+24	0						

UT	SOL			 LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15 ^h 7			Edad: 4 ^d 6	PHE { 4 ^h : 59 ^m /2 12 ^h : 59 ^m /3 20 ^h : 59 ^m /3 Rº: 50 ^m									
	PMG: 12 ^h 04 ^m 7													
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico	Civil		Hora	Rº	Hora	Rº
h	°	'	°	°	'	°	'	h	m	h	m	h	m	m
0	178	50.4	+22 44.4	120	52.3	+1 44.0	60 N	** **	1 16	2 48	10 23	94	22 16	10
1	193	50.2	44.2	135	22.2 ¹⁰⁹	30.0 ¹⁴⁰	58	** **	1 56	3 07	23 90	18 13		
2	208	50.1	43.9	149	52.1 ¹⁰⁹	16.0 ¹⁴⁰	56	** **	2 23	23	23 86	19 16		
3	223	50.0	43.7	164	22.1 ¹¹⁰	+1 01.9 ¹⁴¹	54	1 09	2 43	36	22 84	21 18		
4	238	49.9	43.4	178	52.0 ¹⁰⁹	+0 47.9 ¹⁴⁰	52	1 47	3 00	48	22 81	22 21		
5	253	49.8	+22 43.2	193	21.9 ¹⁰⁹	+0 33.8 ¹⁴¹	50	2 12	3 15	3 58	10 22	79	22 24	22
6	268	49.7	+22 43.0	207	51.9 ¹¹⁰	+0 19.8 ¹⁴⁰	45	2 55	3 43	4 20	10 21	74	22 27	27
7	283	49.6	42.7	222	21.8 ¹⁰⁹	+0 05.7 ¹⁴¹	40	3 24	4 05	37	20 71	29 31		
8	298	49.5	42.5	236	51.7 ¹⁰⁹	-0 08.4 ¹⁴¹	35	3 46	22	4 52	20 67	31 34		
9	313	49.4	42.2	251	21.6 ¹⁰⁹	22.4 ¹⁴⁰	30	4 04	4 37	5 04	19 65	33 37		
10	328	49.3	42.0	265	51.6 ¹¹⁰	36.5 ¹⁴¹	20	32	5 01	26	19 59	36 42		
11	343	49.2	+22 41.7	280	21.5 ¹⁰⁹	-0 50.6 ¹⁴¹	10 N	4 54	5 21	5 44	10 18	55	22 39	46
12	358	49.1	+22 41.5	294	51.4 ¹⁰⁹	-1 04.6 ¹⁴⁰	0	5 13	5 39	6 01	10 18	50	22 41	51
13	13	49.0	41.2	309	21.3 ¹⁰⁹	18.7 ¹⁴¹	10 S	29	5 55	18	17 46	44 55		
14	28	48.9	41.0	323	51.2 ¹⁰⁹	32.7 ¹⁴⁰	20	5 45	6 12	36	17 41	47 59		
15	43	48.8	40.7	338	21.0 ¹⁰⁸	-1 46.8 ¹⁴¹	30	6 00	30	6 56	16 37	50 64		
16	58	48.7	40.5	352	50.9 ¹⁰⁹	-2 00.8 ¹⁴⁰	35	09	40	7 08	16 33	52 67		
17	73	48.6	+22 40.2	7	20.8 ¹⁰⁹	-2 14.8 ¹⁴⁰	40	6 18	6 52	7 22	10 16	30	22 54	71
18	88	48.4	+22 39.9	21	50.6 ¹⁰⁸	-2 28.9 ¹⁴¹	45	6 28	7 05	7 38	10 15	27	22 56	75
19	103	48.3	39.7	36	20.4 ¹⁰⁸	42.9 ¹⁴⁰	50	39	20	7 58	15 22	22 59	80	
20	118	48.2	39.4	50	50.2 ¹⁰⁸	-2 56.8 ¹³⁹	52	44	27	8 07	15 20	23 00	82	
21	133	48.1	39.2	65	20.0 ¹⁰⁸	-3 10.8 ¹⁴⁰	54	49	35	18	14 18	02 84		
22	148	48.0	38.9	79	49.8 ¹⁰⁸	24.8 ¹⁴⁰	56	6 55	43	30	14 15	03 87		
23	163	47.9	38.7	94	19.6 ¹⁰⁸	38.7 ¹³⁹	58	7 01	7 53	8 44	14 12	05 90		
24	178	47.8	+22 38.4	108	49.3 ¹⁰⁷	-3 52.6 ¹³⁹	60 S	7 08	8 04	9 00	10 14	9	23 07	94

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 5 ^h 04 ^m 6		Mag: -3.9 PMG: 11 ^h 16 ^m		Mag: +1.4 PMG: 9 ^h 41 ^m		Mag: -2.3 PMG: 7 ^h 20 ^m		Mag: +0.9 PMG: 17 ^h 47 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	283	38.0	191 12.3	+23 24.0	214 41.6	+21 59.8	249 48.6	+12 18.1	92 40.0	-2 01.8
1	298	40.5	206 11.4	24.0	229 42.2	+22 00.1	264 50.7	18.3	107 42.4	01.9
2	313	43.0	221 10.5	24.1	244 42.8	00.4	279 52.8	18.4	122 44.8	01.9
3	328	45.4	236 09.6	24.1	259 43.4	00.7	294 54.9	18.5	137 47.2	02.0
4	343	47.9	251 08.8	24.2	274 44.0	01.0	309 57.0	18.6	152 49.6	02.0
5	358	50.4	266 07.9	+23 24.2	289 44.6	+22 01.2	324 59.0	+12 18.7	167 51.9	-2 02.1
6	13	52.8	281 07.0	+23 24.3	304 45.2	+22 01.5	340 01.1	+12 18.9	182 54.3	-2 02.1
7	28	55.3	296 06.2	24.3	319 45.8	01.8	355 03.2	19.0	197 56.7	02.1
8	43	57.7	311 05.3	24.4	334 46.4	02.1	10 05.3	19.1	212 59.1	02.2
9	59	00.2	326 04.4	24.4	349 47.0	02.4	25 07.4	19.2	228 01.5	02.2
10	74	02.7	341 03.5	24.4	4 47.6	02.6	40 09.5	19.3	243 03.8	02.3
11	89	05.1	356 02.7	+23 24.5	19 48.2	+22 02.9	55 11.6	+12 19.5	258 06.2	-2 02.3
12	104	07.6	11 01.8	+23 24.5	34 48.8	+22 03.2	70 13.7	+12 19.6	273 08.6	-2 02.4
13	119	10.1	26 00.9	24.5	49 49.4	03.5	85 15.8	19.7	288 11.0	02.4
14	134	12.5	41 00.0	24.6	64 50.0	03.7	100 17.9	19.8	303 13.4	02.5
15	149	15.0	55 59.2	24.6	79 50.6	04.0	115 20.0	19.9	318 15.7	02.5
16	164	17.5	70 58.3	24.6	94 51.2	04.3	130 22.0	20.1	333 18.1	02.6
17	179	19.9	85 57.4	+23 24.7	109 51.8	+22 04.6	145 24.1	+12 20.2	348 20.5	-2 02.6
18	194	22.4	100 56.6	+23 24.7	124 52.4	+22 04.8	160 26.2	+12 20.3	3 22.9	-2 02.7
19	209	24.8	115 55.7	24.7	139 53.0	05.1	175 28.3	20.4	18 25.3	02.7
20	224	27.3	130 54.8	24.8	154 53.6	05.4	190 30.4	20.5	33 27.6	02.8
21	239	29.8	145 53.9	24.8	169 54.2	05.6	205 32.5	20.7	48 30.0	02.8
22	254	32.2	160 53.1	24.8	184 54.8	05.9	220 34.6	20.8	63 32.4	02.8
23	269	34.7	175 52.2	24.8	199 55.4	06.2	235 36.7	20.9	78 34.8	02.9
24	284	37.2	190 51.3	+23 24.9	214 56.0	+22 06.5	250 38.8	+12 21.0	93 37.2	-2 02.9
Dif	—		-9	0	+6	+3	+21	+1	+24	

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15 ^h 7			Edad: 5 ^d 6	PHE { 4 ^h : 59/3 12 ^h : 59/3 20 ^h : 59/3	Civil			R°		R°			
	PMG: 12 ^h 04 ^m 9	hG ☉	Dec			hG ☾			Dif	Dec	Dif			
h	°	'	°	°	'	°	h m	h m	h m	h m	h m	h m	h m	h m
0	178	47.8	+22 38.4	108	49.3	-3 52.6	60 N	21 20	22 49	** **	11 57 94	22 26 12		
1	193	47.7	38.2	123	19.1 ¹⁰⁸	-4 06.5 ¹³⁹	58	21 01	22 10	** **	53 90	31 15		
2	208	47.6	37.9	137	48.8 ¹⁰⁷	20.4 ¹³⁹	56	20 45	21 44	** **	49 88	35 19		
3	223	47.5	37.6	152	18.5 ¹⁰⁷	34.3 ¹³⁹	54	32	24	22 55	46 85	39 22		
4	238	47.4	37.4	166	48.1 ¹⁰⁶	-4 48.1 ¹³⁸	52	20	21 08	22 20	43 82	43 23		
5	253	47.3	+22 37.1	181	17.8 ¹⁰⁷	-5 01.9 ¹³⁸	50	20 10	20 53	21 56	11 41 80	22 46 26		
6	268	47.2	+22 36.8	195	47.4 ¹⁰⁶	-5 15.7 ¹³⁸	45	19 49	20 25	21 14	11 35 75	22 54 30		
7	283	47.1	36.6	210	17.0 ¹⁰⁶	29.4 ¹³⁷	40	32	20 04	20 45	31 71	23 00 34		
8	298	47.0	36.3	224	46.5 ¹⁰⁵	43.1 ¹³⁷	35	17	19 47	23	27 68	05 37		
9	313	46.9	36.1	239	16.1 ¹⁰⁶	-5 56.8 ¹³⁷	30	19 05	32	20 05	24 64	10 39		
10	328	46.8	35.8	253	45.6 ¹⁰⁵	-6 10.5 ¹³⁷	20	18 44	19 08	19 37	18 59	18 44		
11	343	46.7	+22 35.5	268	15.1 ¹⁰⁵	-6 24.1 ¹³⁶	10 N	18 25	18 48	19 15	11 13 55	23 25 49		
12	358	46.6	+22 35.3	282	44.6 ¹⁰⁵	-6 37.7 ¹³⁶	0	18 09	18 31	18 57	11 08 51	23 32 52		
13	13	46.5	35.0	297	14.0 ¹⁰⁴	-6 51.2 ¹³⁵	10 S	17 52	18 14	41	11 03 47	39 56		
14	28	46.4	34.7	311	43.4 ¹⁰⁴	-7 04.7 ¹³⁵	20	34	17 58	25	10 58 43	46 60		
15	43	46.3	34.5	326	12.7 ¹⁰³	18.2 ¹³⁵	30	14	40	10	53 38	54 66		
16	58	46.2	34.2	340	42.1 ¹⁰⁴	31.6 ¹³⁴	35	17 02	30	18 01	49 36	23 59 68		
17	73	46.1	+22 33.9	355	11.4 ¹⁰³	-7 45.0 ¹³⁴	40	16 48	17 19	17 52	10 46 32	** ** *		
18	88	46.0	+22 33.6	9	40.6 ¹⁰²	-7 58.3 ¹³³	45	16 32	17 06	17 43	10 42 28	** ** *		
19	103	45.9	33.4	24	09.9 ¹⁰³	-8 11.6 ¹³³	50	13	16 50	32	37 24	** ** *		
20	118	45.8	33.1	38	39.1 ¹⁰²	24.9 ¹³³	52	16 03	43	27	35 21	** ** *		
21	133	45.7	32.8	53	08.2 ¹⁰¹	38.1 ¹³²	54	15 53	36	21	32 20	** ** *		
22	148	45.6	32.6	67	37.4 ¹⁰²	-8 51.2 ¹³¹	56	41	27	16	29 18	** ** *		
23	163	45.5	32.3	82	06.4 ¹⁰⁰	-9 04.4 ¹³²	58	27	18	09	26 15	** ** *		
24	178	45.4	+22 32.0	96	35.5 ¹⁰¹	-9 17.4 ¹³⁰	60 S	15 11	16 07	17 02	10 23 11	** ** *		
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 5 ^h 00 ^m 7	Mag: -3.9 PMG: 11 ^h 17 ^m	Mag: +1.4 PMG: 9 ^h 40 ^m	Mag: -2.3 PMG: 7 ^h 16 ^m	Mag: +0.9 PMG: 17 ^h 43 ^m									
h	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
0	284	37.2	190 51.3	+23 24.9	214 56.0	+22 06.5	250 38.8	+12 21.0	93 37.2	-2 02.9				
1	299	39.6	205 50.4	24.9	229 56.6	06.7	265 40.9	21.1	108 39.5	03.0				
2	314	42.1	220 49.6	24.9	244 57.2	07.0	280 43.0	21.3	123 41.9	03.0				
3	329	44.6	235 48.7	24.9	259 57.8	07.3	295 45.1	21.4	138 44.3	03.1				
4	344	47.0	250 47.8	24.9	274 58.4	07.5	310 47.2	21.5	153 46.7	03.1				
5	359	49.5	265 46.9	+23 25.0	289 59.0	+22 07.8	325 49.3	+12 21.6	168 49.0	-2 03.2				
6	14	52.0	280 46.1	+23 25.0	304 59.6	+22 08.1	340 51.4	+12 21.7	183 51.4	-2 03.2				
7	29	54.4	295 45.2	25.0	320 00.2	08.3	355 53.4	21.8	198 53.8	03.3				
8	44	56.9	310 44.3	25.0	335 00.8	08.6	10 55.5	22.0	213 56.2	03.3				
9	59	59.3	325 43.5	25.0	350 01.4	08.9	25 57.6	22.1	228 58.6	03.4				
10	75	01.8	340 42.6	25.0	5 02.0	09.2	40 59.7	22.2	244 00.9	03.4				
11	90	04.3	355 41.7	+23 25.0	20 02.6	+22 09.4	56 01.8	+12 22.3	259 03.3	-2 03.5				
12	105	06.7	10 40.8	+23 25.0	35 03.2	+22 09.7	71 03.9	+12 22.4	274 05.7	-2 03.5				
13	120	09.2	25 40.0	25.0	50 03.8	10.0	86 06.0	22.6	289 08.1	03.6				
14	135	11.7	40 39.1	25.0	65 04.4	10.2	101 08.1	22.7	304 10.4	03.6				
15	150	14.1	55 38.2	25.0	80 05.0	10.5	116 10.2	22.8	319 12.8	03.7				
16	165	16.6	70 37.3	25.1	95 05.6	10.8	131 12.3	22.9	334 15.2	03.7				
17	180	19.1	85 36.5	+23 25.1	110 06.2	+22 11.0	146 14.4	+12 23.0	349 17.6	-2 03.8				
18	195	21.5	100 35.6	+23 25.1	125 06.8	+22 11.3	161 16.5	+12 23.1	4 19.9	-2 03.8				
19	210	24.0	115 34.7	25.1	140 07.4	11.5	176 18.6	23.3	19 22.3	03.9				
20	225	26.5	130 33.8	25.1	155 08.0	11.8	191 20.7	23.4	34 24.7	03.9				
21	240	28.9	145 33.0	25.1	170 08.6	12.1	206 22.8	23.5	49 27.1	04.0				
22	255	31.4	160 32.1	25.0	185 09.2	12.3	221 24.9	23.6	64 29.4	04.0				
23	270	33.8	175 31.2	25.0	200 09.8	12.6	236 27.0	23.7	79 31.8	04.0				
24	285	36.3	190 30.3	+23 25.0	215 10.4	+22 12.9	251 29.1	+12 23.8	94 34.2	-2 04.1				
Dif	—	-9	0	+6	+3	+21	+1	+24						

UT	SOL				 LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 15 ^h 7 PMG: 12 ^h 05 ^m 1				Edad: 6 ^d 6 SD: 16 ^h 2 PMG: 18 ^h 12 ^m	PHE { 4 ^h : 59 ^h 3 12 ^h : 59 ^h 3 20 ^h : 59 ^h 3 Rº: 54 ^m	Náutico	Civil		Hora	Rº		Hora	Rº						
	hG ☉	Dec	hG ☾	Dif											Dec	Dif				
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m			
0	178	45.4	+22	32.0	96	35.5	−9	17.4	60 N	** **	1 22	2 51	13 31	94	22 38	16				
1	193	45.3		31.7	111	04.5 ¹⁰⁰		30.4 ¹³⁰	58	** **	2 00	3 09	23 91		46 20					
2	208	45.2		31.5	125	33.5 ¹⁰⁰		43.4 ¹³⁰	56	** **	26	25	17 87		22 54	23				
3	223	45.1		31.2	140	02.4 ⁹⁹	−9	56.3 ¹²⁹	54	1 15	2 46	38	11 84		23 00	26				
4	238	45.0		30.9	154	31.3 ⁹⁹	−10	09.1 ¹²⁸	52	1 50	3 03	3 50	05 82		06 29					
5	253	44.9	+22	30.6	169	00.1 ⁹⁸	−10	21.9 ¹²⁸	50	2 15	3 17	4 00	13 01	79	23 12	30				
6	268	44.8	+22	30.4	183	28.9 ⁹⁸	−10	34.6 ¹²⁷	45	2 56	3 45	4 21	12 50	75	23 24	34				
7	283	44.7		30.1	197	57.7 ⁹⁸		47.3 ¹²⁷	40	3 25	4 06	39	42 71		34 37					
8	298	44.6		29.8	212	26.4 ⁹⁷	−10	59.9 ¹²⁶	35	3 47	24	4 53	35 68		42 41					
9	313	44.5		29.5	226	55.0 ⁹⁶	−11	12.4 ¹²⁵	30	4 05	4 38	5 05	28 66		23 49	44				
10	328	44.4		29.2	241	23.7 ⁹⁷		24.9 ¹²⁵	20	33	5 02	26	17 61		** **	** **				
11	343	44.3	+22	28.9	255	52.2 ⁹⁵	−11	37.3 ¹²⁴	10 N	4 55	5 22	5 45	12 08	57	** **	** **				
12	358	44.2	+22	28.7	270	20.8 ⁹⁶	−11	49.6 ¹²³	0	5 13	5 39	6 01	11 59	54	** **	** **				
13	13	44.1		28.4	284	49.2 ⁹⁴	−12	01.9 ¹²³	10 S	29	5 55	18	50 50		** **	** **				
14	28	44.0		28.1	299	17.7 ⁹⁵		14.1 ¹²²	20	5 45	6 12	36	41 46		** **	** **				
15	43	43.9		27.8	313	46.1 ⁹⁴		26.2 ¹²¹	30	6 00	30	6 56	31 41		** **	** **				
16	58	43.8		27.5	328	14.4 ⁹³		38.2 ¹²⁰	35	09	40	7 08	25 38		** **	** **				
17	73	43.7	+22	27.2	342	42.7 ⁹³	−12	50.2 ¹²⁰	40	6 17	6 51	7 21	11 18	36	0 05	71				
18	88	43.6	+22	27.0	357	10.9 ⁹²	−13	02.1 ¹¹⁹	45	6 27	7 04	7 37	11 10	32	0 11	75				
19	103	43.5		26.7	11 39.1 ⁹²			14.0 ¹¹⁹	50	38	19	7 57	11 01	27	19 79					
20	118	43.4		26.4	26 07.2 ⁹¹			25.7 ¹¹⁷	52	43	26	8 06	10 56	26	22 82					
21	133	43.3		26.1	40 35.3 ⁹¹			37.4 ¹¹⁷	54	48	34	17	52 23		26 85					
22	148	43.3		25.8	55 03.3 ⁹⁰		−13	49.0 ¹¹⁶	56	6 54	42	28	47 20		30 88					
23	163	43.2		25.5	69 31.3 ⁹⁰		−14	00.5 ¹¹⁵	58	7 00	7 52	42	41 17		35 91					
24	178	43.1	+22	25.2	83 59.2 ⁸⁹		−14	11.9 ¹¹⁴	60 S	7 07	8 03	8 58	10 34	14	0 41	94				
UT	ARIES				VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 4 ^h 56 ^m 8				Mag: −3.9 PMG: 11 ^h 19 ^m				Mag: +1.4 PMG: 9 ^h 39 ^m				Mag: −2.3 PMG: 7 ^h 13 ^m				Mag: +0.9 PMG: 17 ^h 39 ^m			
h	hG ♈		Dec		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
0	285	36.3	190	30.3	+23	25.0	215	10.4	+22	12.9	251	29.1	+12	23.8	94	34.2	−2	04.1		
1	300	38.8	205	29.5		25.0	230	11.0		13.1	266	31.2		24.0	109	36.6		04.1		
2	315	41.2	220	28.6		25.0	245	11.6		13.4	281	33.3		24.1	124	38.9		04.2		
3	330	43.7	235	27.7		25.0	260	12.2		13.6	296	35.4		24.2	139	41.3		04.2		
4	345	46.2	250	26.8		25.0	275	12.8		13.9	311	37.5		24.3	154	43.7		04.3		
5	0	48.6	265	26.0	+23	25.0	290	13.4	+22	14.2	326	39.6	+12	24.4	169	46.1	−2	04.3		
6	15	51.1	280	25.1	+23	25.0	305	14.0	+22	14.4	341	41.7	+12	24.6	184	48.4	−2	04.4		
7	30	53.6	295	24.2		25.0	320	14.6		14.7	356	43.8		24.7	199	50.8		04.4		
8	45	56.0	310	23.3		24.9	335	15.2		15.0	11	45.9		24.8	214	53.2		04.5		
9	60	58.5	325	22.5		24.9	350	15.8		15.2	26	48.0		24.9	229	55.6		04.5		
10	76	00.9	340	21.6		24.9	5	16.4		15.5	41	50.1		25.0	244	57.9		04.6		
11	91	03.4	355	20.7	+23	24.9	20	17.0	+22	15.7	56	52.2	+12	25.1	260	00.3	−2	04.6		
12	106	05.9	10	19.9	+23	24.9	35	17.6	+22	16.0	71	54.3	+12	25.2	275	02.7	−2	04.7		
13	121	08.3	25	19.0		24.8	50	18.2		16.2	86	56.4		25.4	290	05.0		04.7		
14	136	10.8	40	18.1		24.8	65	18.8		16.5	101	58.5		25.5	305	07.4		04.8		
15	151	13.3	55	17.2		24.8	80	19.4		16.8	117	00.6		25.6	320	09.8		04.8		
16	166	15.7	70	16.4		24.8	95	20.0		17.0	132	02.7		25.7	335	12.2		04.9		
17	181	18.2	85	15.5	+23	24.7	110	20.6	+22	17.3	147	04.8	+12	25.8	350	14.5	−2	04.9		
18	196	20.7	100	14.6	+23	24.7	125	21.2	+22	17.5	162	06.9	+12	25.9	5	16.9	−2	05.0		
19	211	23.1	115	13.7		24.7	140	21.8		17.8	177	09.0		26.1	20	19.3		05.0		
20	226	25.6	130	12.9		24.7	155	22.4		18.0	192	11.1		26.2	35	21.6		05.1		
21	241	28.1	145	12.0		24.6	170	23.0		18.3	207	13.2		26.3	50	24.0		05.1		
22	256	30.5	160	11.1		24.6	185	23.6		18.5	222	15.3		26.4	65	26.4		05.2		
23	271	33.0	175	10.2		24.6	200	24.2		18.8	237	17.4		26.5	80	28.8		05.2		
24	286	35.4	190	09.4	+23	24.5	215	24.8	+22	19.1	252	19.5	+12	26.6	95	31.1	−2	05.3		
Dif	—		−9		0		+6		+3		+21		+1		+24					

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna		
	SD: 15 ^h 7 PMG: 12 ^h 05 ^m 2			Edad: 7 ^d 6 PHE { SD: 16 ^h 1 PMG: 19 ^h 06 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m m	h m m	h m m		
0	178	43.1	+22	25.2	83	59.2	-14	11.9	60 N	21 17	22 43	** **	15 05	92	22 54	24
1	193	43.0		24.9	98	27.1		23.3 ¹¹⁴	58	20 59	22 07	** **	14 54	88	23 06	28
2	208	42.9		24.6	112	54.9		34.5 ¹¹²	56	43	21 42	** **	44	85	17	31
3	223	42.8		24.3	127	22.7		45.7 ¹¹²	54	30	22	22 50	35	82	26	34
4	238	42.7		24.1	141	50.4	-14	56.8 ¹¹¹	52	19	21 06	22 17	27	80	35	35
5	253	42.6	+22	23.8	156	18.1	-15	07.8 ¹¹⁰	50	20 09	20 52	21 53	14 20	78	23 42	37
6	268	42.5	+22	23.5	170	45.7	-15	18.7 ¹⁰⁹	45	19 48	20 24	21 12	14 05	74	23 58	41
7	283	42.4		23.2	185	13.2		29.5 ¹⁰⁸	40	31	20 03	20 44	13 53	71	** **	** **
8	298	42.3		22.9	199	40.7		40.2 ¹⁰⁷	35	17	19 46	22	43	68	** **	** **
9	313	42.2		22.6	214	08.1	-15	50.8 ¹⁰⁶	30	19 04	32	20 04	34	66	** **	** **
10	328	42.1		22.3	228	35.5	-16	01.3 ¹⁰⁵	20	18 44	19 08	19 37	18	62	0 02	48
11	343	42.0	+22	22.0	243	02.8	-16	11.8 ¹⁰⁵	10 N	18 26	18 48	19 15	13 05	59	0 14	51
12	358	41.9	+22	21.7	257	30.1	-16	22.1 ¹⁰³	0	18 09	18 31	18 57	12 53	55	0 24	55
13	13	41.8		21.4	271	57.3		32.3 ¹⁰²	10 S	17 52	18 15	41	40	53	35	58
14	28	41.8		21.1	286	24.5		42.5 ¹⁰²	20	35	17 59	26	27	49	0 46	62
15	43	41.7		20.8	300	51.6	-16	52.5 ¹⁰⁰	30	15	41	10	12	46	1 00	65
16	58	41.6		20.5	315	18.6	-17	02.4 ⁹⁹	35	17 03	31	18 02	12 03	44	07	68
17	73	41.5	+22	20.2	329	45.6	-17	12.3 ⁹⁹	40	16 50	17 20	17 53	11 54	40	1 16	71
18	88	41.4	+22	19.9	344	12.6	-17	22.0 ⁹⁷	45	16 34	17 07	17 44	11 42	38	1 26	75
19	103	41.3		19.6	358	39.5		31.6 ⁹⁶	50	14	16 52	33	28	34	38	79
20	118	41.2		19.3	13	06.3		41.1 ⁹⁵	52	16 05	45	28	22	32	44	81
21	133	41.1		19.0	27	33.1		50.5 ⁹⁴	54	15 55	38	23	15	29	51	83
22	148	41.0		18.7	41	59.8	-17	59.8 ⁹³	56	43	29	17	11 07	27	1 58	86
23	163	40.9		18.4	56	26.5	-18	08.9 ⁹¹	58	30	20	11	10 58	24	2 06	89
24	178	40.8	+22	18.0	70	53.1	-18	18.0 ⁹¹	60 S	15 14	16 09	17 04	10 48	20	2 15	93

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO							
	PMG: 4 ^h 52 ^m 8		Mag: -3.9 PMG: 11 ^h 20 ^m		Mag: +1.4 PMG: 9 ^h 38 ^m		Mag: -2.3 PMG: 7 ^h 10 ^m		Mag: +0.9 PMG: 17 ^h 35 ^m							
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec						
h	°	'	°	'	°	'	°	'	°	'						
0	286	35.4	190	09.4	215	24.8	+22	19.1	252	19.5	+12	26.6	95	31.1	-2	05.3
1	301	37.9	205	08.5		24.5		19.3	267	21.6		26.7	110	33.5		05.3
2	316	40.4	220	07.6		24.5		19.6	282	23.7		26.9	125	35.9		05.4
3	331	42.8	235	06.7		24.4		19.8	297	25.8		27.0	140	38.2		05.4
4	346	45.3	250	05.9		24.4		20.1	312	27.9		27.1	155	40.6		05.5
5	1	47.8	265	05.0	+23	24.3		20.3	327	30.0	+12	27.2	170	43.0	-2	05.5
6	16	50.2	280	04.1	+23	24.3		20.6	342	32.2	+12	27.3	185	45.4	-2	05.6
7	31	52.7	295	03.2		24.2		20.8	357	34.3		27.4	200	47.7		05.6
8	46	55.2	310	02.4		24.2		21.1	12	36.4		27.6	215	50.1		05.7
9	61	57.6	325	01.5		24.2		21.3	27	38.5		27.7	230	52.5		05.7
10	77	00.1	340	00.6		24.1		21.6	42	40.6		27.8	245	54.8		05.8
11	92	02.6	354	59.7	+23	24.1		21.8	57	42.7	+12	27.9	260	57.2	-2	05.8
12	107	05.0	9	58.9	+23	24.0		22.1	72	44.8	+12	28.0	275	59.6	-2	05.9
13	122	07.5	24	58.0		24.0		22.3	87	46.9		28.1	291	01.9		05.9
14	137	09.9	39	57.1		23.9		22.6	102	49.0		28.2	306	04.3		06.0
15	152	12.4	54	56.2		23.9		22.8	117	51.1		28.4	321	06.7		06.0
16	167	14.9	69	55.4		23.8		23.1	132	53.2		28.5	336	09.0		06.1
17	182	17.3	84	54.5	+23	23.7		23.3	147	55.3	+12	28.6	351	11.4	-2	06.2
18	197	19.8	99	53.6	+23	23.7		23.6	162	57.4	+12	28.7	6	13.8	-2	06.2
19	212	22.3	114	52.7		23.6		23.8	177	59.5		28.8	21	16.1		06.3
20	227	24.7	129	51.9		23.6		24.1	193	01.6		28.9	36	18.5		06.3
21	242	27.2	144	51.0		23.5		24.3	208	03.7		29.0	51	20.9		06.4
22	257	29.7	159	50.1		23.5		24.5	223	05.9		29.1	66	23.3		06.4
23	272	32.1	174	49.2		23.4		24.8	238	08.0		29.3	81	25.6		06.5
24	287	34.6	189	48.4	+23	23.3		25.0	253	10.1	+12	29.4	96	28.0	-2	06.5
Dif	—		-9		0		+6		+21		+1		+24		-1	

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 15 ^h 7			Edad: 8 ^d 6	PHE {	SD: 16 ^h 1		R°: 58 ^m	Náutico		Civil	Hora	R°	Hora	R°			
	PMG: 12 ^h 05 ^m 3																	
	hG ☉	Dec		hG ☾	Dif	Dec	Dif											
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m		
0	178	40.8	+22	18.0	70	53.1	75	-18	18.0	89	58	23	18	37	23	18		
1	193	40.8		17.7	85	19.6	75		26.9	89	58	22	80	34	40	34		
2	208	40.7		17.4	99	46.1	75		35.8	89	56	16	09	77	23	48		
3	223	40.6		17.1	114	12.6	75		44.5	87	54	15	57	76	**	**		
4	238	40.5		16.8	128	39.0	74		-18	53.1	86	47	74	**	**	**		
5	253	40.4	+22	16.5	143	05.3	73		-19	01.6	85	15	38	72	**	**		
6	268	40.3	+22	16.2	157	31.6	73		-19	09.9	83	15	19	70	**	**		
7	283	40.2		15.9	171	57.9	73		18.2	83	40	15	04	67	0	11		
8	298	40.1		15.6	186	24.0	71		26.3	81	35	14	51	65	23	46		
9	313	40.0		15.3	200	50.2	72		34.3	80	30	40	64	33	48	33		
10	328	39.9		14.9	215	16.3	71		42.2	79	20	20	62	0	50	51		
11	343	39.9	+22	14.6	229	42.3	70		-19	49.9	77	14	04	59	1	05		
12	358	39.8	+22	14.3	244	08.3	70		-19	57.5	76	13	48	58	1	19		
13	13	39.7		14.0	258	34.3	70		-20	05.0	75	33	55	33	59	33		
14	28	39.6		13.7	273	00.1	68		12.4	74	20	13	16	54	1	48		
15	43	39.5		13.4	287	26.0	69		19.6	72	30	12	58	50	2	05		
16	58	39.4		13.1	301	51.8	68		26.8	72	35	47	49	15	67	15		
17	73	39.3	+22	12.7	316	17.6	68		-20	33.7	69	12	34	48	2	27		
18	88	39.2	+22	12.4	330	43.3	67		-20	40.6	69	12	20	45	2	41		
19	103	39.2		12.1	345	08.9	66		47.3	67	50	12	02	42	2	57		
20	118	39.1		11.8	359	34.6	67		-20	53.9	66	11	54	40	3	05		
21	133	39.0		11.5	14	00.2	66		-21	00.4	65	44	39	14	79	14		
22	148	38.9		11.1	28	25.7	65		06.7	63	56	34	36	24	82	24		
23	163	38.8		10.8	42	51.2	65		12.9	62	58	22	34	35	85	35		
24	178	38.7	+22	10.5	57	16.7	65		-21	18.9	60	11	08	30	3	48		
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG 4 ^h 48 ^m 9		Mag: -3.9 PMG: 11 ^h 21 ^m				Mag: +1.4 PMG: 9 ^h 37 ^m				Mag: -2.3 PMG: 7 ^h 06 ^m				Mag: +0.9 PMG: 17 ^h 31 ^m			
	hG ♈		hG ♀	Dec			hG ♂	Dec			hG ♃	Dec			hG ♄	Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	287	34.6	189	48.4	+23	23.3	215	39.1	+22	25.0	253	10.1	+12	29.4	96	28.0	-2	06.5
1	302	37.0	204	47.5		23.3	230	39.7		25.3	268	12.2		29.5	111	30.4		06.6
2	317	39.5	219	46.6		23.2	245	40.3		25.5	283	14.3		29.6	126	32.7		06.6
3	332	42.0	234	45.8		23.1	260	40.9		25.8	298	16.4		29.7	141	35.1		06.7
4	347	44.4	249	44.9		23.1	275	41.5		26.0	313	18.5		29.8	156	37.5		06.7
5	2	46.9	264	44.0	+23	23.0	290	42.1	+22	26.3	328	20.6	+12	29.9	171	39.8	-2	06.8
6	17	49.4	279	43.1	+23	22.9	305	42.7	+22	26.5	343	22.7	+12	30.0	186	42.2	-2	06.8
7	32	51.8	294	42.3		22.8	320	43.3		26.7	358	24.8		30.2	201	44.6		06.9
8	47	54.3	309	41.4		22.8	335	43.9		27.0	13	26.9		30.3	216	46.9		06.9
9	62	56.8	324	40.5		22.7	350	44.5		27.2	28	29.1		30.4	231	49.3		07.0
10	77	59.2	339	39.6		22.6	5	45.1		27.5	43	31.2		30.5	246	51.7		07.0
11	93	01.7	354	38.8	+23	22.5	20	45.7	+22	27.7	58	33.3	+12	30.6	261	54.0	-2	07.1
12	108	04.2	9	37.9	+23	22.5	35	46.3	+22	27.9	73	35.4	+12	30.7	276	56.4	-2	07.1
13	123	06.6	24	37.0		22.4	50	46.9		28.2	88	37.5		30.8	291	58.8		07.2
14	138	09.1	39	36.1		22.3	65	47.5		28.4	103	39.6		30.9	307	01.1		07.2
15	153	11.5	54	35.3		22.2	80	48.1		28.7	118	41.7		31.1	322	03.5		07.3
16	168	14.0	69	34.4		22.1	95	48.7		28.9	133	43.8		31.2	337	05.8		07.3
17	183	16.5	84	33.5	+23	22.1	110	49.3	+22	29.1	148	46.0	+12	31.3	352	08.2	-2	07.4
18	198	18.9	99	32.6	+23	22.0	125	49.9	+22	29.4	163	48.1	+12	31.4	7	10.6	-2	07.5
19	213	21.4	114	31.8		21.9	140	50.5		29.6	178	50.2		31.5	22	12.9		07.5
20	228	23.9	129	30.9		21.8	155	51.1		29.9	193	52.3		31.6	37	15.3		07.6
21	243	26.3	144	30.0		21.7	170	51.7		30.1	208	54.4		31.7	52	17.7		07.6
22	258	28.8	159	29.2		21.6	185	52.3		30.3	223	56.5		31.8	67	20.0		07.7
23	273	31.3	174	28.3		21.5	200	52.9		30.6	238	58.6		31.9	82	22.4		07.7
24	288	33.7	189	27.4	+23	21.4	215	53.5	+22	30.8	254	00.7	+12	32.1	97	24.8	-2	07.8
Dif	—		-9	-1			+6	+2			+21	+1			+24	-1		

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15 ^h 7			Edad: 9 ^d 6	PHE { 4 ^h : 58 ^m /8 12 ^h : 58 ^m /7 20 ^h : 58 ^m /6 Rº: 58 ^m										
	PMG: 12 ^h 05 ^m 5					SD: 16 ^h 0			PMG: 21 ^h 00 ^m						
	hG ☉		Dec	hG ☾		Dif	Dec	Dif		Civil	Náutico	Hora	Rº	Hora	Rº
h	°	'	°	°	'	°	°	'	°	h m	h m	h m	h m m	h m m	h m m
0	178	38.7	+22 10.5	57	16.7	-21 18.9	60 N		21 14	22 38	** **	18 01 66	23 55 55		
1	193	38.6	10.2	71	42.1	24.8	58		20 56	22 03	** **	17 42 65	** ** *		
2	208	38.6	09.8	86	07.5	30.6	56		41	21 39	** **	26 65	** ** *		
3	223	38.5	09.5	100	32.9	36.2	54		29	20	22 45	13 64	0 00 44		
4	238	38.4	09.2	114	58.2	41.7	52		17	21 04	22 13	17 01 64	10 46		
5	253	38.3	+22 08.9	129	23.5	-21 47.1	50		20 08	20 50	21 51	16 50 64	0 19 47		
6	268	38.2	+22 08.5	143	48.7	-21 52.3	45		19 47	20 23	21 11	16 29 62	0 39 49		
7	283	38.1	08.2	158	13.9	-21 57.4	40		30	20 02	20 43	16 11 62	0 55 51		
8	298	38.1	07.9	172	39.1	-22 02.3	35		16	19 45	21	15 56 62	1 09 52		
9	313	38.0	07.6	187	04.3	07.1	30		19 04	31	20 04	44 60	21 53		
10	328	37.9	07.2	201	29.4	11.8	20		18 43	19 08	19 36	22 60	41 55		
11	343	37.8	+22 06.9	215	54.5	-22 16.3	10 N		18 26	18 48	19 15	15 03 59	1 59 57		
12	358	37.7	+22 06.6	230	19.6	-22 20.6	0		18 09	18 31	18 57	14 46 58	2 15 59		
13	13	37.6	06.2	244	44.7	24.8	10 S		17 53	18 15	41	28 58	32 60		
14	28	37.5	05.9	259	09.7	28.9	20		35	17 59	26	14 10 57	2 50 61		
15	43	37.5	05.6	273	34.8	32.8	30		16	42	11	13 48 56	3 10 63		
16	58	37.4	05.2	287	59.7	36.6	35		17 04	32	18 03	36 55	22 64		
17	73	37.3	+22 04.9	302	24.7	-22 40.2	40		16 51	17 21	17 55	13 22 54	3 36 65		
18	88	37.2	+22 04.6	316	49.7	-22 43.7	45		16 35	17 09	17 45	13 05 53	3 53 66		
19	103	37.1	04.2	331	14.6	47.1	50		16	16 54	35	12 44 52	4 13 68		
20	118	37.1	03.9	345	39.6	50.3	52		16 07	47	30	34 51	22 70		
21	133	37.0	03.6	0	04.5	53.3	54		15 57	40	25	23 50	33 71		
22	148	36.9	03.2	14	29.4	56.2	56		45	31	19	12 10 49	4 46 71		
23	163	36.8	02.9	28	54.3	-22 59.0	58		32	22	13	11 56 47	5 00 73		
24	178	36.7	+22 02.6	43	19.2	-23 01.6	60 S		15 17	16 11	17 07	11 38 46	5 17 76		
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG: 4 ^h 45 ^m 0		Mag: -3.9 PMG: 11 ^h 23 ^m		Mag: +1.4 PMG: 9 ^h 36 ^m		Mag: -2.4 PMG: 7 ^h 03 ^m		Mag: +0.9 PMG: 17 ^h 28 ^m						
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄						
h	°	'	°	'	°	'	°	'	°	'					
0	288	33.7	189	27.4	215	53.5	254	00.7	97	24.8					
1	303	36.2	204	26.5	230	54.1	269	02.9	112	27.1					
2	318	38.7	219	25.7	245	54.7	284	05.0	127	29.5					
3	333	41.1	234	24.8	260	55.3	299	07.1	142	31.9					
4	348	43.6	249	23.9	275	55.9	314	09.2	157	34.2					
5	3	46.0	264	23.0	290	56.6	329	11.3	172	36.6					
6	18	48.5	279	22.2	305	57.2	344	13.4	187	38.9					
7	33	51.0	294	21.3	320	57.8	359	15.5	202	41.3					
8	48	53.4	309	20.4	335	58.4	14	17.7	217	43.7					
9	63	55.9	324	19.6	350	59.0	29	19.8	232	46.0					
10	78	58.4	339	18.7	5	59.6	44	21.9	247	48.4					
11	94	00.8	354	17.8	21	00.2	59	24.0	262	50.8					
12	109	03.3	9	16.9	36	00.8	74	26.1	277	53.1					
13	124	05.8	24	16.1	51	01.4	89	28.2	292	55.5					
14	139	08.2	39	15.2	66	02.0	104	30.4	307	57.8					
15	154	10.7	54	14.3	81	02.6	119	32.5	323	00.2					
16	169	13.2	69	13.4	96	03.2	134	34.6	338	02.6					
17	184	15.6	84	12.6	111	03.8	149	36.7	353	04.9					
18	199	18.1	99	11.7	126	04.4	164	38.8	8	07.3					
19	214	20.5	114	10.8	141	05.0	179	40.9	23	09.6					
20	229	23.0	129	10.0	156	05.6	194	43.1	38	12.0					
21	244	25.5	144	09.1	171	06.2	209	45.2	53	14.4					
22	259	27.9	159	08.2	186	06.8	224	47.3	68	16.7					
23	274	30.4	174	07.3	201	07.4	239	49.4	83	19.1					
24	289	32.9	189	06.5	216	08.0	254	51.5	98	21.5					
Dif	—		-9		-1		+21		+1						

UT	SOL			O LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15'7			Edad: 10 ^d 6 PHE { 4 ^h : 58'5 12 ^h : 58'3 20 ^h : 58'2 Rº: 57 ^m												
	PMG: 12 ^h 05 ^m 6				SD: 15'9		PMG: 21 ^h 58 ^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	36.7	+22 02.6	43	19.2	-23 01.6	24	60 N	58	1 34	2 57	19 07 46	19 07 46	46	19 07 46	46
1	193	36.6	02.2	57	44.1	59 04.0	24	58	58	2 08	3 15	18 47 48	18 47 48	48	0 14 56	56
2	208	36.6	01.9	72	09.0	59 06.3	23	56	56	32	30	31 49	31 49	49	30 56	56
3	223	36.5	01.5	86	33.9	59 08.5	22	54	54	1 26	2 52	43	17 50	44	44 56	56
4	238	36.4	01.2	100	58.7	58 10.5	20	52	52	1 58	3 08	3 54	18 05 51	0 56	56 56	56
5	253	36.3	+22 00.9	115	23.6	59 -23 12.3	18	50	50	2 21	3 21	4 04	17 54 52	1 06	57 57	57
6	268	36.2	+22 00.5	129	48.5	59 -23 14.0	17	45	45	3 01	3 48	4 25	17 31 53	1 28	58 58	58
7	283	36.2	+22 00.2	144	13.4	59 15.6	16	40	40	29	4 09	41	17 13 54	1 46	58 58	58
8	298	36.1	+21 59.8	158	38.2	58 17.0	14	35	35	3 50	26	4 55	16 58 54	2 01	58 58	58
9	313	36.0	59.5	173	03.1	59 18.2	12	30	30	4 08	4 40	5 07	44 56	14 58	58 58	58
10	328	35.9	59.1	187	28.0	59 19.3	11	20	20	35	5 04	28	22 56	36 58	58 58	58
11	343	35.9	+21 58.8	201	52.9	59 -23 20.3	10	10 N	10 N	4 56	5 23	5 46	16 02 57	2 56	58 58	58
12	358	35.8	+21 58.4	216	17.9	60 -23 21.1	8	0	0	5 14	5 40	6 02	15 44 58	3 14	58 58	58
13	13	35.7	58.1	230	42.8	59 21.8	7	10 S	10 S	30	5 56	18	26 58	32 58	58 58	58
14	28	35.6	57.7	245	07.7	59 22.3	5	20	20	5 45	6 12	36	15 07 58	3 51	58 58	58
15	43	35.5	57.4	259	32.7	60 22.6	3	30	30	6 00	29	6 55	14 44 60	4 13	58 58	58
16	58	35.5	57.1	273	57.7	60 22.8	2	35	35	08	39	7 07	31 60	26 58	58 58	58
17	73	35.4	+21 56.7	288	22.7	60 -23 22.9	1	40	40	6 16	6 50	7 20	14 16 60	4 41	58 58	58
18	88	35.3	+21 56.4	302	47.7	60 -23 22.8	1	45	45	6 26	7 02	7 35	13 58 61	4 59	58 58	58
19	103	35.2	56.0	317	12.7	60 22.6	2	50	50	36	17	7 54	36 61	5 21	58 58	58
20	118	35.2	55.6	331	37.8	61 22.2	4	52	52	41	24	8 03	25 62	32 57	58 58	58
21	133	35.1	55.3	346	02.9	61 21.7	5	54	54	46	31	13	13 13 62	44 57	58 58	58
22	148	35.0	54.9	0	28.0	61 21.0	7	56	56	51	39	25	12 59 63	5 57	58 58	58
23	163	34.9	54.6	14	53.2	62 20.2	8	58	58	6 57	48	38	43 63	6 13	57 57	57
24	178	34.8	+21 54.2	29	18.3	61 -23 19.2	10	60 S	60 S	7 04	7 59	8 53	12 24 64	6 33	56 56	56

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO		
	PMG: 4 ^h 41 ^m 0		Mag: -3.9 PMG: 11 ^h 24 ^m		Mag: +1.4 PMG: 9 ^h 35 ^m		Mag: -2.4 PMG: 7 ^h 00 ^m		Mag: +0.9 PMG: 17 ^h 24 ^m		
	hG ♈		hG ♀ Dec		hG ♂ Dec		hG ♃ Dec		hG ♄ Dec		
h	°	'	°	°	'	°	°	°	'	°	'
0	289	32.9	189 06.5	+23 18.9	216 08.0	+22 36.4	254 51.5	+12 34.7	98 21.5	-2 09.1	09.1
1	304	35.3	204 05.6	18.7	231 08.6	36.6	269 53.7	34.8	113 23.8	09.1	09.1
2	319	37.8	219 04.7	18.6	246 09.2	36.8	284 55.8	34.9	128 26.2	09.2	09.2
3	334	40.3	234 03.9	18.5	261 09.8	37.0	299 57.9	35.0	143 28.5	09.2	09.2
4	349	42.7	249 03.0	18.4	276 10.4	37.3	315 00.0	35.1	158 30.9	09.3	09.3
5	4	45.2	264 02.1	+23 18.2	291 11.0	+22 37.5	330 02.1	+12 35.2	173 33.2	-2 09.3	09.3
6	19	47.6	279 01.2	+23 18.1	306 11.6	+22 37.7	345 04.3	+12 35.3	188 35.6	-2 09.4	09.4
7	34	50.1	294 00.4	18.0	321 12.2	37.9	0 06.4	35.5	203 38.0	09.4	09.4
8	49	52.6	308 59.5	17.9	336 12.8	38.2	15 08.5	35.6	218 40.3	09.5	09.5
9	64	55.0	323 58.6	17.7	351 13.4	38.4	30 10.6	35.7	233 42.7	09.6	09.6
10	79	57.5	338 57.8	17.6	6 14.0	38.6	45 12.7	35.8	248 45.0	09.6	09.6
11	95	00.0	353 56.9	+23 17.5	21 14.6	+22 38.8	60 14.9	+12 35.9	263 47.4	-2 09.7	09.7
12	110	02.4	8 56.0	+23 17.3	36 15.2	+22 39.1	75 17.0	+12 36.0	278 49.8	-2 09.7	09.7
13	125	04.9	23 55.1	17.2	51 15.8	39.3	90 19.1	36.1	293 52.1	09.8	09.8
14	140	07.4	38 54.3	17.0	66 16.4	39.5	105 21.2	36.2	308 54.5	09.8	09.8
15	155	09.8	53 53.4	16.9	81 17.0	39.7	120 23.3	36.3	323 56.8	09.9	09.9
16	170	12.3	68 52.5	16.8	96 17.6	40.0	135 25.5	36.4	338 59.2	09.9	09.9
17	185	14.8	83 51.7	+23 16.6	111 18.2	+22 40.2	150 27.6	+12 36.5	354 01.6	-2 10.0	10.0
18	200	17.2	98 50.8	+23 16.5	126 18.8	+22 40.4	165 29.7	+12 36.6	9 03.9	-2 10.1	10.1
19	215	19.7	113 49.9	16.3	141 19.4	40.6	180 31.8	36.8	24 06.3	10.1	10.1
20	230	22.1	128 49.0	16.2	156 20.0	40.8	195 34.0	36.9	39 08.6	10.2	10.2
21	245	24.6	143 48.2	16.0	171 20.6	41.1	210 36.1	37.0	54 11.0	10.2	10.2
22	260	27.1	158 47.3	15.9	186 21.2	41.3	225 38.2	37.1	69 13.3	10.3	10.3
23	275	29.5	173 46.4	15.8	201 21.8	41.5	240 40.3	37.2	84 15.7	10.3	10.3
24	290	32.0	188 45.6	+23 15.6	216 22.4	+22 41.7	255 42.5	+12 37.3	99 18.1	-2 10.4	10.4
Dif	—		-9	-1	+6	+2	+21	+1	+24	-1	

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 15 ^h 7			Edad: 11 ^d 6 PHE {	4 ^h : 58 ⁰ 12 ^h : 57 ⁹ 20 ^h : 57 ⁷										
	PMG: 12 ^h 05 ^m 7				SD: 15 ^h 8				PMG: 22 ^h 55 ^m		R°: 55 ^m				
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m	m	h m	m
0	178	34.8	+21 54.2	29	18.3	-23 19.2	11	60 N	21 11	22 32	** **	19 53	30	0 50	72
1	193	34.8		43	43.5		18.1	58	20 54	21 59	** **		35 34	1 10	70
2	208	34.7		58	08.8		16.8	56		39	36	23 37	20 36		26 69
3	223	34.6		72	34.1		15.4	54		27	17	22 40	19 07	38	40 68
4	238	34.5		86	59.4		13.8	52		16	21 02	22 10	18 56	39	1 52 67
5	253	34.5	+21 52.5	101	24.7	-23 12.1	17	50	20 06	20 48	21 48	18 46	41	2 03	66
6	268	34.4	+21 52.1	115	50.1	-23 10.3	18	45	19 46	20 22	21 09	18 24	44	2 26	63
7	283	34.3		130	15.5		08.3	40		29	20 01	20 41	18 07	46	44 62
8	298	34.2		144	41.0		06.2	35		15	19 44		20	17 52	48
9	313	34.2		159	06.5		03.9	30	19 03	30	20 03	40 49		3 12	61
10	328	34.1		173	32.1	-23 01.5	24	20	18 43	19 07	19 36	17 18	52	34	60
11	343	34.0	+21 50.3	187	57.7	-22 59.0	25	10 N	18 26	18 48	19 15	16 59	54	3 54	58
12	358	34.0	+21 49.9	202	23.3	-22 56.3	27	0	18 09	18 32	18 58	16 42	55	4 12	57
13	13	33.9		216	49.0		53.4	10 S	17 53		16		24 57		30 55
14	28	33.8		231	14.8		50.5	20		36	18 00	27	16 05	59	4 49 54
15	43	33.7		245	40.6		47.4	30		17	17 43	12	15 44	61	5 11 53
16	58	33.7		260	06.4		44.1	35	17 05		33	18 04	31 62		24 52
17	73	33.6	+21 48.1	274	32.3	-22 40.7	34	40	16 52	17 22	17 56	15 16	64	5 39	50
18	88	33.5	+21 47.8	288	58.3	-22 37.2	35	45	16 37	17 10	17 47	14 59	66	5 57	49
19	103	33.4		303	24.3		33.6	50		18	16 56	36	37 69		6 19 46
20	118	33.4		317	50.4		29.8	52	16 09		49	32	27 70		29 46
21	133	33.3		332	16.5		25.9	54	15 59		42	27	15 71		41 44
22	148	33.2		346	42.7		21.8	41		48	33	21	14 02	73	6 55 42
23	163	33.2		45.9	1 09.0		17.6	58		35	24	16	13 46	76	7 10 41
24	178	33.1	+21 45.5	15	35.3	-22 13.3	43	60 S	15 20	16 14	17 09	13 28	78	7 29	38

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 4 ^h 37 ^m 1		Mag: -3.9 PMG: 11 ^h 26 ^m		Mag: +1.4 PMG: 9 ^h 34 ^m		Mag: -2.4 PMG: 6 ^h 56 ^m		Mag: +0.9 PMG: 17 ^h 20 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	290	32.0	188 45.6	+23 15.6	216 22.4	+22 41.7	255 42.5	+12 37.3	99 18.1	-2 10.4
1	305	34.5	203 44.7	15.5	231 23.0	41.9	270 44.6	37.4	114 20.4	10.4
2	320	36.9	218 43.8	15.3	246 23.6	42.1	285 46.7	37.5	129 22.8	10.5
3	335	39.4	233 43.0	15.1	261 24.2	42.4	300 48.8	37.6	144 25.1	10.6
4	350	41.9	248 42.1	15.0	276 24.8	42.6	315 50.9	37.7	159 27.5	10.6
5	5 44.3	263 41.2	+23 14.8	291 25.4	+22 42.8	330 53.1	+12 37.8	174 29.8	-2 10.7	
6	20 46.8	278 40.4	+23 14.7	306 26.0	+22 43.0	345 55.2	+12 37.9	189 32.2	-2 10.7	
7	35 49.3	293 39.5	14.5	321 26.6	43.2	0 57.3	38.0	204 34.5	10.8	
8	50 51.7	308 38.6	14.4	336 27.2	43.4	15 59.5	38.1	219 36.9	10.8	
9	65 54.2	323 37.7	14.2	351 27.8	43.7	31 01.6	38.2	234 39.3	10.9	
10	80 56.6	338 36.9	14.0	6 28.4	43.9	46 03.7	38.4	249 41.6	11.0	
11	95 59.1	353 36.0	+23 13.9	21 29.0	+22 44.1	61 05.8	+12 38.5	264 44.0	-2 11.0	
12	111 01.6	8 35.1	+23 13.7	36 29.6	+22 44.3	76 08.0	+12 38.6	279 46.3	-2 11.1	
13	126 04.0	23 34.3	13.5	51 30.2	44.5	91 10.1	38.7	294 48.7	11.1	
14	141 06.5	38 33.4	13.4	66 30.8	44.7	106 12.2	38.8	309 51.0	11.2	
15	156 09.0	53 32.5	13.2	81 31.4	44.9	121 14.3	38.9	324 53.4	11.2	
16	171 11.4	68 31.7	13.0	96 32.0	45.2	136 16.5	39.0	339 55.7	11.3	
17	186 13.9	83 30.8	+23 12.9	111 32.6	+22 45.4	151 18.6	+12 39.1	354 58.1	-2 11.4	
18	201 16.4	98 29.9	+23 12.7	126 33.2	+22 45.6	166 20.7	+12 39.2	10 00.5	-2 11.4	
19	216 18.8	113 29.1	12.5	141 33.8	45.8	181 22.8	39.3	25 02.8	11.5	
20	231 21.3	128 28.2	12.4	156 34.4	46.0	196 25.0	39.4	40 05.2	11.5	
21	246 23.8	143 27.3	12.2	171 35.0	46.2	211 27.1	39.5	55 07.5	11.6	
22	261 26.2	158 26.5	12.0	186 35.6	46.4	226 29.2	39.6	70 09.9	11.6	
23	276 28.7	173 25.6	11.8	201 36.2	46.6	241 31.4	39.7	85 12.2	11.7	
24	291 31.1	188 24.7	+23 11.7	216 36.8	+22 46.8	256 33.5	+12 39.8	100 14.6	-2 11.8	
Dif	—		-9 -2		+6 +2		+21 +1		+24 -1	

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15 ^h /7			Edad: 12 ^d 6	PHE { 4 ^h : 57/5 12 ^h : 57/4 20 ^h : 57/2	SD: 15 ^h /7		R°: 51 ^m							
	PMG: 12 ^h 05 ^m 9					PMG: 23 ^h 50 ^m									
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	
0	178	33.1	+21	45.5	15	35.3	-22	13.3	60 N	*** **	1	40	3	01	
1	193	33.0		45.2	30	01.7	74	08.9	44	*** **	2	13	18	20	
2	208	32.9		44.8	44	28.1	74	-22	04.3	46	56	0	35	36	19
3	223	32.9		44.4	58	54.7	76	-21	59.6	47	54	1	32	2	55
4	238	32.8		44.1	73	21.2	75		54.8	48	52	2	02	3	10
5	253	32.7	+21	43.7	87	47.9	77	-21	49.8	50	50	2	24	3	24
6	268	32.7	+21	43.3	102	14.6	77	-21	44.8	50	45	3	03	3	50
7	283	32.6		42.9	116	41.4	78		39.6	52	40		31	4	11
8	298	32.5		42.6	131	08.2	78		34.3	53	35	3	52	27	4
9	313	32.5		42.2	145	35.2	80		28.8	55	30	4	09	4	41
10	328	32.4		41.8	160	02.2	80		23.2	56	20		36	5	04
11	343	32.3	+21	41.4	174	29.2	80	-21	17.6	56	10 N	4	57	5	23
12	358	32.2	+21	41.1	188	56.4	82	-21	11.8	58	0	5	14	5	40
13	13	32.2		40.7	203	23.6	82	-21	05.8	60	10 S		30	5	56
14	28	32.1		40.3	217	50.9	83	-20	59.8	60	20		44	6	12
15	43	32.0		39.9	232	18.3	84		53.7	61	30	5	59	29	6
16	58	32.0		39.5	246	45.7	84		47.4	63	35	6	07	38	7
17	73	31.9	+21	39.2	261	13.2	85	-20	41.0	64	40	6	15	6	49
18	88	31.8	+21	38.8	275	40.8	86	-20	34.5	65	45	6	25	7	01
19	103	31.8		38.4	290	08.5	87		27.9	66	50		35	16	7
20	118	31.7		38.0	304	36.2	87		21.2	67	52		39	22	8
21	133	31.6		37.6	319	04.1	89		14.4	68	54		44	29	12
22	148	31.6		37.3	333	32.0	89		07.5	69	56		50	37	23
23	163	31.5		36.9	348	00.0	90	-20	00.5	70	58	6	56	46	35
24	178	31.4	+21	36.5	2	28.0	90	-19	53.3	72	60 S	7	02	7	57

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 4 ^h 33 ^m 2		Mag: -3.9 PMG: 11 ^h 27 ^m		Mag: +1.4 PMG: 9 ^h 33 ^m		Mag: -2.4 PMG: 6 ^h 53 ^m		Mag: +0.9 PMG: 17 ^h 16 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	291	31.1	188	24.7	+23	11.7	216	36.8	+22	46.8
1	306	33.6	203	23.9		11.5	231	37.4		47.1
2	321	36.1	218	23.0		11.3	246	38.0		47.3
3	336	38.5	233	22.1		11.1	261	38.6		47.5
4	351	41.0	248	21.3		10.9	276	39.2		47.7
5	6	43.5	263	20.4	+23	10.7	291	39.8	+22	47.9
6	21	45.9	278	19.5	+23	10.6	306	40.4	+22	48.1
7	36	48.4	293	18.7		10.4	321	41.0		48.3
8	51	50.9	308	17.8		10.2	336	41.6		48.5
9	66	53.3	323	16.9		10.0	351	42.2		48.7
10	81	55.8	338	16.1		09.8	6	42.8		48.9
11	96	58.3	353	15.2	+23	09.6	21	43.4	+22	49.1
12	112	00.7	8	14.3	+23	09.4	36	44.0	+22	49.3
13	127	03.2	23	13.5		09.2	51	44.6		49.5
14	142	05.6	38	12.6		09.0	66	45.2		49.7
15	157	08.1	53	11.7		08.8	81	45.8		50.0
16	172	10.6	68	10.9		08.6	96	46.4		50.2
17	187	13.0	83	10.0	+23	08.4	111	47.0	+22	50.4
18	202	15.5	98	09.1	+23	08.2	126	47.6	+22	50.6
19	217	18.0	113	08.3		08.0	141	48.2		50.8
20	232	20.4	128	07.4		07.8	156	48.8		51.0
21	247	22.9	143	06.5		07.6	171	49.4		51.2
22	262	25.4	158	05.7		07.4	186	50.0		51.4
23	277	27.8	173	04.8		07.2	201	50.6		51.6
24	292	30.3	188	04.0	+23	07.0	216	51.2	+22	51.8
Dif	—		-9		-2		+6		+2	
							+21		+1	

UT	SOL			☉ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna				
	SD: 15:7 PMG: 12 ^h 06 ^m 0			Edad: 13 ^d 6 PHE { 4 ^h : 57:0 12 ^h : 56:8 20 ^h : 56:6 R°: ***m														
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m				
0	178	31.4	+21	36.5	2	28.0	-19 53.3	60 N	21 08	22 26	** **	20 43 13	3 25 86					
1	193	31.4		36.1	16	56.2	92 46.1	58	20 51	21 55	** **	32 16	39 82					
2	208	31.3		35.7	31	24.4	92 38.7	56	37	32	23 23	22 19	3 51 79					
3	223	31.2		35.3	45	52.7	93 31.3	54	24	21 14	22 34	13 22	4 02 76					
4	238	31.2		34.9	60	21.1	94 23.8	52	14	20 59	22 06	20 06 24	11 74					
5	253	31.1	+21	34.6	74	49.6	95 -19 16.1	50	20 04	20 46	21 45	19 59 26	4 19 73					
6	268	31.1	+21	34.2	89	18.1	95 -19 08.4	45	19 44	20 20	21 07	19 44 30	4 37 68					
7	283	31.0		33.8	103	46.8	97 -19 00.5	40	28	20 00	20 40	32 33	4 51 65					
8	298	30.9		33.4	118	15.5	97 -18 52.6	35	15	19 43	19	21 36	5 04 62					
9	313	30.9		33.0	132	44.3	98 44.6	30	19 03	30	20 02	19 12 38	14 60					
10	328	30.8		32.6	147	13.2	99 36.5	20	18 43	19 07	19 36	18 56 42	32 57					
11	343	30.7	+21	32.2	161	42.1	99 -18 28.3	10 N	18 26	18 48	19 15	18 42 45	5 48 53					
12	358	30.7	+21	31.8	176	11.2	101 -18 20.0	0	18 10	18 32	18 58	18 29 49	6 02 51					
13	13	30.6		31.4	190	40.3	101 11.6	10 S	17 54	16	42	16 52	17 47					
14	28	30.5		31.0	205	09.5	102 -18 03.1	20	37	18 01	28	18 02 55	32 44					
15	43	30.5		30.6	219	38.8	103 -17 54.5	30	18	17 44	13	17 46 59	6 50 40					
16	58	30.4		30.2	234	08.2	104 45.9	35	17 06	34	18 05	36 62	7 00 38					
17	73	30.4	+21	29.8	248	37.6	104 -17 37.1	40	16 54	17 24	17 57	17 25 65	7 12 35					
18	88	30.3	+21	29.5	263	07.2	106 -17 28.3	45	16 39	17 12	17 48	17 13 67	7 25 33					
19	103	30.2		29.1	277	36.8	106 19.4	50	20	16 57	38	16 57 72	42 29					
20	118	30.2		28.7	292	06.5	107 10.4	52	12	51	34	50 74	50 27					
21	133	30.1		28.3	306	36.3	108 -17 01.4	54	16 02	44	29	42 76	7 58 25					
22	148	30.0		27.9	321	06.1	108 -16 52.2	56	15 51	36	24	33 78	8 08 22					
23	163	30.0		27.5	335	36.1	110 43.0	58	38	27	18	22 82	19 20					
24	178	29.9	+21	27.1	350	06.1	110 -16 33.7	60 S	15 23	16 17	17 12	16 10 85	8 31 17					
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 4 ^h 29 ^m 2		Mag: -3.9 PMG: 11 ^h 28 ^m				Mag: +1.4 PMG: 9 ^h 32 ^m				Mag: -2.4 PMG: 6 ^h 49 ^m				Mag: +0.9 PMG: 17 ^h 13 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	292	30.3	188	04.0	+23	07.0	216	51.2	+22	51.8	257	24.7	+12	42.3	101	11.0	-2	13.1
1	307	32.8	203	03.1		06.8	231	51.8		52.0	272	26.8		42.4	116	13.4		13.2
2	322	35.2	218	02.2		06.6	246	52.4		52.2	287	28.9		42.5	131	15.7		13.3
3	337	37.7	233	01.4		06.4	261	53.0		52.4	302	31.1		42.6	146	18.1		13.3
4	352	40.1	248	00.5		06.2	276	53.6		52.6	317	33.2		42.7	161	20.4		13.4
5	7	42.6	262	59.6	+23	06.0	291	54.3	+22	52.8	332	35.3	+12	42.8	176	22.8	-2	13.4
6	22	45.1	277	58.8	+23	05.8	306	54.9	+22	53.0	347	37.5	+12	42.9	191	25.1	-2	13.5
7	37	47.5	292	57.9		05.5	321	55.5		53.2	2	39.6		43.0	206	27.5		13.6
8	52	50.0	307	57.0		05.3	336	56.1		53.4	17	41.8		43.1	221	29.8		13.6
9	67	52.5	322	56.2		05.1	351	56.7		53.6	32	43.9		43.2	236	32.2		13.7
10	82	54.9	337	55.3		04.9	6	57.3		53.8	47	46.0		43.3	251	34.5		13.7
11	97	57.4	352	54.5	+23	04.7	21	57.9	+22	54.0	62	48.2	+12	43.4	266	36.9	-2	13.8
12	112	59.9	7	53.6	+23	04.4	36	58.5	+22	54.2	77	50.3	+12	43.5	281	39.2	-2	13.9
13	128	02.3	22	52.7		04.2	51	59.1		54.4	92	52.4		43.6	296	41.6		13.9
14	143	04.8	37	51.9		04.0	66	59.7		54.6	107	54.6		43.7	311	43.9		14.0
15	158	07.2	52	51.0		03.8	82	00.3		54.7	122	56.7		43.8	326	46.3		14.0
16	173	09.7	67	50.1		03.5	97	00.9		54.9	137	58.9		43.9	341	48.6		14.1
17	188	12.2	82	49.3	+23	03.3	112	01.5	+22	55.1	153	01.0	+12	44.1	356	50.9	-2	14.2
18	203	14.6	97	48.4	+23	03.1	127	02.1	+22	55.3	168	03.1	+12	44.2	11	53.3	-2	14.2
19	218	17.1	112	47.6		02.9	142	02.7		55.5	183	05.3		44.3	26	55.6		14.3
20	233	19.6	127	46.7		02.6	157	03.3		55.7	198	07.4		44.4	41	58.0		14.3
21	248	22.0	142	45.8		02.4	172	03.9		55.9	213	09.5		44.5	57	00.3		14.4
22	263	24.5	157	45.0		02.2	187	04.5		56.1	228	11.7		44.6	72	02.7		14.5
23	278	27.0	172	44.1		01.9	202	05.1		56.3	243	13.8		44.7	87	05.0		14.5
24	293	29.4	187	43.3	+23	01.7	217	05.7	+22	56.5	258	16.0	+12	44.8	102	07.4	-2	14.6
Dif	—		-9		-2		+6		+2		+21		+1		+23		-	

UT	SOL				LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15 ^h 7 PMG: 12 ^h 06 ^m 1				Edad: 14 ^d 6 PHE { 4 ^h : 56 ^m 4 12 ^h : 56 ^m 2 20 ^h : 56 ^m 0 PMG: 0 ^h 41 ^m R°: 48 ^m															
	hG ☉		Dec		hG ☾		Dif		Dec			Dif			Náutico	Civil	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m
0	178	29.9	+21	27.1	350	06.1	-16	33.7	93	58	60 N	** **	1 47	3 05	20 56	10	4 51	84		
1	193	29.9		26.7	4	36.2 ¹¹¹		24.4	93	58	58	** *	2 17	22	48 13	5 01	81			
2	208	29.8		26.3	19	06.4 ¹¹²		14.9	95	56	56	0 50	40	36	41 16	10 78				
3	223	29.7		25.9	33	36.7 ¹¹³	-16	05.4	95	54	54	1 38	2 58	48	35 18	18 75				
4	238	29.7		25.5	48	07.1 ¹¹⁴	-15	55.8	96	52	52	2 06	3 13	3 59	30 20	25 73				
5	253	29.6	+21	25.0	62	37.5 ¹¹⁴	-15	46.2	96	50	50	2 28	3 26	4 08	20 25	21 5 32	71			
6	268	29.6	+21	24.6	77	08.0 ¹¹⁵	-15	36.4	98	45	45	3 06	3 52	4 28	20 14	25 5 45	67			
7	283	29.5		24.2	91	38.6 ¹¹⁶		26.6	98	40	40	33	4 12	44	20 05	29 5 56	64			
8	298	29.5		23.8	106	09.3 ¹¹⁷		16.8	98	35	35	3 53	29	4 58	19 57	32 6 06	61			
9	313	29.4		23.4	120	40.0 ¹¹⁷	-15	06.9	99	30	30	4 10	4 43	5 09	50 34	14 59				
10	328	29.3		23.0	135	10.8 ¹¹⁸	-14	56.9	100	20	20	37	5 05	29	38 38	29 54				
11	343	29.3	+21	22.6	149	41.7 ¹¹⁹	-14	46.8	101	10 N	10 N	4 57	5 24	5 47	19 27	43 6 41	51			
12	358	29.2	+21	22.2	164	12.7 ¹²⁰	-14	36.7	101	0	0	5 14	5 40	6 02	19 18	45 6 53	47			
13	13	29.2		21.8	178	43.8 ¹²¹		26.5	102	10 S	10 S	30	5 56	18	19 08	49 7 04	44			
14	28	29.1		21.4	193	14.9 ¹²¹		16.3	102	20	20	44	6 11	35	18 57	53 16 41				
15	43	29.0		21.0	207	46.1 ¹²²	-14	06.0	103	30	30	5 59	28	6 54	45 57	30 36				
16	58	29.0		20.6	222	17.4 ¹²³	-13	55.7	103	35	35	6 06	38	7 05	38 59	38 34				
17	73	28.9	+21	20.2	236	48.8 ¹²⁴	-13	45.3	104	40	40	6 15	6 48	7 18	18 30	62 7 47	31			
18	88	28.9	+21	19.7	251	20.2 ¹²⁴	-13	34.8	105	45	45	6 24	7 00	7 33	18 20	66 7 58	28			
19	103	28.8		19.3	265	51.7 ¹²⁵		24.3	105	50	50	34	14	7 51	09 70	8 11	23			
20	118	28.8		18.9	280	23.3 ¹²⁶		13.7	106	52	52	38	21	8 00	18 04	72 17 22				
21	133	28.7		18.5	294	55.0 ¹²⁷	-13	03.1	106	54	54	43	28	09	17 58	74 23 20				
22	148	28.6		18.1	309	26.7 ¹²⁷	-12	52.4	107	56	56	48	35	20	51 77	30 18				
23	163	28.6		17.7	323	58.5 ¹²⁸		41.7	107	58	58	6 54	44	33	44 79	39 14				
24	178	28.5	+21	17.3	338	30.4 ¹²⁹	-12	30.9	108	60 S	60 S	7 00	7 54	8 47	17 35	83 8 48	11			
UT	ARIES				VENUS				MARTE				JÚPITER				SATURNO			
	PMG 4 ^h 25 ^m 3				Mag: -3.9 PMG: 11 ^h 30 ^m				Mag: +1.4 PMG: 9 ^h 31 ^m				Mag: -2.4 PMG: 6 ^h 46 ^m				Mag: +0.9 PMG: 17 ^h 09 ^m			
	hG ♈		Dec		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	293	29.4	187	43.3	+23	01.7	217	05.7	+22	56.5	258	16.0	+12	44.8	102	07.4	-2	14.6		
1	308	31.9	202	42.4		01.5	232	06.3		56.7	273	18.1		44.9	117	09.7		14.6		
2	323	34.4	217	41.5		01.2	247	06.9		56.9	288	20.2		45.0	132	12.1		14.7		
3	338	36.8	232	40.7		01.0	262	07.5		57.1	303	22.4		45.1	147	14.4		14.8		
4	353	39.3	247	39.8		00.7	277	08.1		57.3	318	24.5		45.2	162	16.8		14.8		
5	8	41.7	262	39.0	+23	00.5	292	08.7	+22	57.4	333	26.7	+12	45.3	177	19.1	-2	14.9		
6	23	44.2	277	38.1	+23	00.3	307	09.3	+22	57.6	348	28.8	+12	45.4	192	21.5	-2	14.9		
7	38	46.7	292	37.2	+23	00.0	322	09.9		57.8	3	31.0		45.5	207	23.8		15.0		
8	53	49.1	307	36.4	+22	59.8	337	10.5		58.0	18	33.1		45.6	222	26.1		15.1		
9	68	51.6	322	35.5		59.5	352	11.1		58.2	33	35.2		45.7	237	28.5		15.1		
10	83	54.1	337	34.7		59.3	7	11.7		58.4	48	37.4		45.8	252	30.8		15.2		
11	98	56.5	352	33.8	+22	59.0	22	12.3	+22	58.6	63	39.5	+12	45.9	267	33.2	-2	15.2		
12	113	59.0	7	32.9	+22	58.8	37	12.9	+22	58.8	78	41.7	+12	46.0	282	35.5	-2	15.3		
13	129	01.5	22	32.1		58.5	52	13.5		59.0	93	43.8		46.1	297	37.9		15.4		
14	144	03.9	37	31.2		58.3	67	14.1		59.1	108	46.0		46.2	312	40.2		15.4		
15	159	06.4	52	30.4		58.0	82	14.7		59.3	123	48.1		46.3	327	42.6		15.5		
16	174	08.9	67	29.5		57.8	97	15.3		59.5	138	50.2		46.4	342	44.9		15.5		
17	189	11.3	82	28.7	+22	57.5	112	15.9	+22	59.7	153	52.4	+12	46.5	357	47.2	-2	15.6		
18	204	13.8	97	27.8	+22	57.3	127	16.5	+22	59.9	168	54.5	+12	46.6	12	49.6	-2	15.7		
19	219	16.2	112	26.9		57.0	142	17.1	+23	00.1	183	56.7		46.7	27	51.9		15.7		
20	234	18.7	127	26.1		56.8	157	17.8		00.3	198	58.8		46.8	42	54.3		15.8		
21	249	21.2	142	25.2		56.5	172	18.4		00.4	214	01.0		46.9	57	56.6		15.9		
22	264	23.6	157	24.4		56.2	187	19.0		00.6	229	03.1		46.9	72	59.0		15.9		
23	279	26.1	172	23.5		56.0	202	19.6		00.8	244	05.3		47.0	88	01.3		16.0		
24	294	28.6	187	22.7	+22	55.7	217	20.2	+23	01.0	259	07.4	+12	47.1	103	03.7	-2	16.0		
Dif	—		-9		-2		+6		+2		+21		+1		+23		-			

UT	SOL			☉ LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15 ^h 7			Edad: 15 ^d 6 PHE { 4 ^h : 55 ^m 8 12 ^h : 55 ^m 6 20 ^h : 55 ^m 5											
	PMG: 12 ^h 06 ^m 1			SD: 15 ^h 2 PMG: 1 ^h 29 ^m R°: 45 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m		h m m	
0	178	28.5	+21 17.3	338	30.4	-12 30.9	108	60 N	21 04	22 19	** **	21 06 8		6 15 82	
1	193	28.5	16.9	353	02.3 ¹²⁹	20.1	108	58	20 48	21 51	** **	21 01 11		22 78	
2	208	28.4	16.4	7	34.3 ¹³⁰	-12 09.2 ¹⁰⁹	109	56	34	29	23 11	20 57 13		28 76	
3	223	28.4	16.0	22	06.4 ¹³¹	-11 58.3 ¹⁰⁹	109	54	22	21 11	22 29	53 15		33 74	
4	238	28.3	15.6	36	38.5 ¹³¹	47.4 ¹⁰⁹	109	52	12	20 57	22 02	50 17		38 71	
5	253	28.3	+21 15.2	51	10.7 ¹³²	-11 36.4 ¹¹⁰	110	50	20 02	20 44	21 42	20 46 19		6 43 69	
6	268	28.2	+21 14.8	65	43.0 ¹³³	-11 25.3 ¹¹¹	111	45	19 43	20 18	21 04	20 39 23		6 52 65	
7	283	28.2	14.3	80	15.4 ¹³⁴	14.3 ¹¹⁰	110	40	27	19 59	20 38	34 26		7 00 62	
8	298	28.1	13.9	94	47.8 ¹³⁴	-11 03.1 ¹¹²	112	35	14	42	18	29 29		07 58	
9	313	28.1	13.5	109	20.2 ¹³⁴	-10 52.0 ¹¹¹	111	30	19 02	29	20 01	24 32		13 56	
10	328	28.0	13.1	123	52.8 ¹³⁶	40.8 ¹¹²	112	20	18 42	19 06	19 35	16 36		23 51	
11	343	27.9	+21 12.7	138	25.4 ¹³⁶	-10 29.6 ¹¹²	112	10 N	18 25	18 48	19 15	20 10 39		7 32 47	
12	358	27.9	+21 12.2	152	58.1 ¹³⁷	-10 18.3 ¹¹³	113	0	18 10	18 32	18 58	20 03 43		7 40 44	
13	13	27.8	11.8	167	30.8 ¹³⁷	-10 07.0 ¹¹³	113	10 S	17 54	17	43	19 57 46		48 41	
14	28	27.8	11.4	182	03.6 ¹³⁸	-9 55.6 ¹¹⁴	114	20	38	18 01	28	50 50		7 57 37	
15	43	27.7	11.0	196	36.4 ¹³⁸	44.3 ¹¹³	113	30	19	17 45	14	42 55		8 06 33	
16	58	27.7	10.5	211	09.3 ¹³⁹	32.9 ¹¹⁴	114	35	17 08	35	18 06	37 58		12 30	
17	73	27.6	+21 10.1	225	42.3 ¹⁴⁰	-9 21.4 ¹¹⁵	115	40	16 55	17 25	17 58	19 32 61		8 18 28	
18	88	27.6	+21 09.7	240	15.3 ¹⁴⁰	-9 10.0 ¹¹⁴	114	45	16 40	17 13	17 50	19 26 64		8 26 24	
19	103	27.5	09.3	254	48.4 ¹⁴¹	-8 58.5 ¹¹⁵	115	50	22	16 59	40	19 68		34 21	
20	118	27.5	08.8	269	21.5 ¹⁴¹	46.9 ¹¹⁶	116	52	14	53	35	16 69		39 18	
21	133	27.4	08.4	283	54.7 ¹⁴²	35.4 ¹¹⁵	115	54	16 04	46	31	12 72		43 16	
22	148	27.4	08.0	298	28.0 ¹⁴³	23.8 ¹¹⁶	116	56	15 54	38	26	08 74		48 14	
23	163	27.3	07.5	313	01.3 ¹⁴³	12.2 ¹¹⁶	116	58	41	30	20	19 03 77		53 12	
24	178	27.3	+21 07.1	327	34.6 ¹⁴³	-8 00.6 ¹¹⁶	116	60 S	15 27	16 20	17 14	18 58 80		8 59 9	

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 4 ^h 21 ^m 4		Mag: -3.9 PMG: 11 ^h 31 ^m			Mag: +1.4 PMG: 9 ^h 30 ^m			Mag: -2.4 PMG: 6 ^h 43 ^m			Mag: +0.9 PMG: 17 ^h 05 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	'	°	°	'	°	°	'	°	°	'	°
0	294	28.6	187	22.7	+22 55.7	217	20.2	+23 01.0	259	07.4	+12 47.1	103	03.7	-2 16.0
1	309	31.0	202	21.8	55.4	232	20.8	01.2	274	09.5	47.2	118	06.0	16.1
2	324	33.5	217	20.9	55.2	247	21.4	01.4	289	11.7	47.3	133	08.3	16.2
3	339	36.0	232	20.1	54.9	262	22.0	01.5	304	13.8	47.4	148	10.7	16.2
4	354	38.4	247	19.2	54.6	277	22.6	01.7	319	16.0	47.5	163	13.0	16.3
5	9	40.9	262	18.4	+22 54.4	292	23.2	+23 01.9	334	18.1	+12 47.6	178	15.4	-2 16.3
6	24	43.4	277	17.5	+22 54.1	307	23.8	+23 02.1	349	20.3	+12 47.7	193	17.7	-2 16.4
7	39	45.8	292	16.7	53.8	322	24.4	02.3	4	22.4	47.8	208	20.1	16.5
8	54	48.3	307	15.8	53.6	337	25.0	02.4	19	24.6	47.9	223	22.4	16.5
9	69	50.7	322	15.0	53.3	352	25.6	02.6	34	26.7	48.0	238	24.7	16.6
10	84	53.2	337	14.1	53.0	7	26.2	02.8	49	28.9	48.1	253	27.1	16.7
11	99	55.7	352	13.2	+22 52.7	22	26.8	+23 03.0	64	31.0	+12 48.2	268	29.4	-2 16.7
12	114	58.1	7	12.4	+22 52.5	37	27.4	+23 03.2	79	33.2	+12 48.3	283	31.8	-2 16.8
13	130	00.6	22	11.5	52.2	52	28.0	03.3	94	35.3	48.4	298	34.1	16.8
14	145	03.1	37	10.7	51.9	67	28.6	03.5	109	37.5	48.5	313	36.4	16.9
15	160	05.5	52	09.8	51.6	82	29.2	03.7	124	39.6	48.6	328	38.8	17.0
16	175	08.0	67	09.0	51.3	97	29.8	03.9	139	41.8	48.7	343	41.1	17.0
17	190	10.5	82	08.1	+22 51.0	112	30.4	+23 04.1	154	43.9	+12 48.8	358	43.5	-2 17.1
18	205	12.9	97	07.3	+22 50.8	127	31.0	+23 04.2	169	46.1	+12 48.9	13	45.8	-2 17.2
19	220	15.4	112	06.4	50.5	142	31.6	04.4	184	48.2	49.0	28	48.2	17.2
20	235	17.8	127	05.6	50.2	157	32.2	04.6	199	50.4	49.1	43	50.5	17.3
21	250	20.3	142	04.7	49.9	172	32.8	04.8	214	52.5	49.2	58	52.8	17.3
22	265	22.8	157	03.9	49.6	187	33.4	04.9	229	54.7	49.3	73	55.2	17.4
23	280	25.2	172	03.0	49.3	202	34.1	05.1	244	56.8	49.4	88	57.5	17.5
24	295	27.7	187	02.2	+22 49.0	217	34.7	+23 05.3	259	59.0	+12 49.5	103	59.9	-2 17.5
Dif	—		-9		-3	+6		+2	+21		+1	+23		-1

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15 ^h 7			Edad: 16 ^d 6 PHE { 4 ^h : 55 ^m 3 12 ^h : 55 ^m 1 20 ^h : 55 ^m 0										
	PMG: 12 ^h 06 ^m 2			SD: 15 ^h 1 PMG: 2 ^h 14 ^m R°: 42 ^m										
	hG ☉		Dec	hG ☾ Dif		Dec Dif		Náutico	Civil		Hora	R°	Hora	R°
h	°	'	°	°	'	°	°	h m	h m	h m	h m m		h m m	
0	178	27.3	+21 07.1	327	34.6	-8 00.6	60 N	** **	1 53	3 09	21 14	7	7 37	78
1	193	27.2	06.7	342	08.0 ¹⁴⁴	-7 48.9 ¹¹⁷	58	** **	2 22	25	12 10	40	76	
2	208	27.2	06.2	356	41.5 ¹⁴⁵	37.2 ¹¹⁷	56	1 02	2 44	39	10 12	44	73	
3	223	27.1	05.8	11	15.0 ¹⁴⁵	25.5 ¹¹⁷	54	1 44	3 01	3 51	08 15	47	71	
4	238	27.1	05.4	25	48.6 ¹⁴⁶	13.8 ¹¹⁷	52	2 11	16	4 01	07 16	49	69	
5	253	27.0	+21 05.0	40	22.2 ¹⁴⁶	-7 02.1 ¹¹⁷	50	2 31	3 29	4 10	21 05	18	7 52	67
6	268	27.0	+21 04.5	54	55.8 ¹⁴⁶	-6 50.3 ¹¹⁸	45	3 08	3 54	4 30	21 02	22	7 57	63
7	283	26.9	04.1	69	29.5 ¹⁴⁷	38.5 ¹¹⁸	40	35	4 14	46	21 00	25	8 02	59
8	298	26.9	03.6	84	03.3 ¹⁴⁸	26.7 ¹¹⁸	35	3 55	30	4 59	20 58	27	05	57
9	313	26.8	03.2	98	37.1 ¹⁴⁸	14.9 ¹¹⁸	30	4 11	4 44	5 11	56 30	09	54	
10	328	26.8	02.8	113	10.9 ¹⁴⁸	-6 03.1 ¹¹⁸	20	37	5 06	30	52 35	14	50	
11	343	26.7	+21 02.3	127	44.8 ¹⁴⁹	-5 51.3 ¹¹⁸	10 N	4 58	5 24	5 47	20 49	38	8 19	46
12	358	26.7	+21 01.9	142	18.8 ¹⁵⁰	-5 39.4 ¹¹⁹	0	5 15	5 40	6 03	20 46	42	8 24	42
13	13	26.6	01.5	156	52.7 ¹⁴⁹	27.5 ¹¹⁹	10 S	30	5 56	18	43 46	29	39	
14	28	26.6	01.0	171	26.7 ¹⁵⁰	15.6 ¹¹⁹	20	44	6 11	35	40 50	34	35	
15	43	26.6	00.6	186	00.8 ¹⁵¹	-5 03.7 ¹¹⁹	30	5 58	28	6 53	37 54	39	31	
16	58	26.5	+21 00.1	200	34.9 ¹⁵¹	-4 51.8 ¹¹⁹	35	6 06	37	7 04	35 56	42	29	
17	73	26.5	+20 59.7	215	09.0 ¹⁵¹	-4 39.9 ¹¹⁹	40	6 14	6 47	7 17	20 33	59	8 46	25
18	88	26.4	+20 59.3	229	43.2 ¹⁵²	-4 28.0 ¹¹⁹	45	6 22	6 59	7 31	20 30	62	8 50	22
19	103	26.4	58.8	244	17.4 ¹⁵²	16.1 ¹¹⁹	50	32	7 12	49	27 66	55	18	
20	118	26.3	58.4	258	51.6 ¹⁵²	-4 04.1 ¹²⁰	52	36	19	7 58	25 69	57	17	
21	133	26.3	57.9	273	25.9 ¹⁵³	-3 52.2 ¹¹⁹	54	41	26	8 07	24 70	8 59	15	
22	148	26.2	57.5	288	00.2 ¹⁵³	40.2 ¹²⁰	56	46	33	18	22 73	9 02	13	
23	163	26.2	57.0	302	34.5 ¹⁵³	28.2 ¹²⁰	58	51	42	30	20 75	05	11	
24	178	26.1	+20 56.6	317	08.9 ¹⁵⁴	-3 16.3 ¹¹⁹	60 S	6 57	7 51	8 44	20 18	78	9 08	8

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO		
	PMG 4 ^h 17 ^m 4		Mag: -3.9 PMG: 11 ^h 33 ^m		Mag: +1.4 PMG: 9 ^h 29 ^m		Mag: -2.4 PMG: 6 ^h 39 ^m		Mag: +0.9 PMG: 17 ^h 01 ^m		
	hG ♈		hG ♀ Dec		hG ♂ Dec		hG ♃ Dec		hG ♄ Dec		
h	°	'	°	°	'	°	°	°	°	'	°
0	295	27.7	187 02.2	+22 49.0	217 34.7	+23 05.3	259 59.0	+12 49.5	103 59.9	-2 17.5	
1	310	30.2	202 01.3	48.7	232 35.3	05.5	275 01.1	49.6	119 02.2	17.6	
2	325	32.6	217 00.5	48.4	247 35.9	05.6	290 03.3	49.7	134 04.5	17.7	
3	340	35.1	231 59.6	48.1	262 36.5	05.8	305 05.4	49.8	149 06.9	17.7	
4	355	37.6	246 58.8	47.9	277 37.1	06.0	320 07.6	49.9	164 09.2	17.8	
5	10	40.0	261 57.9	+22 47.6	292 37.7	+23 06.1	335 09.7	+12 50.0	179 11.5	-2 17.8	
6	25	42.5	276 57.1	+22 47.3	307 38.3	+23 06.3	350 11.9	+12 50.1	194 13.9	-2 17.9	
7	40	45.0	291 56.2	47.0	322 38.9	06.5	5 14.0	50.2	209 16.2	18.0	
8	55	47.4	306 55.4	46.7	337 39.5	06.7	20 16.2	50.3	224 18.6	18.0	
9	70	49.9	321 54.5	46.4	352 40.1	06.8	35 18.3	50.3	239 20.9	18.1	
10	85	52.3	336 53.7	46.1	7 40.7	07.0	50 20.5	50.4	254 23.2	18.2	
11	100	54.8	351 52.8	+22 45.7	22 41.3	+23 07.2	65 22.6	+12 50.5	269 25.6	-2 18.2	
12	115	57.3	6 52.0	+22 45.4	37 41.9	+23 07.3	80 24.8	+12 50.6	284 27.9	-2 18.3	
13	130	59.7	21 51.1	45.1	52 42.5	07.5	95 26.9	50.7	299 30.3	18.3	
14	146	02.2	36 50.3	44.8	67 43.1	07.7	110 29.1	50.8	314 32.6	18.4	
15	161	04.7	51 49.4	44.5	82 43.7	07.9	125 31.3	50.9	329 34.9	18.5	
16	176	07.1	66 48.6	44.2	97 44.3	08.0	140 33.4	51.0	344 37.3	18.5	
17	191	09.6	81 47.7	+22 43.9	112 44.9	+23 08.2	155 35.6	+12 51.1	359 39.6	-2 18.6	
18	206	12.1	96 46.9	+22 43.6	127 45.5	+23 08.4	170 37.7	+12 51.2	14 41.9	-2 18.7	
19	221	14.5	111 46.0	43.3	142 46.1	08.5	185 39.9	51.3	29 44.3	18.7	
20	236	17.0	126 45.2	43.0	157 46.7	08.7	200 42.0	51.4	44 46.6	18.8	
21	251	19.5	141 44.3	42.6	172 47.3	08.9	215 44.2	51.5	59 49.0	18.9	
22	266	21.9	156 43.5	42.3	187 48.0	09.0	230 46.3	51.6	74 51.3	18.9	
23	281	24.4	171 42.6	42.0	202 48.6	09.2	245 48.5	51.7	89 53.6	19.0	
24	296	26.8	186 41.8	+22 41.7	217 49.2	+23 09.4	260 50.7	+12 51.8	104 56.0	-2 19.0	
Dif	—		-8	-3	+6		+2	+22	+1	+23	

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15 ^h 7			Edad: 17 ^d 6 PHE { 4 ^h : 54 ^m 8 12 ^h : 54 ^m 7 20 ^h : 54 ^m 6										
	PMG: 12 ^h 06 ^m 3			SD: 15 ^h 0 PMG: 2 ^h 56 ^m R°: 42 ^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	26.1	+20 56.6	317	08.9	-3 16.3		60 N	21 00	22 13	** **	21 21 8	8 55 78	
1	193	26.1	56.2	331	43.3 ¹⁵⁴	-3 04.3 ¹²⁰		58	20 45	21 46	** **	22 10	56 75	
2	208	26.1	55.7	346	17.8 ¹⁵⁵	-2 52.3 ¹²⁰		56	31	25	23 01	22 13	57 72	
3	223	26.0	55.3	0	52.2 ¹⁵⁴	40.3 ¹²⁰		54	20	21 08	22 23	23 14	58 70	
4	238	26.0	54.8	15	26.7 ¹⁵⁵	28.3 ¹²⁰		52	09	20 54	21 58	23 16	58 68	
5	253	25.9	+20 54.4	30	01.3 ¹⁵⁶	-2 16.4 ¹¹⁹		50	20 00	20 41	21 38	21 23 18	8 59 66	
6	268	25.9	+20 53.9	44	35.8 ¹⁵⁵	-2 04.4 ¹²⁰		45	19 41	20 16	21 02	21 24 22	9 00 62	
7	283	25.8	53.5	59	10.4 ¹⁵⁶	-1 52.4 ¹²⁰		40	26	19 57	20 36	25 24	01 59	
8	298	25.8	53.0	73	45.0 ¹⁵⁶	40.4 ¹²⁰		35	13	41	16	25 28	02 56	
9	313	25.8	52.6	88	19.6 ¹⁵⁶	28.4 ¹²⁰		30	19 01	28	20 00	26 30	03 53	
10	328	25.7	52.1	102	54.3 ¹⁵⁷	16.5 ¹¹⁹		20	18 42	19 06	19 34	27 34	04 49	
11	343	25.7	+20 51.7	117	28.9 ¹⁵⁶	-1 04.5 ¹²⁰		10 N	18 25	18 48	19 14	21 27 38	9 05 45	
12	358	25.6	+20 51.2	132	03.6 ¹⁵⁷	-0 52.5 ¹²⁰		0	18 10	18 32	18 58	21 28 41	9 06 42	
13	13	25.6	50.8	146	38.3 ¹⁵⁷	40.5 ¹²⁰		10 S	17 55	17	43	29 45	08 37	
14	28	25.5	50.3	161	13.1 ¹⁵⁸	28.6 ¹¹⁹		20	38	18 02	29	30 48	09 34	
15	43	25.5	49.8	175	47.8 ¹⁵⁷	16.6 ¹²⁰		30	20	17 46	15	31 52	10 30	
16	58	25.5	49.4	190	22.6 ¹⁵⁸	-0 04.7 ¹¹⁹		35	17 09	37	08	31 55	11 27	
17	73	25.4	+20 48.9	204	57.4 ¹⁵⁸	+0 07.3 ¹²⁰		40	16 57	17 26	18 00	21 32 58	9 11 25	
18	88	25.4	+20 48.5	219	32.2 ¹⁵⁸	+0 19.2 ¹¹⁹		45	16 42	17 15	17 51	21 32 62	9 12 22	
19	103	25.3	48.0	234	07.0 ¹⁵⁸	31.1 ¹¹⁹		50	25	17 01	42	33 66	13 18	
20	118	25.3	47.6	248	41.8 ¹⁵⁸	43.0 ¹¹⁹		52	16	16 55	38	34 67	14 16	
21	133	25.3	47.1	263	16.7 ¹⁵⁹	+0 55.0 ¹²⁰		54	16 07	48	33	34 69	14 15	
22	148	25.2	46.7	277	51.6 ¹⁵⁹	+1 06.9 ¹¹⁹		56	15 57	41	28	35 71	15 12	
23	163	25.2	46.2	292	26.4 ¹⁵⁸	18.7 ¹¹⁸		58	45	33	23	35 74	16 9	
24	178	25.1	+20 45.7	307	01.3 ¹⁵⁹	+1 30.6 ¹¹⁹		60 S	15 31	16 23	17 17	21 36 77	9 16 8	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 4 ^h 13 ^m 5		Mag: -3.9 PMG: 11 ^h 34 ^m		Mag: +1.4 PMG: 9 ^h 28 ^m		Mag: -2.4 PMG: 6 ^h 36 ^m		Mag: +0.9 PMG: 16 ^h 58 ^m	
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	°	°	°	°	°	°	°	°	
0	296	26.8	186 41.8 +22 41.7	217 49.2 +23 09.4	260 50.7 +12 51.8	104 56.0 -2 19.0				
1	311	29.3	201 40.9 41.4	232 49.8 09.5	275 52.8 51.9	119 58.3 19.1				
2	326	31.8	216 40.1 41.0	247 50.4 09.7	290 55.0 52.0	135 00.6 19.2				
3	341	34.2	231 39.2 40.7	262 51.0 09.9	305 57.1 52.1	150 03.0 19.2				
4	356	36.7	246 38.4 40.4	277 51.6 10.0	320 59.3 52.1	165 05.3 19.3				
5	11	39.2	261 37.6 +22 40.1	292 52.2 +23 10.2	336 01.4 +12 52.2	180 07.6 -2 19.4				
6	26	41.6	276 36.7 +22 39.7	307 52.8 +23 10.3	351 03.6 +12 52.3	195 10.0 -2 19.4				
7	41	44.1	291 35.9 39.4	322 53.4 10.5	6 05.8 52.4	210 12.3 19.5				
8	56	46.6	306 35.0 39.1	337 54.0 10.7	21 07.9 52.5	225 14.7 19.6				
9	71	49.0	321 34.2 38.8	352 54.6 10.8	36 10.1 52.6	240 17.0 19.6				
10	86	51.5	336 33.3 38.4	7 55.2 11.0	51 12.2 52.7	255 19.3 19.7				
11	101	53.9	351 32.5 +22 38.1	22 55.8 +23 11.2	66 14.4 +12 52.8	270 21.7 -2 19.8				
12	116	56.4	6 31.6 +22 37.8	37 56.4 +23 11.3	81 16.6 +12 52.9	285 24.0 -2 19.8				
13	131	58.9	21 30.8 37.4	52 57.0 11.5	96 18.7 53.0	300 26.3 19.9				
14	147	01.3	36 30.0 37.1	67 57.6 11.6	111 20.9 53.1	315 28.7 20.0				
15	162	03.8	51 29.1 36.8	82 58.2 11.8	126 23.0 53.2	330 31.0 20.0				
16	177	06.3	66 28.3 36.4	97 58.9 12.0	141 25.2 53.3	345 33.3 20.1				
17	192	08.7	81 27.4 +22 36.1	112 59.5 +23 12.1	156 27.4 +12 53.4	0 35.7 -2 20.1				
18	207	11.2	96 26.6 +22 35.7	128 00.1 +23 12.3	171 29.5 +12 53.4	15 38.0 -2 20.2				
19	222	13.7	111 25.7 35.4	143 00.7 12.4	186 31.7 53.5	30 40.3 20.3				
20	237	16.1	126 24.9 35.0	158 01.3 12.6	201 33.8 53.6	45 42.7 20.3				
21	252	18.6	141 24.1 34.7	173 01.9 12.8	216 36.0 53.7	60 45.0 20.4				
22	267	21.1	156 23.2 34.4	188 02.5 12.9	231 38.2 53.8	75 47.3 20.5				
23	282	23.5	171 22.4 34.0	203 03.1 13.1	246 40.3 53.9	90 49.7 20.5				
24	297	26.0	186 21.5 +22 33.7	218 03.7 +23 13.2	261 42.5 +12 54.0	105 52.0 -2 20.6				
Dif	—	—	-8 -3	+6 +2	+22 +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 06 ^m 4			Edad: 18 ^d 6 SD: 14 ^h 9 PMG: 3 ^h 38 ^m	PHE { 4 ^h : 54 ^m 5 12 ^h : 54 ^m 4 20 ^h : 54 ^m 3 R°: 41 ^m										
	hG ☉	Dec	hG ☾			Dif		Dec	Dif		Náutico	Civil	Hora	R°	Hora
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	178	25.1	+20	45.7	307	01.3	+1 30.6	60 N	*** **	2 00	3 13	21 29	8	10 13	76
1	193	25.1		45.3	321	36.2 ¹⁵⁹	42.5 ¹¹⁹	58	*** **	27	29	32 11		11 74	
2	208	25.1		44.8	336	11.1 ¹⁵⁹	+1 54.3 ¹¹⁸	56	1 12	2 48	42	35 13		09 71	
3	223	25.0		44.4	350	46.0 ¹⁵⁹	+2 06.2 ¹¹⁹	54	1 50	3 05	3 54	37 15		08 69	
4	238	25.0		43.9	5	20.9 ¹⁵⁹	18.0 ¹¹⁸	52	2 15	19	4 04	39 17		06 67	
5	253	25.0	+20	43.4	19	55.8 ¹⁵⁹	+2 29.8 ¹¹⁸	50	2 35	3 32	4 13	21 41	19	10 05	65
6	268	24.9	+20	43.0	34	30.8 ¹⁶⁰	+2 41.6 ¹¹⁸	45	3 11	3 57	4 32	21 46	22	10 02	61
7	283	24.9		42.5	49	05.7 ¹⁵⁹	+2 53.4 ¹¹⁸	40	37	4 16	4 47	49 26		10 00	58
8	298	24.8		42.0	63	40.6 ¹⁵⁹	+3 05.1 ¹¹⁷	35	3 57	32	5 00	53 28		9 58	55
9	313	24.8		41.6	78	15.6 ¹⁶⁰	16.9 ¹¹⁸	30	4 13	4 45	12	21 56	30	56 53	
10	328	24.8		41.1	92	50.5 ¹⁵⁹	28.6 ¹¹⁷	20	38	5 07	31	22 01	34	53 49	
11	343	24.7	+20	40.6	107	25.5 ¹⁶⁰	+3 40.3 ¹¹⁷	10 N	4 58	5 25	5 47	22 05	38	9 50	45
12	358	24.7	+20	40.2	122	00.4 ¹⁵⁹	+3 52.0 ¹¹⁷	0	5 15	5 41	6 03	22 09	42	9 48	41
13	13	24.7		39.7	136	35.3 ¹⁵⁹	+4 03.6 ¹¹⁶	10 S	30	5 56	18	14 45		45 38	
14	28	24.6		39.2	151	10.3 ¹⁶⁰	15.3 ¹¹⁷	20	44	6 11	34	18 49		43 34	
15	43	24.6		38.8	165	45.2 ¹⁵⁹	26.9 ¹¹⁶	30	5 58	27	6 53	23 53		40 30	
16	58	24.6		38.3	180	20.1 ¹⁵⁹	38.5 ¹¹⁶	35	6 05	36	7 03	26 56		38 28	
17	73	24.5	+20	37.8	194	55.1 ¹⁶⁰	+4 50.1 ¹¹⁶	40	6 13	6 46	7 15	22 30	58	9 36	25
18	88	24.5	+20	37.4	209	30.0 ¹⁵⁹	+5 01.6 ¹¹⁵	45	6 21	6 57	7 30	22 34	61	9 34	22
19	103	24.5		36.9	224	04.9 ¹⁵⁹	13.2 ¹¹⁶	50	30	7 11	47	39 65		31 18	
20	118	24.4		36.4	238	39.8 ¹⁵⁹	24.7 ¹¹⁵	52	35	17	7 55	41 67		30 16	
21	133	24.4		35.9	253	14.7 ¹⁵⁹	36.1 ¹¹⁴	54	39	23	8 05	43 69		29 14	
22	148	24.4		35.5	267	49.6 ¹⁵⁹	47.6 ¹¹⁵	56	44	31	15	46 71		27 13	
23	163	24.3		35.0	282	24.5 ¹⁵⁹	+5 59.0 ¹¹⁴	58	49	39	27	49 74		25 11	
24	178	24.3	+20	34.5	296	59.4 ¹⁵⁹	+6 10.4 ¹¹⁴	60 S	6 55	7 48	8 41	22 53	76	9 24	7

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 4 ^h 09 ^m 6		Mag: -3.9 PMG: 11 ^h 35 ^m		Mag: +1.4 PMG: 9 ^h 27 ^m		Mag: -2.4 PMG: 6 ^h 32 ^m		Mag: +0.9 PMG: 16 ^h 54 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	297	26.0	186	21.5	+22	33.7	218	03.7	+23	13.2	261	42.5	+12	54.0	105	52.0	-2	20.6
1	312	28.4	201	20.7		33.3	233	04.3		13.4	276	44.7		54.1	120	54.3		20.7
2	327	30.9	216	19.9		33.0	248	04.9		13.5	291	46.8		54.2	135	56.7		20.7
3	342	33.4	231	19.0		32.6	263	05.5		13.7	306	49.0		54.3	150	59.0		20.8
4	357	35.8	246	18.2		32.3	278	06.1		13.8	321	51.1		54.4	166	01.3		20.9
5	12	38.3	261	17.3	+22	31.9	293	06.7	+23	14.0	336	53.3	+12	54.5	181	03.7	-2	20.9
6	27	40.8	276	16.5	+22	31.6	308	07.3	+23	14.2	351	55.5	+12	54.6	196	06.0	-2	21.0
7	42	43.2	291	15.7		31.2	323	07.9		14.3	6	57.6		54.6	211	08.3		21.1
8	57	45.7	306	14.8		30.8	338	08.5		14.5	21	59.8		54.7	226	10.7		21.1
9	72	48.2	321	14.0		30.5	353	09.2		14.6	37	02.0		54.8	241	13.0		21.2
10	87	50.6	336	13.1		30.1	8	09.8		14.8	52	04.1		54.9	256	15.3		21.3
11	102	53.1	351	12.3	+22	29.8	23	10.4	+23	14.9	67	06.3	+12	55.0	271	17.7	-2	21.3
12	117	55.5	6	11.5	+22	29.4	38	11.0	+23	15.1	82	08.5	+12	55.1	286	20.0	-2	21.4
13	132	58.0	21	10.6		29.0	53	11.6		15.2	97	10.6		55.2	301	22.3		21.5
14	148	00.5	36	09.8		28.7	68	12.2		15.4	112	12.8		55.3	316	24.7		21.5
15	163	02.9	51	08.9		28.3	83	12.8		15.5	127	15.0		55.4	331	27.0		21.6
16	178	05.4	66	08.1		28.0	98	13.4		15.7	142	17.1		55.5	346	29.3		21.7
17	193	07.9	81	07.3	+22	27.6	113	14.0	+23	15.8	157	19.3	+12	55.6	1	31.7	-2	21.7
18	208	10.3	96	06.4	+22	27.2	128	14.6	+23	16.0	172	21.5	+12	55.6	16	34.0	-2	21.8
19	223	12.8	111	05.6		26.8	143	15.2		16.1	187	23.6		55.7	31	36.3		21.9
20	238	15.3	126	04.8		26.5	158	15.8		16.3	202	25.8		55.8	46	38.6		21.9
21	253	17.7	141	03.9		26.1	173	16.4		16.4	217	28.0		55.9	61	41.0		22.0
22	268	20.2	156	03.1		25.7	188	17.0		16.6	232	30.1		56.0	76	43.3		22.1
23	283	22.7	171	02.3		25.4	203	17.6		16.7	247	32.3		56.1	91	45.6		22.1
24	298	25.1	186	01.4	+22	25.0	218	18.3	+23	16.9	262	34.5	+12	56.2	106	48.0	-2	22.2
Dif	—		-8	-4		+6	+2			+22	+1			+23		-1		

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna		
	SD: 15 ^h 7			Edad: 19 ^d 6 PHE	SD: 14 ^h 8				R°: 42 ^m							
	PMG: 12 ^h 06 ^m 4				PMG: 4 ^h 19 ^m											
	hG ☉		Dec	hG ☾		Dif	Dec	Dif		Civil	Náutico	Hora	R°	Hora	R°	
h	°	'	°	°	'	°	°	'	°	h m	h m	h m	h m m	h m m	h m m	
0	178	24.3	+20 34.5	296	59.4	+6 10.4	60 N	20 56	22 07	** **	21 37 10	11 29 77				
1	193	24.3	34.0	311	34.2 ¹⁵⁸	21.8 ¹¹⁴	58	41	21 41	** **	43 13	25 74				
2	208	24.2	33.6	326	09.1 ¹⁵⁹	33.2 ¹¹⁴	56	28	21	22 52	48 15	20 72				
3	223	24.2	33.1	340	43.9 ¹⁵⁸	44.5 ¹¹³	54	17	21 05	22 17	52 18	17 69				
4	238	24.2	32.6	355	18.7 ¹⁵⁸	+6 55.8 ¹¹³	52	20 07	20 51	21 53	21 56 20	13 67				
5	253	24.1	+20 32.1	9	53.5 ¹⁵⁸	+7 07.0 ¹¹²	50	19 58	20 39	21 35	22 00 21	11 10 65				
6	268	24.1	+20 31.7	24	28.3 ¹⁵⁸	+7 18.3 ¹¹³	45	19 39	20 14	21 00	22 08 25	11 03 62				
7	283	24.1	31.2	39	03.1 ¹⁵⁸	29.5 ¹¹²	40	24	19 55	20 34	15 28	10 58 58				
8	298	24.0	30.7	53	37.8 ¹⁵⁷	40.7 ¹¹²	35	11	40	20 15	21 30	53 56				
9	313	24.0	30.2	68	12.6 ¹⁵⁸	+7 51.8 ¹¹¹	30	19 00	27	19 59	26 33	49 53				
10	328	24.0	29.7	82	47.3 ¹⁵⁷	+8 02.9 ¹¹¹	20	18 41	19 05	34	35 37	42 49				
11	343	23.9	+20 29.3	97	22.0 ¹⁵⁷	+8 14.0 ¹¹¹	10 N	18 25	18 48	19 14	22 43 40	10 35 46				
12	358	23.9	+20 28.8	111	56.7 ¹⁵⁷	+8 25.0 ¹¹⁰	0	18 10	18 32	18 58	22 51 43	10 29 43				
13	13	23.9	28.3	126	31.3 ¹⁵⁶	36.0 ¹¹⁰	10 S	17 55	17	43	22 59 46	23 39				
14	28	23.8	27.8	141	06.0 ¹⁵⁷	47.0 ¹¹⁰	20	39	18 03	29	23 07 49	17 36				
15	43	23.8	27.3	155	40.6 ¹⁵⁶	+8 57.9 ¹⁰⁹	30	21	17 47	16	16 54	10 31				
16	58	23.8	26.8	170	15.2 ¹⁵⁶	+9 08.8 ¹⁰⁹	35	17 10	38	09	22 55	06 29				
17	73	23.8	+20 26.4	184	49.7 ¹⁵⁵	+9 19.7 ¹⁰⁹	40	16 58	17 28	18 01	23 28 58	10 01 27				
18	88	23.7	+20 25.9	199	24.2 ¹⁵⁵	+9 30.5 ¹⁰⁸	45	16 44	17 17	17 53	23 35 62	9 56 23				
19	103	23.7	25.4	213	58.7 ¹⁵⁵	41.3 ¹⁰⁸	50	27	17 04	44	44 65	49 20				
20	118	23.7	24.9	228	33.2 ¹⁵⁵	+9 52.0 ¹⁰⁷	52	19	16 58	40	48 67	46 18				
21	133	23.6	24.4	243	07.7 ¹⁵⁵	+10 02.7 ¹⁰⁷	54	10	51	35	52 70	43 16				
22	148	23.6	23.9	257	42.1 ¹⁵⁴	13.4 ¹⁰⁷	56	16 00	44	31	23 57 72	40 14				
23	163	23.6	23.4	272	16.5 ¹⁵⁴	24.0 ¹⁰⁶	58	15 48	36	25	** ** *	36 11				
24	178	23.6	+20 23.0	286	50.9 ¹⁵⁴	+10 34.6 ¹⁰⁶	60 S	15 35	16 26	17 20	** ** *	9 31 9				

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 4 ^h 05 ^m 7		Mag: -3.9 PMG: 11 ^h 37 ^m		Mag: +1.4 PMG: 9 ^h 26 ^m		Mag: -2.4 PMG: 6 ^h 29 ^m		Mag: +0.9 PMG: 16 ^h 50 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	298	25.1	186	01.4	+22 25.0	218	18.3	+23 16.9	262	34.5	+12 56.2	106	48.0	-2 22.2
1	313	27.6	201	00.6	24.6	233	18.9	17.0	277	36.6	56.3	121	50.3	22.3
2	328	30.0	215	59.8	24.2	248	19.5	17.2	292	38.8	56.4	136	52.6	22.3
3	343	32.5	230	58.9	23.9	263	20.1	17.3	307	41.0	56.5	151	55.0	22.4
4	358	35.0	245	58.1	23.5	278	20.7	17.5	322	43.1	56.5	166	57.3	22.5
5	13	37.4	260	57.3	+22 23.1	293	21.3	+23 17.6	337	45.3	+12 56.6	181	59.6	-2 22.5
6	28	39.9	275	56.4	+22 22.7	308	21.9	+23 17.8	352	47.5	+12 56.7	197	01.9	-2 22.6
7	43	42.4	290	55.6	22.3	323	22.5	17.9	7	49.7	56.8	212	04.3	22.7
8	58	44.8	305	54.8	21.9	338	23.1	18.0	22	51.8	56.9	227	06.6	22.7
9	73	47.3	320	53.9	21.6	353	23.7	18.2	37	54.0	57.0	242	08.9	22.8
10	88	49.8	335	53.1	21.2	8	24.3	18.3	52	56.2	57.1	257	11.3	22.9
11	103	52.2	350	52.3	+22 20.8	23	24.9	+23 18.5	67	58.3	+12 57.2	272	13.6	-2 22.9
12	118	54.7	5	51.4	+22 20.4	38	25.5	+23 18.6	83	00.5	+12 57.3	287	15.9	-2 23.0
13	133	57.2	20	50.6	20.0	53	26.2	18.8	98	02.7	57.3	302	18.2	23.1
14	148	59.6	35	49.8	19.6	68	26.8	18.9	113	04.9	57.4	317	20.6	23.1
15	164	02.1	50	48.9	19.2	83	27.4	19.1	128	07.0	57.5	332	22.9	23.2
16	179	04.5	65	48.1	18.8	98	28.0	19.2	143	09.2	57.6	347	25.2	23.3
17	194	07.0	80	47.3	+22 18.4	113	28.6	+23 19.3	158	11.4	+12 57.7	2	27.6	-2 23.3
18	209	09.5	95	46.4	+22 18.0	128	29.2	+23 19.5	173	13.5	+12 57.8	17	29.9	-2 23.4
19	224	11.9	110	45.6	17.6	143	29.8	19.6	188	15.7	57.9	32	32.2	23.5
20	239	14.4	125	44.8	17.2	158	30.4	19.8	203	17.9	58.0	47	34.5	23.5
21	254	16.9	140	44.0	16.8	173	31.0	19.9	218	20.1	58.0	62	36.9	23.6
22	269	19.3	155	43.1	16.4	188	31.6	20.0	233	22.2	58.1	77	39.2	23.7
23	284	21.8	170	42.3	16.0	203	32.2	20.2	248	24.4	58.2	92	41.5	23.7
24	299	24.3	185	41.5	+22 15.6	218	32.8	+23 20.3	263	26.6	+12 58.3	107	43.8	-2 23.8
Dif	—		-8		-4	+6		+1	+22		+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 5				Edad: 20 ^d 6 PHE { 4 ^h : 54/2 12 ^h : 54/3 20 ^h : 54/3 PMG: 5 ^h 01 ^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	h m	h m	h m	h m			
0	178	23.6	+20	23.0	286	50.9	+10	34.6	60 N	** ** *	2 06	3 17	21 47	13	12 46	78				
1	193	23.5		22.5	301	25.2 ¹⁵³		45.1 ¹⁰⁵	58	** ** *	32	32	21 56	16	39	74				
2	208	23.5		22.0	315	59.5 ¹⁵³	+10	55.6 ¹⁰⁵	56	1 21	2 52	45	22 03	19	32	71				
3	223	23.5		21.5	330	33.7 ¹⁵²	+11	06.1 ¹⁰⁵	54	1 56	3 09	3 57	10 21		26	69				
4	238	23.5		21.0	345	08.0 ¹⁵³		16.5 ¹⁰⁴	52	2 20	22	4 06	16 23		20	68				
5	253	23.4	+20	20.5	359	42.2 ¹⁵²	+11	26.9 ¹⁰⁴	50	2 39	3 34	4 15	22 21	25	12 15	66				
6	268	23.4	+20	20.0	14	16.3 ¹⁵¹	+11	37.2 ¹⁰³	45	3 14	3 59	4 34	22 33	28	12 05	61				
7	283	23.4		19.5	28	50.4 ¹⁵¹		47.5 ¹⁰³	40	39	4 18	4 49	43 31		11 56	59				
8	298	23.3		19.0	43	24.5 ¹⁵¹	+11	57.7 ¹⁰²	35	3 58	33	5 02	51 34		49	56				
9	313	23.3		18.5	57	58.6 ¹⁵¹	+12	07.9 ¹⁰²	30	4 14	4 46	13	22 59	36	42	54				
10	328	23.3		18.0	72	32.6 ¹⁵⁰		18.0 ¹⁰¹	20	39	5 08	32	23 12	39	31	50				
11	343	23.3	+20	17.5	87	06.6 ¹⁵⁰	+12	28.1 ¹⁰¹	10 N	4 59	5 25	5 48	23 23	42	11 21	47				
12	358	23.2	+20	17.0	101	40.5 ¹⁴⁹	+12	38.2 ¹⁰¹	0	5 15	5 41	6 03	23 34	45	11 12	43				
13	13	23.2		16.5	116	14.4 ¹⁴⁹		48.2 ¹⁰⁰	10 S	30	5 55	18	45 48		11 02	41				
14	28	23.2		16.0	130	48.2 ¹⁴⁸	+12	58.1 ⁹⁹	20	43	6 10	34	23 56	51	10 53	37				
15	43	23.2		15.5	145	22.0 ¹⁴⁸	+13	08.0 ⁹⁹	30	5 57	26	6 52	** ** *	**	41	34				
16	58	23.2		15.1	159	55.8 ¹⁴⁸		17.8 ⁹⁸	35	6 04	35	7 02	** ** *	**	35	32				
17	73	23.1	+20	14.6	174	29.5 ¹⁴⁷	+13	27.6 ⁹⁸	40	6 11	6 45	7 14	** ** *	**	10 28	29				
18	88	23.1	+20	14.1	189	03.2 ¹⁴⁷	+13	37.4 ⁹⁸	45	6 20	6 56	7 28	** ** *	**	10 19	27				
19	103	23.1		13.6	203	36.8 ¹⁴⁶		47.0 ⁹⁶	50	29	7 09	45	** ** *	**	09	23				
20	118	23.1		13.1	218	10.4 ¹⁴⁶	+13	56.7 ⁹⁷	52	33	15	7 53	** ** *	**	10 04	21				
21	133	23.0		12.6	232	43.9 ¹⁴⁵	+14	06.2 ⁹⁵	54	37	21	8 02	** ** *	**	9 59	19				
22	148	23.0		12.0	247	17.4 ¹⁴⁵		15.8 ⁹⁶	56	42	28	12	** ** *	**	54	16				
23	163	23.0		11.5	261	50.9 ¹⁴⁵		25.2 ⁹⁴	58	47	36	24	0 03	74	47	15				
24	178	23.0	+20	11.0	276	24.3 ¹⁴⁴	+14	34.6 ⁹⁴	60 S	6 52	7 45	8 37	0 09	78	9 40	11				
UT	ARIES				VENUS				MARTE				JÚPITER				SATURNO			
	PMG 4 ^h 01 ^m 7				Mag: -3.9 PMG: 11 ^h 38 ^m				Mag: +1.4 PMG: 9 ^h 25 ^m				Mag: -2.4 PMG: 6 ^h 25 ^m				Mag: +0.9 PMG: 16 ^h 46 ^m			
	hG ♈		Dec		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	299	24.3	185	41.5	+22	15.6	218	32.8	+23	20.3	263	26.6	+12	58.3	107	43.8	-2	23.8		
1	314	26.7	200	40.6		15.2	233	33.4		20.5	278	28.8		58.4	122	46.2		23.9		
2	329	29.2	215	39.8		14.8	248	34.1		20.6	293	30.9		58.5	137	48.5		23.9		
3	344	31.6	230	39.0		14.4	263	34.7		20.7	308	33.1		58.6	152	50.8		24.0		
4	359	34.1	245	38.2		14.0	278	35.3		20.9	323	35.3		58.7	167	53.2		24.1		
5	14	36.6	260	37.3	+22	13.6	293	35.9	+23	21.0	338	37.5	+12	58.7	182	55.5	-2	24.1		
6	29	39.0	275	36.5	+22	13.2	308	36.5	+23	21.1	353	39.6	+12	58.8	197	57.8	-2	24.2		
7	44	41.5	290	35.7		12.8	323	37.1		21.3	8	41.8		58.9	213	00.1		24.3		
8	59	44.0	305	34.9		12.4	338	37.7		21.4	23	44.0		59.0	228	02.5		24.3		
9	74	46.4	320	34.0		12.0	353	38.3		21.6	38	46.2		59.1	243	04.8		24.4		
10	89	48.9	335	33.2		11.6	8	38.9		21.7	53	48.3		59.2	258	07.1		24.5		
11	104	51.4	350	32.4	+22	11.1	23	39.5	+23	21.8	68	50.5	+12	59.3	273	09.4	-2	24.6		
12	119	53.8	5	31.5	+22	10.7	38	40.1	+23	22.0	83	52.7	+12	59.4	288	11.8	-2	24.6		
13	134	56.3	20	30.7		10.3	53	40.8		22.1	98	54.9		59.4	303	14.1		24.7		
14	149	58.8	35	29.9		09.9	68	41.4		22.2	113	57.1		59.5	318	16.4		24.8		
15	165	01.2	50	29.1		09.5	83	42.0		22.4	128	59.2		59.6	333	18.7		24.8		
16	180	03.7	65	28.3		09.1	98	42.6		22.5	144	01.4		59.7	348	21.1		24.9		
17	195	06.1	80	27.4	+22	08.6	113	43.2	+23	22.6	159	03.6	+12	59.8	3	23.4	-2	25.0		
18	210	08.6	95	26.6	+22	08.2	128	43.8	+23	22.8	174	05.8	+12	59.9	18	25.7	-2	25.0		
19	225	11.1	110	25.8		07.8	143	44.4		22.9	189	07.9	+13	00.0	33	28.0		25.1		
20	240	13.5	125	25.0		07.4	158	45.0		23.0	204	10.1	+13	00.0	48	30.4		25.2		
21	255	16.0	140	24.1		06.9	173	45.6		23.2	219	12.3	+13	00.1	63	32.7		25.2		
22	270	18.5	155	23.3		06.5	188	46.2		23.3	234	14.5		00.2	78	35.0		25.3		
23	285	20.9	170	22.5		06.1	203	46.8		23.4	249	16.7		00.3	93	37.3		25.4		
24	300	23.4	185	21.7	+22	05.6	218	47.5	+23	23.5	264	18.8	+13	00.4	108	39.6	-2	25.5		
Dif	—				-8 -4				+6 +1				+22 +1				+23 -1			

UT	SOL				☾ LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15 ^h 7				Edad: 21 ^d 6 PHE { 4 ^h : 54/4 12 ^h : 54/4 20 ^h : 54/5												
	PMG: 12 ^h 06 ^m 5				SD: 14'8 PMG: 5 ^h 45 ^m R°: 45 ^m												
	hG ☉		Dec		hG ☾		Dif				Civil	Náutico	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m	
0	178	23.0	+20	11.0	276	24.3	+14	34.6	60 N	20 52	22 01	** **	22 00 19	14 04 77			
1	193	22.9		10.5	290	57.6 ¹⁴³		44.0 ⁹⁴	58	37	21 36	** **	12 22	13 53 74			
2	208	22.9		10.0	305	30.9 ¹⁴³	+14	53.3 ⁹³	56	25	17	22 43	22 25	43 72			
3	223	22.9		09.5	320	04.1 ¹⁴²	+15	02.5 ⁹²	54	14	21 01	22 12	31 27	35 69			
4	238	22.9		09.0	334	37.3 ¹⁴²		11.7 ⁹²	52	20 04	20 48	21 49	39 29	28 66			
5	253	22.9	+20	08.5	349	10.5 ¹⁴²	+15	20.8 ⁹¹	50	19 56	20 36	21 31	22 46 30	13 21 65			
6	268	22.8	+20	08.0	3	43.6 ¹⁴¹	+15	29.8 ⁹⁰	45	19 37	20 12	20 57	23 01 34	13 06 62			
7	283	22.8		07.5	18	16.6 ¹⁴⁰		38.8 ⁹⁰	40	23	19 54	32	14 36	12 55 59			
8	298	22.8		07.0	32	49.6 ¹⁴⁰		47.7 ⁸⁹	35	19 10	39	20 13	25 38	45 56			
9	313	22.8		06.5	47	22.5 ¹³⁹	+15	56.6 ⁸⁹	30	18 59	26	19 58	35 39	36 55			
10	328	22.8		06.0	61	55.4 ¹³⁹	+16	05.4 ⁸⁸	20	41	19 05	33	23 51 43	21 51			
11	343	22.7	+20	05.5	76	28.2 ¹³⁸	+16	14.1 ⁸⁷	10 N	18 25	18 47	19 14	** ** *	12 08 48			
12	358	22.7	+20	05.0	91	01.0 ¹³⁸	+16	22.8 ⁸⁷	0	18 10	18 32	18 58	** ** *	11 55 47			
13	13	22.7		04.5	105	33.7 ¹³⁷		31.4 ⁸⁶	10 S	17 55	18	43	** ** *	43 44			
14	28	22.7		03.9	120	06.3 ¹³⁶		39.9 ⁸⁵	20	40	18 03	30	** ** *	30 41			
15	43	22.7		03.4	134	38.9 ¹³⁶		48.4 ⁸⁵	30	22	17 48	17	0 10 54	15 38			
16	58	22.7		02.9	149	11.5 ¹³⁶	+16	56.8 ⁸⁴	35	12	39	10	17 57	11 07 35			
17	73	22.6	+20	02.4	163	43.9 ¹³⁴	+17	05.1 ⁸³	40	17 00	17 29	18 03	0 26 59	10 57 33			
18	88	22.6	+20	01.9	178	16.3 ¹³⁴	+17	13.4 ⁸³	45	16 46	17 19	17 55	0 37 62	10 46 30			
19	103	22.6		01.4	192	48.7 ¹³⁴		21.6 ⁸²	50	29	06	46	49 66	32 27			
20	118	22.6		00.9	207	21.0 ¹³³		29.7 ⁸¹	52	22	17 00	42	0 55 68	25 26			
21	133	22.6	+20	00.3	221	53.2 ¹³²		37.8 ⁸¹	54	13	16 54	38	1 02 69	18 24			
22	148	22.6	+19	59.8	236	25.4 ¹³²		45.7 ⁷⁹	56	16 03	47	33	09 72	10 22			
23	163	22.5		59.3	250	57.5 ¹³¹	+17	53.6 ⁷⁹	58	15 52	39	28	17 75	10 02 18			
24	178	22.5	+19	58.8	265	29.6 ¹³¹	+18	01.5 ⁷⁹	60 S	15 39	16 30	17 23	1 27 78	9 51 16			

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 3 ^h 57 ^m 8		Mag: -3.9 PMG: 11 ^h 39 ^m		Mag: +1.4 PMG: 9 ^h 24 ^m		Mag: -2.4 PMG: 6 ^h 22 ^m		Mag: +0.9 PMG: 16 ^h 43 ^m	
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄	
h	°	'	°	'	°	'	°	'	°	'
0	300	23.4	185	21.7	218	47.5	264	18.8	108	39.6
1	315	25.9	200	20.9	233	48.1	279	21.0	123	42.0
2	330	28.3	215	20.0	248	48.7	294	23.2	138	44.3
3	345	30.8	230	19.2	263	49.3	309	25.4	153	46.6
4	0	33.3	245	18.4	278	49.9	324	27.6	168	48.9
5	15	35.7	260	17.6	293	50.5	339	29.7	183	51.3
6	30	38.2	275	16.8	308	51.1	354	31.9	198	53.6
7	45	40.6	290	15.9	323	51.7	9	34.1	213	55.9
8	60	43.1	305	15.1	338	52.3	24	36.3	228	58.2
9	75	45.6	320	14.3	353	52.9	39	38.5	244	00.6
10	90	48.0	335	13.5	8	53.6	54	40.7	259	02.9
11	105	50.5	350	12.7	23	54.2	69	42.8	274	05.2
12	120	53.0	5	11.8	38	54.8	84	45.0	289	07.5
13	135	55.4	20	11.0	53	55.4	99	47.2	304	09.8
14	150	57.9	35	10.2	68	56.0	114	49.4	319	12.2
15	166	00.4	50	09.4	83	56.6	129	51.6	334	14.5
16	181	02.8	65	08.6	98	57.2	144	53.8	349	16.8
17	196	05.3	80	07.8	113	57.8	159	55.9	4	19.1
18	211	07.7	95	06.9	128	58.4	174	58.1	19	21.5
19	226	10.2	110	06.1	143	59.1	190	00.3	34	23.8
20	241	12.7	125	05.3	158	59.7	205	02.5	49	26.1
21	256	15.1	140	04.5	174	00.3	220	04.7	64	28.4
22	271	17.6	155	03.7	189	00.9	235	06.9	79	30.7
23	286	20.1	170	02.9	204	01.5	250	09.1	94	33.1
24	301	22.5	185	02.1	219	02.1	265	11.2	109	35.4
Dif	—		-8		+6		+22		+23	
			-4		+1		+1		-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: 22 ^d 6 SD: 14'9 PMG: 6 ^h 30 ^m	PHE { 4 ^h : 54'6 12 ^h : 54'8 20 ^h : 54'9 R°: 49 ^m										
	hG ☉	Dec				hG ☾		Dif	Dec		Dif	Náutico	Civil	Hora	R°
h	°	'	°	°	'	°	°	h	m	h	m	h	m	h	m
0	178	22.5	+19 58.8	265	29.6	+18 01.5	60 N	** **	2 13	3 21	22 19	29	15 21	74	
1	193	22.5	58.3	280	01.6 ¹³⁰	09.2	58	** **	37	36	34	31	15 07	71	
2	208	22.5	57.8	294	33.5 ¹²⁹	16.9	56	1 30	2 57	3 49	47	33	14 55	68	
3	223	22.5	57.2	309	05.4 ¹²⁹	24.5	54	2 02	3 12	4 00	22 58	35	44	66	
4	238	22.5	56.7	323	37.2 ¹²⁸	32.0	52	25	26	09	23 08	36	34	65	
5	253	22.4	+19 56.2	338	08.9 ¹²⁷	+18 39.5	50	2 43	3 37	4 18	23 16	38	14 26	64	
6	268	22.4	+19 55.7	352	40.6 ¹²⁷	+18 46.8	45	3 16	4 01	4 36	23 35	40	14 08	61	
7	283	22.4	55.2	7	12.2 ¹²⁶	+18 54.1	40	3 41	20	4 51	23 50	43	13 54	58	
8	298	22.4	54.6	21	43.8 ¹²⁶	+19 01.3	35	4 00	35	5 03	** **	**	41	57	
9	313	22.4	54.1	36	15.3 ¹²⁵	08.5	30	16	4 48	14	** **	**	31	55	
10	328	22.4	53.6	50	46.7 ¹²⁴	15.5	20	40	5 09	32	** **	**	13 12	53	
11	343	22.4	+19 53.1	65	18.0 ¹²³	+19 22.5	10 N	4 59	5 26	5 48	0 05	46	12 56	51	
12	358	22.4	+19 52.6	79	49.3 ¹²³	+19 29.3	0	5 15	5 41	6 03	0 19	48	12 42	49	
13	13	22.3	52.0	94	20.6 ¹²³	36.1	10 S	30	5 55	18	33	50	27	47	
14	28	22.3	51.5	108	51.7 ¹²¹	42.8	20	43	6 10	33	0 47	53	12 11	45	
15	43	22.3	51.0	123	22.8 ¹²¹	49.5	30	5 56	25	6 51	1 04	56	11 53	42	
16	58	22.3	50.4	137	53.8 ¹²⁰	+19 56.0	35	6 03	34	7 01	14	57	42	41	
17	73	22.3	+19 49.9	152	24.8 ¹²⁰	+20 02.4	40	6 10	6 43	7 12	1 25	59	11 30	39	
18	88	22.3	+19 49.4	166	55.7 ¹¹⁹	+20 08.8	45	6 18	6 54	7 26	1 39	61	11 16	37	
19	103	22.3	48.9	181	26.5 ¹¹⁸	15.1	50	27	7 07	43	1 55	65	10 59	34	
20	118	22.3	48.3	195	57.3 ¹¹⁸	21.3	52	31	12	51	2 03	66	51	32	
21	133	22.2	47.8	210	28.0 ¹¹⁷	27.4	54	35	19	7 59	11	68	42	30	
22	148	22.2	47.3	224	58.6 ¹¹⁶	33.4	56	39	26	8 09	21	70	32	28	
23	163	22.2	46.7	239	29.2 ¹¹⁶	39.3	58	44	33	20	32	73	20	26	
24	178	22.2	+19 46.2	253	59.6 ¹¹⁴	+20 45.1	60 S	6 49	7 42	8 33	2 45	76	10 07	23	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG: 3 ^h 53 ^m 9		Mag: -3.9 PMG: 11 ^h 40 ^m		Mag: +1.4 PMG: 9 ^h 23 ^m		Mag: -2.4 PMG: 6 ^h 18 ^m		Mag: +0.9 PMG: 16 ^h 39 ^m						
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'					
0	301	22.5	185	02.1	+21 55.0	219	02.1	+23 26.6	265	11.2	+13 02.4	109	35.4	-2 27.1	
1	316	25.0	200	01.2	54.5	234	02.7	26.7	280	13.4	02.5	124	37.7	27.2	
2	331	27.5	215	00.4	54.1	249	03.3	26.8	295	15.6	02.6	139	40.0	27.3	
3	346	29.9	229	59.6	53.6	264	03.9	26.9	310	17.8	02.7	154	42.3	27.3	
4	1	32.4	244	58.8	53.2	279	04.6	27.1	325	20.0	02.7	169	44.7	27.4	
5	16	34.9	259	58.0	+21 52.7	294	05.2	+23 27.2	340	22.2	+13 02.8	184	47.0	-2 27.5	
6	31	37.3	274	57.2	+21 52.2	309	05.8	+23 27.3	355	24.4	+13 02.9	199	49.3	-2 27.6	
7	46	39.8	289	56.4	51.8	324	06.4	27.4	10	26.6	03.0	214	51.6	27.6	
8	61	42.2	304	55.6	51.3	339	07.0	27.5	25	28.7	03.1	229	53.9	27.7	
9	76	44.7	319	54.7	50.8	354	07.6	27.6	40	30.9	03.2	244	56.3	27.8	
10	91	47.2	334	53.9	50.4	9	08.2	27.8	55	33.1	03.2	259	58.6	27.8	
11	106	49.6	349	53.1	+21 49.9	24	08.8	+23 27.9	70	35.3	+13 03.3	275	00.9	-2 27.9	
12	121	52.1	4	52.3	+21 49.4	39	09.4	+23 28.0	85	37.5	+13 03.4	290	03.2	-2 28.0	
13	136	54.6	19	51.5	49.0	54	10.1	28.1	100	39.7	03.5	305	05.5	28.0	
14	151	57.0	34	50.7	48.5	69	10.7	28.2	115	41.9	03.6	320	07.8	28.1	
15	166	59.5	49	49.9	48.0	84	11.3	28.3	130	44.1	03.6	335	10.2	28.2	
16	182	02.0	64	49.1	47.6	99	11.9	28.5	145	46.3	03.7	350	12.5	28.3	
17	197	04.4	79	48.3	+21 47.1	114	12.5	+23 28.6	160	48.5	+13 03.8	5	14.8	-2 28.3	
18	212	06.9	94	47.5	+21 46.6	129	13.1	+23 28.7	175	50.6	+13 03.9	20	17.1	-2 28.4	
19	227	09.4	109	46.7	46.1	144	13.7	28.8	190	52.8	04.0	35	19.4	28.5	
20	242	11.8	124	45.8	45.6	159	14.3	28.9	205	55.0	04.1	50	21.8	28.5	
21	257	14.3	139	45.0	45.2	174	15.0	29.0	220	57.2	04.1	65	24.1	28.6	
22	272	16.7	154	44.2	44.7	189	15.6	29.2	235	59.4	04.2	80	26.4	28.7	
23	287	19.2	169	43.4	44.2	204	16.2	29.3	251	01.6	04.3	95	28.7	28.8	
24	302	21.7	184	42.6	+21 43.7	219	16.8	+23 29.4	266	03.8	+13 04.4	110	31.0	-2 28.8	
Dif	—		-8	-5		+6	+1		+22		+1		+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 6 PHE	SD: 15 ^h 0				Final del crepúsculo		Salida de Luna		Puesta de Luna	
	PMG: 12 ^h 06 ^m 5				PMG: 7 ^h 19 ^m				Civil		Náutico		Hora R°	
	hG ☉	Dec		hG ☾	Dif	Dec	Dif							
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m
0	178	22.2	+19 46.2	253	59.6	+20 45.1	57	60 N	20 48	21 54	** **	22 48 43	16 35 66	
1	193	22.2		268	30.1 ¹¹⁵	50.8	57	58	34	31	23 27	23 05 45	18 63	
2	208	22.2		283	00.4 ¹¹³	+20 56.4	56	56	21	21 13	22 35	20 46	16 03 62	
3	223	22.2		297	30.7 ¹¹³	+21 01.9	55	54	11	20 57	22 06	33 47	15 51 61	
4	238	22.2		312	01.0 ¹¹³	07.4	55	52	20 01	44	21 44	44 48	39 61	
5	253	22.2	+19 43.6	326	31.1 ¹¹¹	+21 12.7	53	50	19 53	20 33	21 27	23 54 48	15 30 59	
6	268	22.2	+19 43.0	341	01.2 ¹¹¹	+21 18.0	53	45	19 35	20 10	20 54	** ** *	15 09 58	
7	283	22.2		355	31.2 ¹¹⁰	23.1	51	40	21	19 52	30	** ** *	14 52 57	
8	298	22.1		10	01.2 ¹¹⁰	28.1	50	35	19 09	37	20 11	0 03 44	38 57	
9	313	22.1		24	31.1 ¹⁰⁹	33.1	50	30	18 58	24	19 56	14 45	26 56	
10	328	22.1		39	00.9 ¹⁰⁸	37.9	48	20	40	19 04	32	34 47	14 05 54	
11	343	22.1	+19 40.3	53	30.7 ¹⁰⁸	+21 42.7	48	10 N	18 25	18 47	19 13	0 51 49	13 47 53	
12	358	22.1	+19 39.8	68	00.4 ¹⁰⁷	+21 47.3	46	0	18 10	18 32	18 58	1 07 50	13 31 51	
13	13	22.1		82	30.0 ¹⁰⁶	51.8	45	10 S	17 56	18	44	23 52	13 14 50	
14	28	22.1		96	59.6 ¹⁰⁶	+21 56.2	44	20	41	18 04	31	1 40 53	12 56 49	
15	43	22.1		111	29.1 ¹⁰⁵	+22 00.6	44	30	23	17 49	18	2 00 55	35 48	
16	58	22.1		125	58.5 ¹⁰⁴	04.8	42	35	13	40	11	11 57	23 47	
17	73	22.1	+19 37.1	140	27.9 ¹⁰⁴	+22 08.9	41	40	17 02	17 31	18 04	2 24 59	12 09 46	
18	88	22.1	+19 36.6	154	57.2 ¹⁰³	+22 12.9	40	45	16 48	17 21	17 56	2 40 60	11 53 44	
19	103	22.1		169	26.4 ¹⁰²	16.8	39	50	32	08	48	3 00 62	33 42	
20	118	22.1		183	55.6 ¹⁰²	20.6	38	52	24	17 02	44	09 63	23 42	
21	133	22.1		198	24.7 ¹⁰¹	24.2	36	54	16	16 56	40	19 65	12 41	
22	148	22.1		212	53.8 ¹⁰¹	27.8	36	56	16 06	49	36	31 67	11 00 39	
23	163	22.1		227	22.8 ¹⁰⁰	31.3	35	58	15 55	42	31	3 45 68	10 46 37	
24	178	22.1	+19 33.3	241	51.7 ⁹⁹	+22 34.6	33	60 S	15 43	16 33	17 26	4 01 71	10 30 34	
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG 3 ^h 49 ^m 9		Mag: -3.9 PMG: 11 ^h 42 ^m		Mag: +1.4 PMG: 9 ^h 22 ^m		Mag: -2.4 PMG: 6 ^h 15 ^m		Mag: +0.9 PMG: 16 ^h 35 ^m					
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	302	21.7	184	42.6	+21 43.7	219 16.8	+23 29.4	266 03.8	+13 04.4	110 31.0	-2 28.8			
1	317	24.1	199	41.8	43.2	234 17.4	29.5	281 06.0	04.5	125 33.3	28.9			
2	332	26.6	214	41.0	42.7	249 18.0	29.6	296 08.2	04.5	140 35.7	29.0			
3	347	29.1	229	40.2	42.3	264 18.6	29.7	311 10.4	04.6	155 38.0	29.1			
4	2	31.5	244	39.4	41.8	279 19.2	29.8	326 12.6	04.7	170 40.3	29.1			
5	17	34.0	259	38.6	+21 41.3	294 19.9	+23 29.9	341 14.8	+13 04.8	185 42.6	-2 29.2			
6	32	36.5	274	37.8	+21 40.8	309 20.5	+23 30.0	356 17.0	+13 04.9	200 44.9	-2 29.3			
7	47	38.9	289	37.0	40.3	324 21.1	30.2	11 19.2	04.9	215 47.2	29.3			
8	62	41.4	304	36.2	39.8	339 21.7	30.3	26 21.3	05.0	230 49.6	29.4			
9	77	43.8	319	35.4	39.3	354 22.3	30.4	41 23.5	05.1	245 51.9	29.5			
10	92	46.3	334	34.6	38.8	9 22.9	30.5	56 25.7	05.2	260 54.2	29.6			
11	107	48.8	349	33.8	+21 38.3	24 23.5	+23 30.6	71 27.9	+13 05.3	275 56.5	-2 29.6			
12	122	51.2	4	33.0	+21 37.8	39 24.1	+23 30.7	86 30.1	+13 05.3	290 58.8	-2 29.7			
13	137	53.7	19	32.2	37.3	54 24.8	30.8	101 32.3	05.4	306 01.1	29.8			
14	152	56.2	34	31.4	36.8	69 25.4	30.9	116 34.5	05.5	321 03.5	29.8			
15	167	58.6	49	30.6	36.3	84 26.0	31.0	131 36.7	05.6	336 05.8	29.9			
16	183	01.1	64	29.8	35.8	99 26.6	31.1	146 38.9	05.7	351 08.1	30.0			
17	198	03.6	79	29.0	+21 35.3	114 27.2	+23 31.2	161 41.1	+13 05.7	6 10.4	-2 30.1			
18	213	06.0	94	28.2	+21 34.8	129 27.8	+23 31.3	176 43.3	+13 05.8	21 12.7	-2 30.1			
19	228	08.5	109	27.4	34.3	144 28.4	31.5	191 45.5	05.9	36 15.0	30.2			
20	243	11.0	124	26.6	33.8	159 29.1	31.6	206 47.7	06.0	51 17.3	30.3			
21	258	13.4	139	25.8	33.3	174 29.7	31.7	221 49.9	06.1	66 19.7	30.4			
22	273	15.9	154	25.0	32.8	189 30.3	31.8	236 52.1	06.1	81 22.0	30.4			
23	288	18.3	169	24.2	32.3	204 30.9	31.9	251 54.3	06.2	96 24.3	30.5			
24	303	20.8	184	23.4	+21 31.8	219 31.5	+23 32.0	266 56.5	+13 06.3	111 26.6	-2 30.6			
Dif	—		-8	-5		+6	+1	+22	+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 06 ^m 5				Edad: 24 ^d 6 PHE { 4 ^h : 55 ^m /7 12 ^h : 55 ^m /9 20 ^h : 56 ^m /2 R°: 53 ^m	Dec	Dif	Náutico		Civil	Hora		R°	Hora	R°				
	hG ☉	Dec	hG ☾	Dif															
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	h	m
0	178	22.1	+19	33.3	241	51.7	+22	34.6	32	60 N	** ** *	2 20	3 26	23 31	60	17 41	51		
1	193	22.0		32.8	256	20.6		37.8	32	58	0 47	2 43	40	23 50	60	21	53		
2	208	22.0		32.2	270	49.4		41.0	30	56	1 38	3 01	3 52	** ** *	**	17 05	53		
3	223	22.0		31.7	285	18.1		44.0	30	54	2 08	16	4 03	** ** *	**	16 52	53		
4	238	22.0		31.1	299	46.8		46.8	28	52	29	29	12	** ** *	**	40	53		
5	253	22.0	+19	30.6	314	15.4	+22	49.6	28	50	2 47	3 40	4 20	** ** *	**	16 29	54		
6	268	22.0	+19	30.0	328	44.0	+22	52.3	27	45	3 19	4 04	4 38	0 15	49	16 07	54		
7	283	22.0		29.5	343	12.5		54.8	25	40	3 43	22	4 52	33	49	15 49	54		
8	298	22.0		28.9	357	41.0		57.2	24	35	4 02	36	5 05	47	50	35	53		
9	313	22.0		28.4	12	09.4	+22	59.5	23	30	17	4 49	15	0 59	51	15 22	53		
10	328	22.0		27.8	26	37.7	+23	01.7	22	20	4 41	5 09	33	1 21	52	14 59	54		
11	343	22.0	+19	27.3	41	06.0	+23	03.8	21	10 N	5 00	5 26	5 49	1 40	52	14 40	54		
12	358	22.0	+19	26.7	55	34.2	+23	05.7	19	0	5 16	5 41	6 03	1 57	53	14 22	54		
13	13	22.0		26.2	70	02.4		07.5	18	10 S	29	5 55	17	2 15	53	14 04	54		
14	28	22.0		25.6	84	30.5		09.2	17	20	42	6 09	32	33	55	13 45	54		
15	43	22.0		25.1	98	58.6		10.8	16	30	5 55	24	50	2 55	55	23	54		
16	58	22.0		24.5	113	26.6		12.3	15	35	6 02	32	6 59	3 08	55	13 10	53		
17	73	22.0	+19	24.0	127	54.6	+23	13.6	13	40	6 09	6 42	7 11	3 23	55	12 55	53		
18	88	22.0	+19	23.4	142	22.5	+23	14.8	12	45	6 16	6 52	7 24	3 40	56	12 37	53		
19	103	22.0		22.9	156	50.4		15.9	11	50	25	7 04	40	4 02	57	15	53		
20	118	22.0		22.3	171	18.2		16.9	10	52	28	10	48	12	58	12 05	52		
21	133	22.0		21.7	185	46.0		17.7	8	54	32	16	7 56	24	58	11 53	52		
22	148	22.0		21.2	200	13.7		18.4	7	56	37	23	8 06	38	58	39	52		
23	163	22.0		20.6	214	41.4		19.0	6	58	41	30	16	4 53	59	23	52		
24	178	22.0	+19	20.1	229	09.0	+23	19.4	4	60 S	6 46	7 39	8 29	5 12	60	11 04	51		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 3 ^h 46 ^m 0		Mag: -3.9 PMG: 11 ^h 43 ^m		Mag: +1.4 PMG: 9 ^h 22 ^m		Mag: -2.5 PMG: 6 ^h 11 ^m		Mag: +0.9 PMG: 16 ^h 32 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	303	20.8	184	23.4	+21	31.8	219	31.5	+23	32.0	266	56.5	+13	06.3	111	26.6	-2	30.6
1	318	23.3	199	22.6		31.3	234	32.1		32.1	281	58.7		06.4	126	28.9		30.6
2	333	25.7	214	21.8		30.8	249	32.7		32.2	297	00.9		06.4	141	31.2		30.7
3	348	28.2	229	21.0		30.3	264	33.4		32.3	312	03.1		06.5	156	33.5		30.8
4	3	30.7	244	20.2		29.7	279	34.0		32.4	327	05.3		06.6	171	35.9		30.9
5	18	33.1	259	19.4	+21	29.2	294	34.6	+23	32.5	342	07.5	+13	06.7	186	38.2	-2	30.9
6	33	35.6	274	18.6	+21	28.7	309	35.2	+23	32.6	357	09.7	+13	06.8	201	40.5	-2	31.0
7	48	38.1	289	17.8		28.2	324	35.8		32.7	12	11.9		06.8	216	42.8		31.1
8	63	40.5	304	17.0		27.7	339	36.4		32.8	27	14.1		06.9	231	45.1		31.2
9	78	43.0	319	16.2		27.2	354	37.0		32.9	42	16.3		07.0	246	47.4		31.2
10	93	45.5	334	15.4		26.6	9	37.7		33.0	57	18.5		07.1	261	49.7		31.3
11	108	47.9	349	14.6	+21	26.1	24	38.3	+23	33.1	72	20.7	+13	07.1	276	52.0	-2	31.4
12	123	50.4	4	13.8	+21	25.6	39	38.9	+23	33.2	87	22.9	+13	07.2	291	54.4	-2	31.5
13	138	52.8	19	13.0		25.1	54	39.5		33.3	102	25.1		07.3	306	56.7		31.5
14	153	55.3	34	12.2		24.6	69	40.1		33.4	117	27.3		07.4	321	59.0		31.6
15	168	57.8	49	11.4		24.0	84	40.7		33.5	132	29.5		07.5	337	01.3		31.7
16	184	00.2	64	10.7		23.5	99	41.4		33.6	147	31.7		07.5	352	03.6		31.7
17	199	02.7	79	09.9	+21	23.0	114	42.0	+23	33.7	162	33.9	+13	07.6	7	05.9	-2	31.8
18	214	05.2	94	09.1	+21	22.4	129	42.6	+23	33.8	177	36.1	+13	07.7	22	08.2	-2	31.9
19	229	07.6	109	08.3		21.9	144	43.2		33.9	192	38.3		07.8	37	10.5		32.0
20	244	10.1	124	07.5		21.4	159	43.8		34.0	207	40.5		07.8	52	12.9		32.0
21	259	12.6	139	06.7		20.9	174	44.4		34.1	222	42.7		07.9	67	15.2		32.1
22	274	15.0	154	05.9		20.3	189	45.0		34.2	237	44.9		08.0	82	17.5		32.2
23	289	17.5	169	05.1		19.8	204	45.7		34.3	252	47.1		08.1	97	19.8		32.3
24	304	20.0	184	04.3	+21	19.2	219	46.3	+23	34.4	267	49.3	+13	08.1	112	22.1	-2	32.3
Dif	—		-8		-5		+6		+1		+22		+1		+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 6 PHE { 4 ^h : 56/4 12 ^h : 56/7 20 ^h : 56/9													
	PMG: 12 ^h 06 ^m 5			SD: 15/3 PMG: 9 ^h 03 ^m R°: 55 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Civil	Náutico		Hora	R°	Hora	R°	
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m	h m m	
0	178	22.0	+19 20.1	229	09.0	+23 19.4	4	60 N	20 43	21 48	** ** *	** ** *	** ** *	18 32	37		
1	193	22.0	19.5	243	36.6	19.8	4	58	30	26	23 10	** ** *	** ** *	18 14	39		
2	208	22.0	19.0	258	04.2	20.0	2	56	18	21 08	22 27	0 06	59	17 58	42		
3	223	22.0	18.4	272	31.7	20.0	0	54	20 08	20 54	22 00	20 59	45	43			
4	238	22.0	17.8	286	59.2	20.0	0	52	19 59	41	21 40	32 58	33	44			
5	253	22.0	+19 17.3	301	26.6	+23 19.8	2	50	19 50	20 30	21 23	0 42	59	17 23	45		
6	268	22.1	+19 16.7	315	54.0	+23 19.4	4	45	19 33	20 07	20 51	1 04	58	17 01	47		
7	283	22.1	16.2	330	21.3	19.0	4	40	19	19 50	28	22 57	16 43	49			
8	298	22.1	15.6	344	48.7	18.4	6	35	19 07	35	20 10	37 57	28	50			
9	313	22.1	15.0	359	15.9	17.7	7	30	18 57	23	19 55	1 50	57	16 15	51		
10	328	22.1	14.5	13	43.2	16.9	8	20	39	19 03	31	2 13	55	15 53	53		
11	343	22.1	+19 13.9	28	10.4	+23 15.9	10	10 N	18 24	18 47	19 13	2 32	55	15 34	54		
12	358	22.1	+19 13.3	42	37.6	+23 14.8	11	0	18 10	18 32	18 57	2 50	55	15 16	55		
13	13	22.1	12.8	57	04.7	13.5	13	10 S	17 56	18	44	3 08	54	14 58	56		
14	28	22.1	12.2	71	31.8	12.2	13	20	41	18 05	31	28 53	39	57			
15	43	22.1	11.6	85	58.9	10.6	16	30	24	17 50	19	3 50	53	17 58			
16	58	22.1	11.1	100	26.0	09.0	16	35	15	42	12	4 03	52	14 03	60		
17	73	22.1	+19 10.5	114	53.0	+23 07.2	18	40	17 03	17 33	18 06	4 18	52	13 48	61		
18	88	22.1	+19 09.9	129	20.0	+23 05.3	19	45	16 50	17 22	17 58	4 36	51	13 30	62		
19	103	22.1	09.4	143	47.0	03.3	20	50	35	10	50	4 59	49	13 08	63		
20	118	22.1	08.8	158	13.9	+23 01.1	22	52	27	17 05	46	5 10	48	12 57	65		
21	133	22.1	08.2	172	40.8	+22 58.8	23	54	19	16 59	43	22 48	45	65			
22	148	22.1	07.7	187	07.7	56.3	25	56	16 10	52	39	36 47	31	67			
23	163	22.2	07.1	201	34.6	53.8	25	58	15 59	45	34	5 52	46	12 15	68		
24	178	22.2	+19 06.5	216	01.5	+22 51.0	28	60 S	15 47	16 37	17 29	6 12	44	11 55	70		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 3 ^h 42 ^m 1		Mag: -3.9 PMG: 11 ^h 44 ^m		Mag: +1.4 PMG: 9 ^h 21 ^m		Mag: -2.5 PMG: 6 ^h 08 ^m		Mag: +0.9 PMG: 16 ^h 28 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	304	20.0	184	04.3	+21 19.2	219	46.3	+23 34.4	267	49.3	+13 08.1	112	22.1	-2 32.3
1	319	22.4	199	03.5	18.7	234	46.9	34.5	282	51.6	08.2	127	24.4	32.4
2	334	24.9	214	02.8	18.2	249	47.5	34.6	297	53.8	08.3	142	26.7	32.5
3	349	27.3	229	02.0	17.6	264	48.1	34.7	312	56.0	08.4	157	29.0	32.6
4	4	29.8	244	01.2	17.1	279	48.7	34.7	327	58.2	08.5	172	31.3	32.6
5	19	32.3	259	00.4	+21 16.6	294	49.4	+23 34.8	343	00.4	+13 08.5	187	33.6	-2 32.7
6	34	34.7	273	59.6	+21 16.0	309	50.0	+23 34.9	358	02.6	+13 08.6	202	36.0	-2 32.8
7	49	37.2	288	58.8	15.5	324	50.6	35.0	13	04.8	08.7	217	38.3	32.9
8	64	39.7	303	58.0	14.9	339	51.2	35.1	28	07.0	08.8	232	40.6	32.9
9	79	42.1	318	57.2	14.4	354	51.8	35.2	43	09.2	08.8	247	42.9	33.0
10	94	44.6	333	56.5	13.8	9	52.4	35.3	58	11.4	08.9	262	45.2	33.1
11	109	47.1	348	55.7	+21 13.3	24	53.1	+23 35.4	73	13.6	+13 09.0	277	47.5	-2 33.2
12	124	49.5	3	54.9	+21 12.7	39	53.7	+23 35.5	88	15.8	+13 09.1	292	49.8	-2 33.2
13	139	52.0	18	54.1	12.2	54	54.3	35.6	103	18.0	09.1	307	52.1	33.3
14	154	54.5	33	53.3	11.6	69	54.9	35.7	118	20.2	09.2	322	54.4	33.4
15	169	56.9	48	52.5	11.1	84	55.5	35.8	133	22.5	09.3	337	56.7	33.5
16	184	59.4	63	51.8	10.5	99	56.1	35.8	148	24.7	09.4	352	59.1	33.5
17	200	01.8	78	51.0	+21 10.0	114	56.8	+23 35.9	163	26.9	+13 09.4	8	01.4	-2 33.6
18	215	04.3	93	50.2	+21 09.4	129	57.4	+23 36.0	178	29.1	+13 09.5	23	03.7	-2 33.7
19	230	06.8	108	49.4	08.9	144	58.0	36.1	193	31.3	09.6	38	06.0	33.8
20	245	09.2	123	48.6	08.3	159	58.6	36.2	208	33.5	09.7	53	08.3	33.8
21	260	11.7	138	47.8	07.8	174	59.2	36.3	223	35.7	09.7	68	10.6	33.9
22	275	14.2	153	47.1	07.2	189	59.9	36.4	238	37.9	09.8	83	12.9	34.0
23	290	16.6	168	46.3	06.6	205	00.5	36.5	253	40.1	09.9	98	15.2	34.1
24	305	19.1	183	45.5	+21 06.1	220	01.1	+23 36.6	268	42.3	+13 10.0	113	17.5	-2 34.1
Dif	—		-8	-5	+6	+1	+22	+1	+23	-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 06 ^m 5				Edad: 26 ^d 6 PHE { 4 ^h : 57/2 12 ^h : 57/4 20 ^h : 57/7 SD: 15/5 PMG: 9 ^h 58 ^m R°: 55 ^m												
	hG ☉		Dec		hG ☾ Dif		Dec Dif			Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	178	22.2	+19	06.5	216	01.5	+22	51.0	60 N	**	**	2 26	3 30	0 31	78	19 09	26
1	193	22.2		05.9	230	28.3	78	48.2	58	1 03	2 48	44	0 50	75	18 53	29	
2	208	22.2		05.4	244	55.2	79	45.2	56	1 46	3 05	3 56	1 05	73	40	31	
3	223	22.2		04.8	259	22.0	78	42.1	54	2 13	20	4 06	19	70	28	34	
4	238	22.2		04.2	273	48.8	78	38.8	52	34	33	15	30	70	17	36	
5	253	22.2	+19	03.7	288	15.6	78	+22 35.4	50	2 51	3 44	4 23	1 41	68	18 08	38	
6	268	22.2	+19	03.1	302	42.3	77	+22 31.9	45	3 22	4 06	4 40	2 02	66	17 48	41	
7	283	22.2		02.5	317	09.1	78	28.2	40	3 45	24	4 54	19	64	32	43	
8	298	22.2		01.9	331	35.8	77	24.4	35	4 04	38	5 06	34	62	18	46	
9	313	22.2		01.4	346	02.6	78	20.5	30	19	4 50	16	2 47	61	17 06	48	
10	328	22.3		00.8	0	29.3	77	16.4	20	4 42	5 10	34	3 08	59	16 46	50	
11	343	22.3	+19	00.2	14	56.0	77	+22 12.2	10 N	5 00	5 27	5 49	3 27	57	16 28	53	
12	358	22.3	+18	59.6	29	22.8	78	+22 07.9	0	5 16	5 41	6 03	3 45	55	16 11	55	
13	13	22.3		59.0	43	49.5	77	+22 03.4	10 S	29	5 55	17	4 02	54	15 54	58	
14	28	22.3		58.5	58	16.2	77	+21 58.8	20	42	6 08	32	21	52	36	60	
15	43	22.3		57.9	72	42.9	77	54.1	30	5 54	23	48	43	49	15	63	
16	58	22.3		57.3	87	09.6	77	49.2	35	6 00	31	6 58	4 55	48	15 03	65	
17	73	22.3	+18	56.7	101	36.3	77	+21 44.2	40	6 07	6 40	7 09	5 10	46	14 49	66	
18	88	22.4	+18	56.1	116	03.0	77	+21 39.0	45	6 14	6 50	7 22	5 27	44	14 32	69	
19	103	22.4		55.6	130	29.7	77	33.7	50	22	7 02	38	48	42	11	73	
20	118	22.4		55.0	144	56.4	77	28.3	52	26	07	45	5 58	40	14 02	73	
21	133	22.4		54.4	159	23.1	77	22.8	54	30	13	7 53	6 10	38	13 50	76	
22	148	22.4		53.8	173	49.8	77	17.1	56	34	20	8 02	23	36	38	77	
23	163	22.4		53.2	188	16.5	77	11.3	58	38	27	13	38	34	23	80	
24	178	22.4	+18	52.6	202	43.2	77	+21 05.4	60 S	6 43	7 35	8 25	6 56	30	13 05	84	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 3 ^h 38 ^m 1		Mag: -3.9 PMG: 11 ^h 46 ^m		Mag: +1.4 PMG: 9 ^h 20 ^m		Mag: -2.5 PMG: 6 ^h 04 ^m		Mag: +0.9 PMG: 16 ^h 24 ^m	
	hG ♈		hG ♀ Dec		hG ♂ Dec		hG ♃ Dec		hG ♄ Dec	
h	°	'	°	'	°	'	°	'	°	'
0	305	19.1	183	45.5	+21	06.1	220	01.1	+23	36.6
1	320	21.6	198	44.7		05.5	235	01.7		36.6
2	335	24.0	213	43.9		05.0	250	02.3		36.7
3	350	26.5	228	43.2		04.4	265	02.9		36.8
4	5	28.9	243	42.4		03.8	280	03.6		36.9
5	20	31.4	258	41.6	+21	03.3	295	04.2	+23	37.0
6	35	33.9	273	40.8	+21	02.7	310	04.8	+23	37.1
7	50	36.3	288	40.1		02.1	325	05.4		37.1
8	65	38.8	303	39.3		01.6	340	06.0		37.2
9	80	41.3	318	38.5		01.0	355	06.7		37.3
10	95	43.7	333	37.7	+21	00.4	10	07.3		37.4
11	110	46.2	348	36.9	+20	59.8	25	07.9	+23	37.5
12	125	48.7	3	36.2	+20	59.3	40	08.5	+23	37.6
13	140	51.1	18	35.4		58.7	55	09.1		37.6
14	155	53.6	33	34.6		58.1	70	09.8		37.7
15	170	56.1	48	33.8		57.5	85	10.4		37.8
16	185	58.5	63	33.1		57.0	100	11.0		37.9
17	201	01.0	78	32.3	+20	56.4	115	11.6	+23	38.0
18	216	03.4	93	31.5	+20	55.8	130	12.2	+23	38.1
19	231	05.9	108	30.7		55.2	145	12.9		38.1
20	246	08.4	123	30.0		54.6	160	13.5		38.2
21	261	10.8	138	29.2		54.1	175	14.1		38.3
22	276	13.3	153	28.4		53.5	190	14.7		38.4
23	291	15.8	168	27.7		52.9	205	15.3		38.4
24	306	18.2	183	26.9	+20	52.3	220	15.9	+23	38.5
Dif	—		-8		-6		+6		+1	

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 15 ^h 8			Edad: 27 ^d 6 PHE { 4 ^h : 57 ^m 9 12 ^h : 58 ^m 2 20 ^h : 58 ^m 4 R°: 55 ^m											
	PMG: 12 ^h 06 ^m 5			SD: 15 ^h 7 PMG: 10 ^h 53 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m
0	178	22.4	+18 52.6	202	43.2	+21 05.4	61	60 N	20 39	21 41	** **	1 49 89	19 35 17		
1	193	22.4	52.1	217	10.0	+20 59.3	61	58	25	20	22 57	2 05 85	22 21		
2	208	22.5	51.5	231	36.7	53.1	62	56	14	21 04	22 19	18 82	11 25		
3	223	22.5	50.9	246	03.5	46.8	63	54	20 04	20 50	21 54	29 80	19 02 27		
4	238	22.5	50.3	260	30.2	40.3	65	52	19 55	37	35	40 77	18 53 29		
5	253	22.5	+18 49.7	274	57.0	+20 33.7	66	50	19 48	20 27	21 19	2 49 75	18 46 31		
6	268	22.5	+18 49.1	289	23.8	+20 27.0	67	45	19 31	20 05	20 48	3 08 71	18 29 35		
7	283	22.5	48.5	303	50.6	20.1	69	40	17	19 48	26	23 69	15 39		
8	298	22.6	48.0	318	17.4	13.1	70	35	19 06	34	20 08	36 67	18 04 41		
9	313	22.6	47.4	332	44.2	+20 06.0	71	30	18 56	22	19 53	3 48 64	17 54 43		
10	328	22.6	46.8	347	11.0	+19 58.8	72	20	39	19 02	30	4 07 61	36 48		
11	343	22.6	+18 46.2	1	37.9	+19 51.4	74	10 N	18 24	18 46	19 12	4 24 58	17 21 51		
12	358	22.6	+18 45.6	16	04.7	+19 44.0	74	0	18 10	18 32	18 57	4 40 55	17 06 55		
13	13	22.6	45.0	30	31.6	36.4	76	10 S	17 56	18	44	4 56 52	16 52 57		
14	28	22.7	44.4	44	58.5	28.6	78	20	42	18 05	32	5 13 49	36 61		
15	43	22.7	43.8	59	25.4	20.8	78	30	26	17 51	20	32 45	18 65		
16	58	22.7	43.2	73	52.4	12.8	80	35	16	43	14	43 44	16 08 67		
17	73	22.7	+18 42.6	88	19.3	+19 04.7	81	40	17 05	17 34	18 07	5 56 41	15 55 71		
18	88	22.7	+18 42.0	102	46.3	+18 56.5	82	45	16 53	17 24	18 00	6 11 38	15 41 74		
19	103	22.8	41.4	117	13.3	48.1	84	50	37	13	17 52	30 34	24 77		
20	118	22.8	40.8	131	40.4	39.6	85	52	30	08	49	38 33	15 80		
21	133	22.8	40.3	146	07.4	31.1	85	54	22	17 02	45	48 30	15 06 82		
22	148	22.8	39.7	160	34.5	22.4	87	56	13	16 56	41	6 59 28	14 55 85		
23	163	22.8	39.1	175	01.6	13.5	89	58	16 03	48	37	7 12 24	43 88		
24	178	22.9	+18 38.5	189	28.7	+18 04.6	89	60 S	15 51	16 41	17 33	7 26 21	14 29 92		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 3 ^h 34 ^m 2		Mag: -3.9 PMG: 11 ^h 47 ^m		Mag: +1.4 PMG: 9 ^h 19 ^m		Mag: -2.5 PMG: 6 ^h 01 ^m		Mag: +0.9 PMG: 16 ^h 21 ^m	
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	°	°	°	°	°	°	°	°	
0	306	18.2	+20 52.3	220	15.9	+23 38.5	269	35.5	+13 11.7	
1	321	20.7	51.7	235	16.6	38.6	284	37.7	11.8	
2	336	23.2	51.1	250	17.2	38.7	299	39.9	11.8	
3	351	25.6	50.5	265	17.8	38.8	314	42.2	11.9	
4	6	28.1	49.9	280	18.4	38.8	329	44.4	12.0	
5	21	30.6	+20 49.3	295	19.1	+23 38.9	344	46.6	+13 12.1	
6	36	33.0	+20 48.8	310	19.7	+23 39.0	359	48.8	+13 12.1	
7	51	35.5	48.2	325	20.3	39.1	14	51.0	12.2	
8	66	37.9	47.6	340	20.9	39.1	29	53.3	12.3	
9	81	40.4	47.0	355	21.5	39.2	44	55.5	12.3	
10	96	42.9	46.4	10	22.2	39.3	59	57.7	12.4	
11	111	45.3	+20 45.8	25	22.8	+23 39.4	74	59.9	+13 12.5	
12	126	47.8	3 17.7	40	23.4	+23 39.4	90	02.1	+13 12.6	
13	141	50.3	18 16.9	55	24.0	39.5	105	04.4	12.6	
14	156	52.7	33 16.1	70	24.6	39.6	120	06.6	12.7	
15	171	55.2	48 15.4	85	25.3	39.7	135	08.8	12.8	
16	186	57.7	63 14.6	100	25.9	39.7	150	11.0	12.8	
17	202	00.1	+20 42.2	115	26.5	+23 39.8	165	13.3	+13 12.9	
18	217	02.6	93 13.1	130	27.1	+23 39.9	180	15.5	+13 13.0	
19	232	05.1	108 12.3	145	27.7	39.9	195	17.7	13.0	
20	247	07.5	123 11.6	160	28.4	40.0	210	19.9	13.1	
21	262	10.0	138 10.8	175	29.0	40.1	225	22.1	13.2	
22	277	12.4	153 10.0	190	29.6	40.2	240	24.4	13.3	
23	292	14.9	168 09.3	205	30.2	40.2	255	26.6	13.3	
24	307	17.4	+20 37.9	220	30.9	+23 40.3	270	28.8	+13 13.4	
Dif	—	-8	-6	+6	+1	+22	+1	+23	-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: 28 ^d 6 PHE { SD: 15 ^h 9 PMG: 11 ^h 48 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m		
0	178	22.9	+18	38.5	189	28.7	+18	04.6	60 N	** *	2 32	3 35	3 18	93	19 52	13		
1	193	22.9		37.9	203	55.8	+17	55.6	58	1 17	2 53	48	30	89	43	17		
2	208	22.9		37.3	218	23.0		46.4	56	1 54	3 10	3 59	40	86	36	19		
3	223	22.9		36.7	232	50.2		37.1	54	2 19	24	4 09	49	84	29	22		
4	238	22.9		36.1	247	17.4		27.7	52	39	36	18	3 57	81	22	25		
5	253	23.0	+18	35.5	261	44.7	+17	18.2	50	2 55	3 47	4 26	4 04	79	19 17	26		
6	268	23.0	+18	34.9	276	12.0	+17	08.6	45	3 25	4 08	4 43	4 19	75	19 04	31		
7	283	23.0		34.3	290	39.3	+16	58.9	40	3 48	26	4 56	32	71	18 54	35		
8	298	23.0		33.7	305	06.6		49.0	35	4 06	40	5 08	43	68	45	38		
9	313	23.1		33.1	319	34.0		39.1	30	20	4 51	18	4 52	65	37	41		
10	328	23.1		32.5	334	01.4		29.0	20	4 43	5 11	35	5 08	61	24	45		
11	343	23.1	+18	31.9	348	28.8	+16	18.9	10 N	5 01	5 27	5 49	5 22	57	18 12	49		
12	358	23.1	+18	31.3	2	56.3	+16	08.6	0	5 16	5 41	6 03	5 35	54	18 01	53		
13	13	23.2		30.7	17	23.7	+15	58.3	10 S	29	5 54	16	5 48	50	17 49	57		
14	28	23.2		30.0	31	51.3		47.8	20	41	6 08	31	6 02	46	37	61		
15	43	23.2		29.4	46	18.8		37.2	30	53	22	47	17	42	23	66		
16	58	23.2		28.8	60	46.4		26.5	35	5 59	30	6 56	27	39	15	68		
17	73	23.3	+18	28.2	75	14.0	+15	15.8	40	6 05	6 38	7 07	6 37	36	17 06	71		
18	88	23.3	+18	27.6	89	41.6	+15	04.9	45	6 12	6 48	7 20	6 49	33	16 55	75		
19	103	23.3		27.0	104	09.3	+14	53.9	50	20	6 59	35	7 04	28	41	80		
20	118	23.3		26.4	118	37.0		42.9	52	23	7 05	42	11	26	35	82		
21	133	23.4		25.8	133	04.7		31.7	54	27	10	50	18	24	28	85		
22	148	23.4		25.2	147	32.5		20.5	56	31	16	7 59	27	21	20	88		
23	163	23.4		24.6	162	00.3	+14	09.1	58	35	23	8 09	36	19	11	92		
24	178	23.4	+18	24.0	176	28.1	+13	57.7	60 S	6 39	7 31	8 20	7 47	15	16 01	95		
UT	ARIES		VENUS			MARTE			JÚPITER				SATURNO					
	PMG 3 ^h 30 ^m 3		Mag: -3.9 PMG: 11 ^h 48 ^m			Mag: +1.4 PMG: 9 ^h 18 ^m			Mag: -2.5 PMG: 5 ^h 57 ^m				Mag: +0.9 PMG: 16 ^h 17 ^m					
	hG ♈		hG ♀ Dec			hG ♂ Dec			hG ♃ Dec				hG ♄ Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	307	17.4	183	08.5	+20	37.9	220	30.9	+23	40.3	270	28.8	+13	13.4	115	08.1	-2	37.8
1	322	19.8	198	07.7		37.3	235	31.5		40.4	285	31.0		13.5	130	10.5		37.9
2	337	22.3	213	07.0		36.7	250	32.1		40.4	300	33.3		13.5	145	12.8		38.0
3	352	24.8	228	06.2		36.1	265	32.7		40.5	315	35.5		13.6	160	15.1		38.0
4	7	27.2	243	05.5		35.5	280	33.3		40.6	330	37.7		13.7	175	17.4		38.1
5	22	29.7	258	04.7	+20	34.8	295	34.0	+23	40.6	345	39.9	+13	13.7	190	19.7	-2	38.2
6	37	32.2	273	03.9	+20	34.2	310	34.6	+23	40.7	0	42.2	+13	13.8	205	22.0	-2	38.3
7	52	34.6	288	03.2		33.6	325	35.2		40.8	15	44.4		13.9	220	24.3		38.4
8	67	37.1	303	02.4		33.0	340	35.8		40.8	30	46.6		13.9	235	26.6		38.4
9	82	39.6	318	01.7		32.4	355	36.5		40.9	45	48.9		14.0	250	28.9		38.5
10	97	42.0	333	00.9		31.7	10	37.1		41.0	60	51.1		14.1	265	31.2		38.6
11	112	44.5	348	00.2	+20	31.1	25	37.7	+23	41.0	75	53.3	+13	14.2	280	33.5	-2	38.7
12	127	46.9	2	59.4	+20	30.5	40	38.3	+23	41.1	90	55.5	+13	14.2	295	35.8	-2	38.8
13	142	49.4	17	58.6		29.9	55	39.0		41.2	105	57.8		14.3	310	38.1		38.8
14	157	51.9	32	57.9		29.2	70	39.6		41.2	121	00.0		14.4	325	40.4		38.9
15	172	54.3	47	57.1		28.6	85	40.2		41.3	136	02.2		14.4	340	42.7		39.0
16	187	56.8	62	56.4		28.0	100	40.8		41.4	151	04.4		14.5	355	45.0		39.1
17	202	59.3	77	55.6	+20	27.4	115	41.5	+23	41.4	166	06.7	+13	14.6	10	47.3	-2	39.1
18	218	01.7	92	54.9	+20	26.7	130	42.1	+23	41.5	181	08.9	+13	14.6	25	49.6	-2	39.2
19	233	04.2	107	54.1		26.1	145	42.7		41.5	196	11.1		14.7	40	51.9		39.3
20	248	06.7	122	53.4		25.5	160	43.3		41.6	211	13.4		14.8	55	54.2		39.4
21	263	09.1	137	52.6		24.8	175	43.9		41.7	226	15.6		14.8	70	56.5		39.5
22	278	11.6	152	51.9		24.2	190	44.6		41.7	241	17.8		14.9	85	58.8		39.5
23	293	14.0	167	51.1		23.6	205	45.2		41.8	256	20.1		15.0	101	01.1		39.6
24	308	16.5	182	50.4	+20	22.9	220	45.8	+23	41.9	271	22.3	+13	15.0	116	03.4	-2	39.7
Dif	—		-8 -6			+6 +1			+22 +1				+23 -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 4				Edad: 29 ^d 6 PHE { 4 ^h : 59/2 12 ^h : 59/4 20 ^h : 59/5 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	
0	178	23.4	+18	24.0	176	28.1	+13	57.7	60 N	20 34	21 35	** **	4 51 96	20 05 11		
1	193	23.5		23.4	190	55.9	88	46.2	58	21	21 15	22 45	4 59 92	20 00 14		
2	208	23.5		22.8	205	23.8	89	34.6	56	10	20 59	22 12	5 06 89	19 55 17		
3	223	23.5		22.1	219	51.7	89	22.8	54	20 01	45	21 48	13 85	51 19		
4	238	23.5		21.5	234	19.7	90	+13 11.1	52	19 52	34	30	18 83	47 21		
5	253	23.6	+18	20.9	248	47.7	90	+12 59.2	50	19 45	20 23	21 15	5 23 81	19 43 24		
6	268	23.6	+18	20.3	263	15.7	90	+12 47.2	45	19 28	20 02	20 45	5 34 76	19 35 29		
7	283	23.6		19.7	277	43.7	90	35.2	40	15	19 46	23	43 72	29 32		
8	298	23.7		19.1	292	11.8	91	23.1	35	19 04	32	20 06	51 68	23 35		
9	313	23.7		18.5	306	39.9	91	+12 10.9	30	18 54	20	19 51	5 57 66	18 38		
10	328	23.7		17.8	321	08.0	91	+11 58.6	20	38	19 01	29	6 09 61	09 43		
11	343	23.7	+18	17.2	335	36.2	92	+11 46.2	10 N	18 23	18 45	19 11	6 19 57	19 01 48		
12	358	23.8	+18	16.6	350	04.3	91	+11 33.8	0	18 10	18 32	18 57	6 29 52	18 54 52		
13	13	23.8		16.0	4	32.6	93	21.3	10 S	17 57	19	44	38 48	46 56		
14	28	23.8		15.4	19	00.8	92	+11 08.7	20	43	18 06	32	48 44	38 61		
15	43	23.9		14.8	33	29.1	93	+10 56.1	30	27	17 52	21	6 59 40	29 66		
16	58	23.9		14.1	47	57.4	93	43.4	35	17	44	15	7 06 36	23 69		
17	73	23.9	+18	13.5	62	25.7	93	+10 30.6	40	17 07	17 36	18 09	7 13 34	18 17 73		
18	88	24.0	+18	12.9	76	54.1	94	+10 17.7	45	16 55	17 26	18 02	7 22 29	18 10 76		
19	103	24.0		12.3	91	22.5	94	+10 04.8	50	40	15	17 55	32 25	18 01 82		
20	118	24.0		11.7	105	50.9	94	+9 51.8	52	33	10	51	37 23	17 57 84		
21	133	24.1		11.0	120	19.3	94	38.7	54	25	17 05	48	42 21	53 86		
22	148	24.1		10.4	134	47.8	95	25.6	56	17	16 59	44	48 18	48 89		
23	163	24.1		09.8	149	16.3	95	+9 12.5	58	16 07	52	40	7 55 15	43 91		
24	178	24.2	+18	09.2	163	44.8	95	+8 59.2	60 S	15 56	16 44	17 36	8 02 12	17 36 96		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 3 ^h 26 ^m 3		Mag: -3.9 PMG: 11 ^h 49 ^m		Mag: +1.4 PMG: 9 ^h 17 ^m		Mag: -2.5 PMG: 5 ^h 54 ^m		Mag: +0.9 PMG: 16 ^h 13 ^m	
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄	
h	°	'	°	'	°	'	°	'	°	'
0	308	16.5	182	50.4	+20	22.9	271	22.3	+13	15.0
1	323	19.0	197	49.6		22.3	286	24.5		15.1
2	338	21.4	212	48.9		21.7	301	26.8		15.2
3	353	23.9	227	48.1		21.0	316	29.0		15.2
4	8	26.4	242	47.4		20.4	331	31.2		15.3
5	23	28.8	257	46.6	+20	19.7	346	33.5	+13	15.4
6	38	31.3	272	45.9	+20	19.1	1	35.7	+13	15.4
7	53	33.8	287	45.1		18.4	16	37.9		15.5
8	68	36.2	302	44.4		17.8	31	40.2		15.6
9	83	38.7	317	43.6		17.2	46	42.4		15.6
10	98	41.2	332	42.9		16.5	61	44.6		15.7
11	113	43.6	347	42.1	+20	15.9	76	46.9	+13	15.8
12	128	46.1	2	41.4	+20	15.2	91	49.1	+13	15.8
13	143	48.5	17	40.6		14.6	106	51.3		15.9
14	158	51.0	32	39.9		13.9	121	53.6		16.0
15	173	53.5	47	39.1		13.3	136	55.8		16.0
16	188	55.9	62	38.4		12.6	151	58.0		16.1
17	203	58.4	77	37.6	+20	12.0	167	00.3	+13	16.2
18	219	00.9	92	36.9	+20	11.3	182	02.5	+13	16.2
19	234	03.3	107	36.2		10.7	197	04.7		16.3
20	249	05.8	122	35.4		10.0	212	07.0		16.4
21	264	08.3	137	34.7		09.3	227	09.2		16.4
22	279	10.7	152	33.9		08.7	242	11.4		16.5
23	294	13.2	167	33.2		08.0	257	13.7		16.6
24	309	15.7	182	32.5	+20	07.4	272	15.9	+13	16.6
Dif	—		-7		-6		+6		+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 4			Edad: 1 ^d 2 SD: 16/2 PMG: 13 ^h 33 ^m	PHE { 4 ^h : 59/7 12 ^h : 59/8 20 ^h : 59/8 Rº: 52 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	Rº	Hora	Rº			
h	°	'	°	°	'	°	'	h	m	h	m	h	m	h	m	h	m	
0	178	24.2	+18	09.2	163	44.8	+8	59.2	60 N	** *	2 39	3 40	6 27	95	20 16	10		
1	193	24.2		08.6	178	13.4	96	45.9	58	1 28	2 58	3 52	31	92	14	13		
2	208	24.2		07.9	192	42.0	96	32.6	56	2 01	3 14	4 03	35	89	12	16		
3	223	24.3		07.3	207	10.6	96	19.2	54	25	28	13	38	86	10	18		
4	238	24.3		06.7	221	39.2	96	+8 05.7	52	43	40	21	41	84	08	21		
5	253	24.3	+18	06.1	236	07.8	96	+7 52.2	50	2 59	3 50	4 29	6 44	81	20 07	22		
6	268	24.4	+18	05.4	250	36.5	97	+7 38.7	45	3 28	4 11	4 45	6 50	76	20 04	27		
7	283	24.4		04.8	265	05.2	97	25.1	40	3 50	28	4 58	55	72	20 01	31		
8	298	24.4		04.2	279	33.9	97	+7 11.4	35	4 07	41	5 09	6 59	69	19 58	35		
9	313	24.5		03.6	294	02.6	97	+6 57.7	30	22	4 53	19	7 03	66	56	37		
10	328	24.5		02.9	308	31.4	98	44.0	20	4 44	5 12	35	10	60	52	43		
11	343	24.5	+18	02.3	323	00.2	98	+6 30.2	10 N	5 01	5 27	5 50	7 16	55	19 49	47		
12	358	24.6	+18	01.7	337	28.9	97	+6 16.3	0	5 16	5 41	6 03	7 21	52	19 46	51		
13	13	24.6		01.0	351	57.8	99	+6 02.5	10 S	29	5 54	16	26	48	42	56		
14	28	24.7	+18	00.4	6	26.6	98	+5 48.6	20	40	6 07	30	32	43	39	60		
15	43	24.7	+17	59.8	20	55.4	98	34.6	30	52	20	46	39	37	35	65		
16	58	24.7		59.2	35	24.3	99	20.6	35	5 58	28	6 55	42	35	32	69		
17	73	24.8	+17	58.5	49	53.2	99	+5 06.6	40	6 04	6 36	7 05	7 47	31	19 30	72		
18	88	24.8	+17	57.9	64	22.1	99	+4 52.6	45	6 10	6 46	7 17	7 51	28	19 26	77		
19	103	24.8		57.3	78	51.0	99	38.5	50	18	6 57	32	7 57	23	23	81		
20	118	24.9		56.6	93	19.9	99	24.4	52	21	7 02	39	8 00	21	21	83		
21	133	24.9		56.0	107	48.9	100	+4 10.3	54	24	07	46	03	18	19	86		
22	148	25.0		55.4	122	17.8	99	+3 56.1	56	28	13	7 55	06	16	17	89		
23	163	25.0		54.7	136	46.8	100	41.9	58	32	20	8 05	10	13	14	92		
24	178	25.0	+17	54.1	151	15.7	99	+3 27.7	60 S	6 36	7 27	8 16	8 14	10	19 12	95		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 3 ^h 22 ^m 4		Mag: -3.9 PMG: 11 ^h 50 ^m			Mag: +1.4 PMG: 9 ^h 16 ^m			Mag: -2.5 PMG: 5 ^h 50 ^m			Mag: +0.9 PMG: 16 ^h 10 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'				
0	309	15.7	182	32.5	+20	07.4	221	00.8	+23	43.2	272	15.9	+13	16.6	116	58.5	-2	41.6
1	324	18.1	197	31.7		06.7	236	01.5		43.3	287	18.2		16.7	132	00.8		41.7
2	339	20.6	212	31.0		06.0	251	02.1		43.3	302	20.4		16.7	147	03.1		41.8
3	354	23.0	227	30.2		05.4	266	02.7		43.4	317	22.6		16.8	162	05.4		41.8
4	9	25.5	242	29.5		04.7	281	03.4		43.4	332	24.9		16.9	177	07.7		41.9
5	24	28.0	257	28.8	+20	04.0	296	04.0	+23	43.5	347	27.1	+13	16.9	192	10.0	-2	42.0
6	39	30.4	272	28.0	+20	03.4	311	04.6	+23	43.5	2	29.4	+13	17.0	207	12.3	-2	42.1
7	54	32.9	287	27.3		02.7	326	05.2		43.6	17	31.6		17.1	222	14.6		42.2
8	69	35.4	302	26.5		02.0	341	05.9		43.6	32	33.8		17.1	237	16.9		42.2
9	84	37.8	317	25.8		01.4	356	06.5		43.7	47	36.1		17.2	252	19.1		42.3
10	99	40.3	332	25.1	+20	00.7	11	07.1		43.7	62	38.3		17.3	267	21.4		42.4
11	114	42.8	347	24.3	+20	00.0	26	07.7	+23	43.8	77	40.6	+13	17.3	282	23.7	-2	42.5
12	129	45.2	2	23.6	+19	59.4	41	08.4	+23	43.8	92	42.8	+13	17.4	297	26.0	-2	42.6
13	144	47.7	17	22.9		58.7	56	09.0		43.9	107	45.0		17.5	312	28.3		42.6
14	159	50.1	32	22.1		58.0	71	09.6		43.9	122	47.3		17.5	327	30.6		42.7
15	174	52.6	47	21.4		57.3	86	10.3		44.0	137	49.5		17.6	342	32.9		42.8
16	189	55.1	62	20.7		56.7	101	10.9		44.0	152	51.8		17.6	357	35.2		42.9
17	204	57.5	77	19.9	+19	56.0	116	11.5	+23	44.0	167	54.0	+13	17.7	12	37.5	-2	43.0
18	220	00.0	92	19.2	+19	55.3	131	12.1	+23	44.1	182	56.3	+13	17.8	27	39.8	-2	43.0
19	235	02.5	107	18.5		54.6	146	12.8		44.1	197	58.5		17.8	42	42.1		43.1
20	250	04.9	122	17.7		53.9	161	13.4		44.2	213	00.7		17.9	57	44.4		43.2
21	265	07.4	137	17.0		53.3	176	14.0		44.2	228	03.0		18.0	72	46.7		43.3
22	280	09.9	152	16.3		52.6	191	14.7		44.3	243	05.2		18.0	87	49.0		43.4
23	295	12.3	167	15.5		51.9	206	15.3		44.3	258	07.5		18.1	102	51.3		43.5
24	310	14.8	182	14.8	+19	51.2	221	15.9	+23	44.4	273	09.7	+13	18.1	117	53.6	-2	43.5
Dif	—		-7			-7	+6			0	+22		+1	+23			-1	

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna						
	SD: 15 ^h 8			Edad: 2 ^d 2	PHE	4^h: 59'9 12^h: 59'9 20^h: 60'0 R°: 51^m				Civil		Náutico		Hora		R°			
	hG ☉	Dec								hG ☾	Dif		Dec		Dif		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	h m m	
0	178	25.0	+17	54.1	151	15.7	+3	27.7	60 N	20 29	21 28	23 30	8 02 95	20 26 10					
1	193	25.1		53.5	165	44.7 ¹⁰⁰	+3	13.5 ¹⁴²	58	17	21 10	22 35	03 92	27 13					
2	208	25.1		52.8	180	13.7 ¹⁰⁰	+2	59.2 ¹⁴³	56	20 06	20 54	22 05	04 88	28 16					
3	223	25.2		52.2	194	42.7 ¹⁰⁰		45.0 ¹⁴²	54	19 57	41	21 43	04 86	28 19					
4	238	25.2		51.6	209	11.8 ¹⁰¹		30.7 ¹⁴³	52	49	30	25	05 83	29 21					
5	253	25.2	+17	50.9	223	40.8 ¹⁰⁰	+2	16.4 ¹⁴³	50	19 42	20 20	21 10	8 05 82	20 29 23					
6	268	25.3	+17	50.3	238	09.8 ¹⁰⁰	+2	02.1 ¹⁴³	45	19 26	19 59	20 42	8 06 77	20 31 27					
7	283	25.3		49.6	252	38.8 ¹⁰⁰	+1	47.7 ¹⁴⁴	40	13	43	20	07 73	32 31					
8	298	25.4		49.0	267	07.9 ¹⁰¹		33.4 ¹⁴³	35	19 02	30	20 04	08 69	33 34					
9	313	25.4		48.4	281	36.9 ¹⁰⁰		19.0 ¹⁴⁴	30	18 53	19	19 50	09 66	33 38					
10	328	25.5		47.7	296	06.0 ¹⁰¹	+1	04.7 ¹⁴³	20	37	19 00	28	10 61	35 42					
11	343	25.5	+17	47.1	310	35.0 ¹⁰⁰	+0	50.3 ¹⁴⁴	10 N	18 23	18 45	19 11	8 11 56	20 36 47					
12	358	25.5	+17	46.4	325	04.1 ¹⁰¹	+0	35.9 ¹⁴⁴	0	18 10	18 31	18 57	8 13 51	20 37 51					
13	13	25.6		45.8	339	33.2 ¹⁰¹		21.6 ¹⁴³	10 S	17 57	19	44	14 47	38 56					
14	28	25.6		45.2	354	02.2 ¹⁰⁰	+0	07.2 ¹⁴⁴	20	43	18 06	33	15 42	39 60					
15	43	25.7		44.5	8	31.3 ¹⁰¹	-0	07.2 ¹⁴⁴	30	28	17 53	22	16 37	40 66					
16	58	25.7		43.9	23	00.3 ¹⁰⁰		21.6 ¹⁴⁴	35	19	46	16	17 34	41 69					
17	73	25.8	+17	43.2	37	29.4 ¹⁰¹	-0	35.9 ¹⁴³	40	17 09	17 38	18 10	8 18 31	20 42 72					
18	88	25.8	+17	42.6	51	58.4 ¹⁰⁰	-0	50.3 ¹⁴⁴	45	16 57	17 28	18 04	8 19 27	20 43 76					
19	103	25.8		42.0	66	27.5 ¹⁰¹	-1	04.7 ¹⁴⁴	50	43	18	17 57	20 23	44 81					
20	118	25.9		41.3	80	56.5 ¹⁰⁰		19.0 ¹⁴³	52	36	13	54	21 20	44 84					
21	133	25.9		40.7	95	25.6 ¹⁰¹		33.4 ¹⁴⁴	54	28	08	51	21 19	45 86					
22	148	26.0		40.0	109	54.6 ¹⁰⁰	-1	47.7 ¹⁴³	56	20	17 02	47	22 16	46 88					
23	163	26.0		39.4	124	23.7 ¹⁰¹	-2	02.0 ¹⁴³	58	11	16 55	43	23 13	46 92					
24	178	26.1	+17	38.7	138	52.7 ¹⁰⁰	-2	16.3 ¹⁴³	60 S	16 00	16 48	17 39	8 24 10	20 47 95					

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG		Mag: -3.9		Mag: +1.4		Mag: -2.5		Mag: +0.9									
	3 ^h 18 ^m 5		PMG: 11 ^h 52 ^m		PMG: 9 ^h 15 ^m		PMG: 5 ^h 46 ^m		PMG: 16 ^h 06 ^m									
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	310	14.8	182	14.8	+19	51.2	221	15.9	+23	44.4	273	09.7	+13	18.1	117	53.6	-2	43.5
1	325	17.3	197	14.1		50.5	236	16.6		44.4	288	12.0		18.2	132	55.8		43.6
2	340	19.7	212	13.3		49.8	251	17.2		44.4	303	14.2		18.3	147	58.1		43.7
3	355	22.2	227	12.6		49.2	266	17.8		44.5	318	16.5		18.3	163	00.4		43.8
4	10	24.6	242	11.9		48.5	281	18.4		44.5	333	18.7		18.4	178	02.7		43.9
5	25	27.1	257	11.1	+19	47.8	296	19.1	+23	44.6	348	20.9	+13	18.5	193	05.0	-2	43.9
6	40	29.6	272	10.4	+19	47.1	311	19.7	+23	44.6	3	23.2	+13	18.5	208	07.3	-2	44.0
7	55	32.0	287	09.7		46.4	326	20.3		44.7	18	25.4		18.6	223	09.6		44.1
8	70	34.5	302	09.0		45.7	341	21.0		44.7	33	27.7		18.6	238	11.9		44.2
9	85	37.0	317	08.2		45.0	356	21.6		44.7	48	29.9		18.7	253	14.2		44.3
10	100	39.4	332	07.5		44.3	11	22.2		44.8	63	32.2		18.8	268	16.5		44.3
11	115	41.9	347	06.8	+19	43.6	26	22.9	+23	44.8	78	34.4	+13	18.8	283	18.8	-2	44.4
12	130	44.4	2	06.1	+19	42.9	41	23.5	+23	44.9	93	36.7	+13	18.9	298	21.1	-2	44.5
13	145	46.8	17	05.3		42.2	56	24.1		44.9	108	38.9		18.9	313	23.3		44.6
14	160	49.3	32	04.6		41.5	71	24.8		44.9	123	41.2		19.0	328	25.6		44.7
15	175	51.7	47	03.9		40.8	86	25.4		45.0	138	43.4		19.1	343	27.9		44.8
16	190	54.2	62	03.2		40.1	101	26.0		45.0	153	45.7		19.1	358	30.2		44.8
17	205	56.7	77	02.4	+19	39.4	116	26.6	+23	45.1	168	47.9	+13	19.2	13	32.5	-2	44.9
18	220	59.1	92	01.7	+19	38.7	131	27.3	+23	45.1	183	50.2	+13	19.2	28	34.8	-2	45.0
19	236	01.6	107	01.0		38.0	146	27.9		45.1	198	52.4		19.3	43	37.1		45.1
20	251	04.1	122	00.3		37.3	161	28.5		45.2	213	54.7		19.4	58	39.4		45.2
21	266	06.5	136	59.5		36.6	176	29.2		45.2	228	56.9		19.4	73	41.7		45.2
22	281	09.0	151	58.8		35.9	191	29.8		45.2	243	59.2		19.5	88	44.0		45.3
23	296	11.5	166	58.1		35.2	206	30.4		45.3	259	01.4		19.5	103	46.3		45.4
24	311	13.9	181	57.4	+19	34.5	221	31.1	+23	45.3	274	03.7	+13	19.6	118	48.5	-2	45.5
Dif	—		-7		-7		+6		0		+22		+1		+23		-1	

UT	SOL				● LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15 ^h 8 PMG: 12 ^h 06 ^m 2				Edad: 3 ^d 2 PHE { 4 ^h : 59 ^m 9 12 ^h : 59 ^m 9 20 ^h : 59 ^m 9 PMG: 15 ^h 16 ^m R°: 52 ^m												
	hG ☉		Dec		hG ☾ Dif		Dec Dif			Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	178	26.1	+17	38.7	138	52.7	-2	16.3	60 N	0 43	2 45	3 44	9 37	96	20 36	12	
1	193	26.1		38.1	153	21.7 ¹⁰⁰		30.6 ¹⁴³	58	1 38	3 04	3 56	35	92	40	15	
2	208	26.2		37.4	167	50.7 ¹⁰⁰		44.9 ¹⁴³	56	2 09	19	4 07	32	89	44	18	
3	223	26.2		36.8	182	19.7 ¹⁰⁰	-2	59.2 ¹⁴³	54	31	32	16	30	86	47	20	
4	238	26.3		36.1	196	48.7 ¹⁰⁰	-3	13.4 ¹⁴²	52	2 48	43	24	28	84	50	23	
5	253	26.3	+17	35.5	211	17.7 ¹⁰⁰	-3	27.7 ¹⁴³	50	3 03	3 53	4 32	9 27	81	20 52	25	
6	268	26.4	+17	34.8	225	46.7 ¹⁰⁰	-3	41.9 ¹⁴²	45	3 31	4 14	4 47	9 23	76	20 58	30	
7	283	26.4		34.2	240	15.6 ⁹⁹	-3	56.1 ¹⁴²	40	3 53	30	5 00	20	72	21 03	33	
8	298	26.5		33.5	254	44.5 ⁹⁹	-4	10.2 ¹⁴¹	35	4 09	43	11	17	69	07	37	
9	313	26.5		32.9	269	13.5 ¹⁰⁰		24.3 ¹⁴¹	30	23	4 54	20	15	66	11	39	
10	328	26.6		32.2	283	42.4 ⁹⁹		38.4 ¹⁴¹	20	4 45	5 13	36	11	60	17	45	
11	343	26.6	+17	31.6	298	11.3 ⁹⁹	-4	52.5 ¹⁴¹	10 N	5 02	5 28	5 50	9 07	56	21 23	49	
12	358	26.7	+17	30.9	312	40.2 ⁹⁹	-5	06.6 ¹⁴¹	0	5 16	5 41	6 03	9 04	52	21 28	53	
13	13	26.7		30.3	327	09.0 ⁹⁸		20.6 ¹⁴⁰	10 S	28	5 54	15	9 01	47	34	56	
14	28	26.8		29.6	341	37.9 ⁹⁹		34.5 ¹³⁹	20	39	6 06	29	8 57	44	39	61	
15	43	26.8		29.0	356	06.7 ⁹⁸	-5	48.5 ¹⁴⁰	30	50	19	44	53	39	46	66	
16	58	26.9		28.3	10	35.5 ⁹⁸	-6	02.4 ¹³⁹	35	5 56	26	6 53	51	36	50	69	
17	73	26.9	+17	27.7	25	04.3 ⁹⁸	-6	16.2 ¹³⁸	40	6 02	6 34	7 03	8 49	32	21 54	72	
18	88	27.0	+17	27.0	39	33.1 ⁹⁸	-6	30.1 ¹³⁹	45	6 08	6 43	7 15	8 46	28	21 59	76	
19	103	27.0		26.3	54	01.8 ⁹⁷		43.8 ¹³⁷	50	15	54	29	43	24	22 05	81	
20	118	27.1		25.7	68	30.5 ⁹⁷	-6	57.6 ¹³⁸	52	18	6 59	36	41	22	08	83	
21	133	27.1		25.0	82	59.2 ⁹⁷	-7	11.3 ¹³⁷	54	21	7 04	43	40	19	11	86	
22	148	27.2		24.4	97	27.9 ⁹⁷		24.9 ¹³⁶	56	25	10	7 51	38	17	14	89	
23	163	27.2		23.7	111	56.5 ⁹⁶		38.5 ¹³⁶	58	28	16	8 00	36	14	18	92	
24	178	27.3	+17	23.1	126	25.2 ⁹⁷	-7	52.1 ¹³⁶	60 S	6 32	7 23	8 11	8 34	10	22 22	96	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 3 ^h 14 ^m 5		Mag: -3.9 PMG: 11 ^h 53 ^m		Mag: +1.4 PMG: 9 ^h 14 ^m		Mag: -2.5 PMG: 5 ^h 43 ^m		Mag: +0.9 PMG: 16 ^h 02 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	311	13.9	181	57.4	+19	34.5	221	31.1	+23	45.3	274	03.7	+13	19.6	118	48.5	-2	45.5
1	326	16.4	196	56.7		33.8	236	31.7		45.3	289	05.9		19.7	133	50.8		45.6
2	341	18.9	211	55.9		33.1	251	32.3		45.4	304	08.2		19.7	148	53.1		45.7
3	356	21.3	226	55.2		32.4	266	33.0		45.4	319	10.4		19.8	163	55.4		45.7
4	11	23.8	241	54.5		31.7	281	33.6		45.4	334	12.7		19.8	178	57.7		45.8
5	26	26.2	256	53.8	+19	31.0	296	34.2	+23	45.5	349	14.9	+13	19.9	194	00.0	-2	45.9
6	41	28.7	271	53.1	+19	30.2	311	34.9	+23	45.5	4	17.2	+13	20.0	209	02.3	-2	46.0
7	56	31.2	286	52.4		29.5	326	35.5		45.5	19	19.4		20.0	224	04.6		46.1
8	71	33.6	301	51.6		28.8	341	36.1		45.6	34	21.7		20.1	239	06.9		46.2
9	86	36.1	316	50.9		28.1	356	36.8		45.6	49	24.0		20.1	254	09.1		46.2
10	101	38.6	331	50.2		27.4	11	37.4		45.6	64	26.2		20.2	269	11.4		46.3
11	116	41.0	346	49.5	+19	26.7	26	38.0	+23	45.7	79	28.5	+13	20.3	284	13.7	-2	46.4
12	131	43.5	1	48.8	+19	25.9	41	38.7	+23	45.7	94	30.7	+13	20.3	299	16.0	-2	46.5
13	146	46.0	16	48.1		25.2	56	39.3		45.7	109	33.0		20.4	314	18.3		46.6
14	161	48.4	31	47.4		24.5	71	39.9		45.8	124	35.2		20.4	329	20.6		46.6
15	176	50.9	46	46.6		23.8	86	40.6		45.8	139	37.5		20.5	344	22.9		46.7
16	191	53.4	61	45.9		23.1	101	41.2		45.8	154	39.7		20.6	359	25.2		46.8
17	206	55.8	76	45.2	+19	22.3	116	41.8	+23	45.9	169	42.0	+13	20.6	14	27.5	-2	46.9
18	221	58.3	91	44.5	+19	21.6	131	42.5	+23	45.9	184	44.3	+13	20.7	29	29.7	-2	47.0
19	237	00.7	106	43.8		20.9	146	43.1		45.9	199	46.5		20.7	44	32.0		47.1
20	252	03.2	121	43.1		20.2	161	43.7		45.9	214	48.8		20.8	59	34.3		47.1
21	267	05.7	136	42.4		19.4	176	44.4		46.0	229	51.0		20.8	74	36.6		47.2
22	282	08.1	151	41.7		18.7	191	45.0		46.0	244	53.3		20.9	89	38.9		47.3
23	297	10.6	166	41.0		18.0	206	45.6		46.0	259	55.5		21.0	104	41.2		47.4
24	312	13.1	181	40.2	+19	17.2	221	46.3	+23	46.0	274	57.8	+13	21.0	119	43.5	-2	47.5
Dif	—		-7		-7		+6		0		+23		+1		+23		-1	

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8			Edad: 4 ^d 2	PHE { 4 ^h : 59 ^m 8 12 ^h : 59 ^m 7 20 ^h : 59 ^m 6									
	PMG: 12 ^h 06 ^m 1													
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m
0	178	27.3	+17 23.1	126	25.2	-7 52.1		60 N	20 24	21 22	23 09	11 13 95	20 48 15	
1	193	27.3		140	53.8	-8 05.6	135	58	12	21 04	22 25	07 91	20 55 19	
2	208	27.4		155	22.3		95	56	20 02	20 49	21 57	11 01 89	21 02 21	
3	223	27.4		169	50.9		96	54	19 53	37	37	10 56 86	07 25	
4	238	27.5		184	19.4		95	52	45	26	20	52 83	13 26	
5	253	27.5	+17 19.8	198	47.9	-8 59.1	133	50	19 38	20 16	21 06	10 48 81	21 17 29	
6	268	27.6	+17 19.1	213	16.3	-9 12.3	132	45	19 23	19 57	20 38	10 39 76	21 28 33	
7	283	27.6		227	44.8		95	40	11	41	18	32 72	36 37	
8	298	27.7		242	13.2		94	35	19 00	28	20 01	26 69	44 39	
9	313	27.8		256	41.5	-9 51.7	131	30	18 51	19 17	19 48	21 66	21 50 43	
10	328	27.8		271	09.9	-10 04.7	130	20	36	18 59	27	11 62	22 02 46	
11	343	27.9	+17 15.8	285	38.2	-10 17.6	129	10 N	18 22	18 44	19 10	10 03 57	22 12 50	
12	358	27.9	+17 15.1	300	06.4	-10 30.5	129	0	18 10	18 31	18 56	9 56 53	22 21 54	
13	13	28.0		314	34.7		93	10 S	17 57	19	44	48 50	30 58	
14	28	28.0		329	02.9	-10 56.0	127	20	44	18 07	33	41 45	40 62	
15	43	28.1		343	31.1	-11 08.7	127	30	29	17 54	23	32 40	52 66	
16	58	28.1		357	59.2		91	35	20	47	17	27 38	22 59 68	
17	73	28.2	+17 11.8	12	27.3	-11 33.8	125	40	17 11	17 39	18 12	9 21 35	23 06 72	
18	88	28.3	+17 11.1	26	55.4	-11 46.2	124	45	16 59	17 31	18 06	9 14 32	23 15 76	
19	103	28.3		41	23.4	-11 58.6	124	50	45	20	17 59	07 26	26 80	
20	118	28.4		55	51.4	-12 10.9	123	52	39	16	56	9 03 25	31 82	
21	133	28.4		70	19.3		89	54	32	11	53	8 59 22	37 84	
22	148	28.5		84	47.2		89	56	24	17 05	50	55 19	43 87	
23	163	28.6		99	15.1		89	58	15	16 59	47	50 16	50 90	
24	178	28.6	+17 07.1	113	42.9	-12 59.3	120	60 S	16 05	16 52	17 43	8 44 14	23 58 94	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG		Mag: -3.9			Mag: +1.4			Mag: -2.5			Mag: +0.9		
	3 ^h 10 ^m 6		PMG: 11 ^h 54 ^m			PMG: 9 ^h 13 ^m			PMG: 5 ^h 39 ^m			PMG: 15 ^h 59 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	'	°	°	'	°	°	'	°	°	'	
0	312	13.1	181	40.2	+19 17.2	221	46.3	+23 46.0	274	57.8	+13 21.0	119	43.5	-2 47.5
1	327	15.5	196	39.5	16.5	236	46.9	46.1	290	00.1	21.1	134	45.8	47.6
2	342	18.0	211	38.8	15.8	251	47.6	46.1	305	02.3	21.1	149	48.0	47.6
3	357	20.5	226	38.1	15.0	266	48.2	46.1	320	04.6	21.2	164	50.3	47.7
4	12	22.9	241	37.4	14.3	281	48.8	46.2	335	06.8	21.2	179	52.6	47.8
5	27	25.4	256	36.7	+19 13.6	296	49.5	+23 46.2	350	09.1	+13 21.3	194	54.9	-2 47.9
6	42	27.8	271	36.0	+19 12.8	311	50.1	+23 46.2	5	11.4	+13 21.4	209	57.2	-2 48.0
7	57	30.3	286	35.3	12.1	326	50.7	46.2	20	13.6	21.4	224	59.5	48.1
8	72	32.8	301	34.6	11.4	341	51.4	46.3	35	15.9	21.5	240	01.8	48.1
9	87	35.2	316	33.9	10.6	356	52.0	46.3	50	18.1	21.5	255	04.0	48.2
10	102	37.7	331	33.2	09.9	11	52.6	46.3	65	20.4	21.6	270	06.3	48.3
11	117	40.2	346	32.5	+19 09.1	26	53.3	+23 46.3	80	22.7	+13 21.6	285	08.6	-2 48.4
12	132	42.6	1	31.8	+19 08.4	41	53.9	+23 46.3	95	24.9	+13 21.7	300	10.9	-2 48.5
13	147	45.1	16	31.1	07.7	56	54.5	46.4	110	27.2	21.8	315	13.2	48.6
14	162	47.6	31	30.4	06.9	71	55.2	46.4	125	29.5	21.8	330	15.5	48.6
15	177	50.0	46	29.7	06.2	86	55.8	46.4	140	31.7	21.9	345	17.8	48.7
16	192	52.5	61	29.0	05.4	101	56.5	46.4	155	34.0	21.9	0	20.0	48.8
17	207	55.0	76	28.3	+19 04.7	116	57.1	+23 46.5	170	36.2	+13 22.0	15	22.3	-2 48.9
18	222	57.4	91	27.6	+19 03.9	131	57.7	+23 46.5	185	38.5	+13 22.0	30	24.6	-2 49.0
19	237	59.9	106	26.9	03.2	146	58.4	46.5	200	40.8	22.1	45	26.9	49.1
20	253	02.3	121	26.2	02.4	161	59.0	46.5	215	43.0	22.2	60	29.2	49.2
21	268	04.8	136	25.5	01.7	176	59.6	46.5	230	45.3	22.2	75	31.5	49.2
22	283	07.3	151	24.8	00.9	192	00.3	46.6	245	47.6	22.3	90	33.8	49.3
23	298	09.7	166	24.1	+19 00.2	207	00.9	46.6	260	49.8	22.3	105	36.0	49.4
24	313	12.2	181	23.4	+18 59.4	222	01.6	+23 46.6	275	52.1	+13 22.4	120	38.3	-2 49.5
Dif	—		-7	-7		+6	0		+23	+1		+23	-1	

UT	SOL			 LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15 ^h 8			Edad: 5 ^d 2	PHE { 4 ^h : 59 ^h 5 12 ^h : 59 ^h 4 20 ^h : 59 ^h 3											
	PMG: 12 ^h 06 ^m 0					SD: 16 ^h 2		PMG: 17 ^h 02 ^m			R°: 56 ^m					
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m
0	178	28.6	+17 07.1	113	42.9	88	−12 59.3	60 N	1 04	2 51	3 49	12 48	94	21 03	21	
1	193	28.7	06.4	128	10.7	88	−13 11.2	58	1 48	3 09	4 01	38 90		14 25		
2	208	28.7	05.8	142	38.5	88	23.0	56	2 15	24	11	30 85		23 29		
3	223	28.8	05.1	157	06.2	87	34.8	54	36	36	19	22 83		32 31		
4	238	28.9	04.4	171	33.9	87	46.4	52	2 53	47	27	15 81		39 33		
5	253	28.9	+17 03.8	186	01.6	87	−13 58.0	50	3 07	3 56	4 34	12 09	78	21 46	35	
6	268	29.0	+17 03.1	200	29.2	86	−14 09.4	45	3 34	4 16	4 49	11 55	75	22 01	39	
7	283	29.0	02.4	214	56.7	85	20.8	40	3 55	32	5 02	44 71		13 42		
8	298	29.1	01.7	229	24.2	85	32.1	35	4 11	45	12	35 68		23 45		
9	313	29.2	01.1	243	51.7	85	43.3	30	25	4 55	21	27 65		33 46		
10	328	29.2	+17 00.4	258	19.1	84	−14 54.4	20	4 46	5 13	37	13 61		22 48	50	
11	343	29.3	+16 59.7	272	46.5	84	−15 05.4	10 N	5 02	5 28	5 50	11 00	59	23 02	53	
12	358	29.3	+16 59.0	287	13.9	84	−15 16.3	0	5 16	5 41	6 03	10 49	55	23 15	56	
13	13	29.4	58.4	301	41.2	83	27.1	10 S	28	5 53	15	38 52		28 59		
14	28	29.5	57.7	316	08.5	83	37.8	20	39	6 05	28	26 48		42 62		
15	43	29.5	57.0	330	35.7	82	48.4	30	49	18	43	12 45		23 58	65	
16	58	29.6	56.3	345	02.9	82	−15 59.0	35	5 54	25	6 51	10 05	42	** ** *	**	
17	73	29.7	+16 55.7	359	30.0	81	−16 09.4	40	6 00	6 32	7 01	9 56	39	** ** *	**	
18	88	29.7	+16 55.0	13	57.1	81	−16 19.7	45	6 06	6 41	7 12	9 46	35	** ** *	**	
19	103	29.8	54.3	28	24.2	81	29.9	50	12	51	26	33 32		** ** *	**	
20	118	29.9	53.6	42	51.2	80	40.0	52	15	6 56	32	28 29		** ** *	**	
21	133	29.9	52.9	57	18.2	80	50.0	54	18	7 01	39	21 28		** ** *	**	
22	148	30.0	52.3	71	45.1	79	−16 59.9	56	21	06	47	14 25		** ** *	**	
23	163	30.0	51.6	86	12.0	79	−17 09.6	58	24	12	7 56	9 06	22	** ** *	**	
24	178	30.1	+16 50.9	100	38.9	79	−17 19.3	60 S	6 28	7 19	8 06	8 58	18	** ** *	**	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG: 3 ^h 06 ^m 7		Mag: −4.0 PMG: 11 ^h 55 ^m		Mag: +1.4 PMG: 9 ^h 12 ^m		Mag: −2.5 PMG: 5 ^h 36 ^m		Mag: +0.9 PMG: 15 ^h 55 ^m						
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'					
0	313	12.2	181	23.4	+18 59.4	222	01.6	+23 46.6	275	52.1	+13 22.4	120	38.3	−2 49.5	
1	328	14.7	196	22.7	58.7	237	02.2	46.6	290	54.4	22.4	135	40.6	49.6	
2	343	17.1	211	22.0	57.9	252	02.8	46.6	305	56.6	22.5	150	42.9	49.7	
3	358	19.6	226	21.3	57.2	267	03.5	46.6	320	58.9	22.5	165	45.2	49.7	
4	13	22.1	241	20.6	56.4	282	04.1	46.7	336	01.2	22.6	180	47.5	49.8	
5	28	24.5	256	19.9	+18 55.6	297	04.8	+23 46.7	351	03.4	+13 22.6	195	49.7	−2 49.9	
6	43	27.0	271	19.2	+18 54.9	312	05.4	+23 46.7	6	05.7	+13 22.7	210	52.0	−2 50.0	
7	58	29.4	286	18.5	54.1	327	06.0	46.7	21	08.0	22.8	225	54.3	50.1	
8	73	31.9	301	17.8	53.4	342	06.7	46.7	36	10.2	22.8	240	56.6	50.2	
9	88	34.4	316	17.1	52.6	357	07.3	46.7	51	12.5	22.9	255	58.9	50.3	
10	103	36.8	331	16.4	51.8	12	07.9	46.8	66	14.8	22.9	271	01.2	50.3	
11	118	39.3	346	15.7	+18 51.1	27	08.6	+23 46.8	81	17.0	+13 23.0	286	03.4	−2 50.4	
12	133	41.8	1	15.0	+18 50.3	42	09.2	+23 46.8	96	19.3	+13 23.0	301	05.7	−2 50.5	
13	148	44.2	16	14.3	49.5	57	09.9	46.8	111	21.6	23.1	316	08.0	50.6	
14	163	46.7	31	13.6	48.8	72	10.5	46.8	126	23.8	23.1	331	10.3	50.7	
15	178	49.2	46	12.9	48.0	87	11.1	46.8	141	26.1	23.2	346	12.6	50.8	
16	193	51.6	61	12.2	47.2	102	11.8	46.8	156	28.4	23.2	1	14.9	50.8	
17	208	54.1	76	11.6	+18 46.5	117	12.4	+23 46.8	171	30.7	+13 23.3	16	17.1	−2 50.9	
18	223	56.6	91	10.9	+18 45.7	132	13.1	+23 46.9	186	32.9	+13 23.4	31	19.4	−2 51.0	
19	238	59.0	106	10.2	44.9	147	13.7	46.9	201	35.2	23.4	46	21.7	51.1	
20	254	01.5	121	09.5	44.2	162	14.3	46.9	216	37.5	23.5	61	24.0	51.2	
21	269	03.9	136	08.8	43.4	177	15.0	46.9	231	39.7	23.5	76	26.3	51.3	
22	284	06.4	151	08.1	42.6	192	15.6	46.9	246	42.0	23.6	91	28.6	51.4	
23	299	08.9	166	07.4	41.8	207	16.3	46.9	261	44.3	23.6	106	30.8	51.4	
24	314	11.3	181	06.7	+18 41.1	222	16.9	+23 46.9	276	46.6	+13 23.7	121	33.1	−2 51.5	
Dif	—		−7	−8		+6	0		+23		+1	+23		−1	

UT	SOL			 LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 15:8			Edad: 6 ^d 2	PHE {	4 ^h : 59:2 12 ^h : 59:0 20 ^h : 58:9									
	PMG: 12 ^h 05 ^m 9														SD: 16:1
	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	m
0	178	30.1	+16 50.9	100	38.9	-17 19.3	78	60 N	20 19	21 15	22 53	14 22 86	21 24 32	39 35	
1	193	30.2	50.2	115	05.7	28.9	96	58	20 08	20 58	22 16	14 08 82	21 52 38	22 03 40	
2	208	30.2	49.5	129	32.4	38.3	94	56	19 58	44	21 50	13 55 80	21 52 38	12 42	
3	223	30.3	48.9	143	59.2	47.6	93	54	49	32	31	45 77	22 03 40	22 21 43	
4	238	30.4	48.2	158	25.8	-17 56.9	93	52	42	22	15	36 75	12 42	22 40 46	
5	253	30.4	+16 47.5	172	52.5	-18 06.0	91	50	19 35	20 13	21 01	13 27 74	22 21 43	22 55 48	
6	268	30.5	+16 46.8	187	19.1	-18 15.0	90	45	19 21	19 54	20 35	13 10 70	22 40 46	23 08 49	
7	283	30.6	46.1	201	45.7	23.8	88	40	19 09	38	20 15	12 55 68	22 55 48	23 55 56	
8	298	30.7	45.4	216	12.2	32.6	88	35	18 59	26	19 59	43 66	23 08 49	23 55 56	
9	313	30.7	44.8	230	38.7	41.2	86	30	50	19 15	46	32 65	19 51	20 87	
10	328	30.8	44.1	245	05.1	49.7	85	20	35	18 58	25	12 14 62	38 54	49 35	
11	343	30.9	+16 43.4	259	31.5	-18 58.1	84	10 N	18 22	18 44	19 09	11 59 59	23 55 56	0 07 68	
12	358	30.9	+16 42.7	273	57.9	-19 06.4	83	0	18 09	18 31	18 56	11 44 57	*** ** **	0 18 70	
13	13	31.0	42.0	288	24.2	14.6	82	10 S	17 57	19	45	30 54	*** ** **	0 31 72	
14	28	31.1	41.3	302	50.5	22.6	80	20	45	18 08	34	11 14 52	*** ** **	0 53 79	
15	43	31.1	40.6	317	16.8	30.5	79	30	30	17 55	24	10 57 49	*** ** **	1 01 81	
16	58	31.2	39.9	331	43.0	38.3	78	35	22	48	19	47 47	0 07 68	0 18 70	
17	73	31.3	+16 39.3	346	09.2	-19 45.9	76	40	17 12	17 41	18 13	10 35 45	0 18 70	0 31 72	
18	88	31.3	+16 38.6	0	35.3	-19 53.5	71	45	17 01	17 33	18 08	10 21 43	0 31 72	0 53 79	
19	103	31.4	37.9	15	01.5	-20 00.9	74	50	16 48	23	18 02	10 05 39	46 77	57 27	
20	118	31.5	37.2	29	27.5	08.1	72	52	42	18	17 59	9 57 37	0 53 79	1 01 81	
21	133	31.6	36.5	43	53.6	15.3	72	54	35	14	56	49 35	1 01 81	1 08 83	
22	148	31.6	35.8	58	19.6	22.3	70	56	27	08	53	39 33	10 83	20 87	
23	163	31.7	35.1	72	45.6	29.2	69	58	19	17 03	50	28 30	20 87	21 24 32	
24	178	31.8	+16 34.4	87	11.5	-20 35.9	67	60 S	16 09	16 56	17 47	9 16 26	1 32 90	21 52 38	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO		
	PMG: 3 ^h 02 ^m 7		Mag: -4.0 PMG: 11 ^h 56 ^m		Mag: +1.4 PMG: 9 ^h 10 ^m		Mag: -2.5 PMG: 5 ^h 32 ^m		Mag: +0.9 PMG: 15 ^h 51 ^m		
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	
0	314	11.3	181	06.7	+18 41.1	222 16.9	+23 46.9	276 46.6	+13 23.7	121 33.1	-2 51.5
1	329	13.8	196	06.1	40.3	237 17.5	46.9	291 48.8	23.7	136 35.4	51.6
2	344	16.3	211	05.4	39.5	252 18.2	46.9	306 51.1	23.8	151 37.7	51.7
3	359	18.7	226	04.7	38.7	267 18.8	47.0	321 53.4	23.8	166 40.0	51.8
4	14	21.2	241	04.0	37.9	282 19.5	47.0	336 55.6	23.9	181 42.2	51.9
5	29	23.7	256	03.3	+18 37.2	297 20.1	+23 47.0	351 57.9	+13 23.9	196 44.5	-2 52.0
6	44	26.1	271	02.6	+18 36.4	312 20.8	+23 47.0	7 00.2	+13 24.0	211 46.8	-2 52.0
7	59	28.6	286	01.9	35.6	327 21.4	47.0	22 02.5	24.0	226 49.1	52.1
8	74	31.1	301	01.3	34.8	342 22.0	47.0	37 04.7	24.1	241 51.4	52.2
9	89	33.5	316	00.6	34.0	357 22.7	47.0	52 07.0	24.1	256 53.6	52.3
10	104	36.0	330	59.9	33.3	12 23.3	47.0	67 09.3	24.2	271 55.9	52.4
11	119	38.4	345	59.2	+18 32.5	27 24.0	+23 47.0	82 11.6	+13 24.2	286 58.2	-2 52.5
12	134	40.9	0	58.5	+18 31.7	42 24.6	+23 47.0	97 13.8	+13 24.3	302 00.5	-2 52.6
13	149	43.4	15	57.9	30.9	57 25.3	47.0	112 16.1	24.3	317 02.8	52.6
14	164	45.8	30	57.2	30.1	72 25.9	47.0	127 18.4	24.4	332 05.0	52.7
15	179	48.3	45	56.5	29.3	87 26.5	47.0	142 20.7	24.4	347 07.3	52.8
16	194	50.8	60	55.8	28.5	102 27.2	47.0	157 23.0	24.5	2 09.6	52.9
17	209	53.2	75	55.1	+18 27.7	117 27.8	+23 47.0	172 25.2	+13 24.6	17 11.9	-2 53.0
18	224	55.7	90	54.5	+18 26.9	132 28.5	+23 47.1	187 27.5	+13 24.6	32 14.2	-2 53.1
19	239	58.2	105	53.8	26.2	147 29.1	47.1	202 29.8	24.7	47 16.4	53.2
20	255	00.6	120	53.1	25.4	162 29.8	47.1	217 32.1	24.7	62 18.7	53.2
21	270	03.1	135	52.4	24.6	177 30.4	47.1	232 34.3	24.8	77 21.0	53.3
22	285	05.6	150	51.7	23.8	192 31.0	47.1	247 36.6	24.8	92 23.3	53.4
23	300	08.0	165	51.1	23.0	207 31.7	47.1	262 38.9	24.9	107 25.6	53.5
24	315	10.5	180	50.4	+18 22.2	222 32.3	+23 47.1	277 41.2	+13 24.9	122 27.8	-2 53.6
Dif	—	—	-7	-8	-8	+6	0	+23	+1	+23	-1

UT	SOL				LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15 ^h 8				Edad: 7 ^d 2	PHE {	4 ^h : 58 ^m 7 12 ^h : 58 ^m 6 20 ^h : 58 ^m 4					Náutico	Civil		Hora	R°	Hora	R°	
	PMG: 12 ^h 05 ^m 8						SD: 16 ^h 0												R°: 58 ^m
	hG ☉		Dec		hG ☾		Dif		Dec		Dif								
h	°	'	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m	
0	178	31.8	+16	34.4	87	11.5	70	–20	35.9	66	60 N	1	20	2	58	3	54	15	48
1	193	31.8		33.7	101	37.5	69		42.5	66	58	1	57	3	14	4	05	30	69
2	208	31.9		33.0	116	03.4	69		49.0	65	56	2	22		28	15		15	68
3	223	32.0		32.3	130	29.2	68	–20	55.4	64	54	42		40	23		15	02	67
4	238	32.1		31.6	144	55.1	69	–21	01.6	62	52	2	58	3	50	30		14	51
5	253	32.1	+16	30.9	159	20.9	68	–21	07.7	61	50	3	11	4	00	4	37	14	41
6	268	32.2	+16	30.3	173	46.6	67	–21	13.6	59	45	3	37	4	19	4	52	14	20
7	283	32.3		29.6	188	12.4	68		19.5	59	40	3	57		34	5	04	14	03
8	298	32.4		28.9	202	38.1	67		25.1	56	35	4	13		46	14		13	49
9	313	32.4		28.2	217	03.8	67		30.7	56	30		26	4	57	22		37	61
10	328	32.5		27.5	231	29.5	67		36.1	54	20	4	47	5	14	37		13	16
11	343	32.6	+16	26.8	245	55.2	67	–21	41.3	52	10 N	5	03	5	28	5	50	12	58
12	358	32.7	+16	26.1	260	20.8	66	–21	46.5	52	0	5	16	5	41	6	02	12	41
13	13	32.7		25.4	274	46.5	67		51.5	50	10 S	27	5	52	14		24	56	
14	28	32.8		24.7	289	12.1	66	–21	56.3	48	20	38	6	04	27		12	06	55
15	43	32.9		24.0	303	37.7	66	–22	01.0	47	30	48		16	41		11	46	53
16	58	33.0		23.3	318	03.2	65		05.6	46	35	53		23	49		34	52	
17	73	33.0	+16	22.6	332	28.8	66	–22	10.0	44	40	5	58	6	30	6	59	11	20
18	88	33.1	+16	21.9	346	54.3	65	–22	14.3	43	45	6	03	6	38	7	10	11	04
19	103	33.2		21.2	1	19.9	66		18.4	41	50	09		48	23		10	44	48
20	118	33.3		20.5	15	45.4	65		22.4	40	52	12		52	29		34	47	
21	133	33.3		19.8	30	10.9	65		26.3	39	54	15		6	57	36		24	45
22	148	33.4		19.1	44	36.4	65		30.0	37	56	18		7	02	43		10	12
23	163	33.5		18.4	59	01.9	65		33.6	36	58	21		08	7	52		9	58
24	178	33.6	+16	17.7	73	27.3	64	–22	37.0	34	60 S	6	24	7	14	8	01	9	42

UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 2 ^h 58 ^m 8		Mag: –4.0 PMG: 11 ^h 57 ^m				Mag: +1.4 PMG: 9 ^h 09 ^m				Mag: –2.5 PMG: 5 ^h 28 ^m				Mag: +0.9 PMG: 15 ^h 48 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	315	10.5	180	50.4	+18	22.2			222	32.3	+23	47.1	277	41.2	+13	24.9	122	27.8
1	330	12.9	195	49.7		21.4			237	33.0		47.1	292	43.5		25.0	137	30.1
2	345	15.4	210	49.0		20.6			252	33.6		47.1	307	45.7		25.0	152	32.4
3	0	17.9	225	48.4		19.8			267	34.3		47.1	322	48.0		25.1	167	34.7
4	15	20.3	240	47.7		19.0			282	34.9		47.1	337	50.3		25.1	182	37.0
5	30	22.8	255	47.0	+18	18.2			297	35.6	+23	47.1	352	52.6	+13	25.2	197	39.2
6	45	25.3	270	46.3	+18	17.4			312	36.2	+23	47.1	7	54.9	+13	25.2	212	41.5
7	60	27.7	285	45.7		16.6			327	36.8		47.1	22	57.2		25.3	227	43.8
8	75	30.2	300	45.0		15.8			342	37.5		47.1	37	59.4		25.3	242	46.1
9	90	32.7	315	44.3		15.0			357	38.1		47.1	53	01.7		25.4	257	48.3
10	105	35.1	330	43.7		14.2			12	38.8		47.1	68	04.0		25.4	272	50.6
11	120	37.6	345	43.0	+18	13.3			27	39.4	+23	47.1	83	06.3	+13	25.5	287	52.9
12	135	40.0	0	42.3	+18	12.5			42	40.1	+23	47.1	98	08.6	+13	25.5	302	55.2
13	150	42.5	15	41.6		11.7			57	40.7		47.1	113	10.8		25.6	317	57.5
14	165	45.0	30	41.0		10.9			72	41.4		47.1	128	13.1		25.6	332	59.7
15	180	47.4	45	40.3		10.1			87	42.0		47.1	143	15.4		25.7	348	02.0
16	195	49.9	60	39.6		09.3			102	42.7		47.0	158	17.7		25.7	3	04.3
17	210	52.4	75	39.0	+18	08.5			117	43.3	+23	47.0	173	20.0	+13	25.7	18	06.6
18	225	54.8	90	38.3	+18	07.7			132	43.9	+23	47.0	188	22.3	+13	25.8	33	08.8
19	240	57.3	105	37.6		06.9			147	44.6		47.0	203	24.6		25.8	48	11.1
20	255	59.8	120	37.0		06.0			162	45.2		47.0	218	26.8		25.9	63	13.4
21	271	02.2	135	36.3		05.2			177	45.9		47.0	233	29.1		25.9	78	15.7
22	286	04.7	150	35.6		04.4			192	46.5		47.0	248	31.4		26.0	93	17.9
23	301	07.2	165	35.0		03.6			207	47.2		47.0	263	33.7		26.0	108	20.2
24	316	09.6	180	34.3	+18	02.8			222	47.8	+23	47.0	278	36.0	+13	26.1	123	22.5
Dif	—		–7		–8				+6		0		+23		0		+23	

UT	SOL				☾ LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15/8 PMG: 12 ^h 05 ^m 7				Edad: 8 ^d 2 PHE { 4 ^h : 58/2 12 ^h : 58/1 20 ^h : 57/9 R°: 56 ^m SD: 15/9 PMG: 19 ^h 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	178	33.6	+16	17.7	73	27.3	-22	37.0	60 N	20 13	21 08	22 39	16 59 52	22 44 65		
1	193	33.7		17.0	87	52.8	65	40.3	58	20 03	20 53	22 07	39 54	23 04 64		
2	208	33.7		16.3	102	18.3	65	43.4	56	19 54	39	21 43	23 54	20 63		
3	223	33.8		15.5	116	43.7	64	46.4	54	45	28	25	16 09 54	34 62		
4	238	33.9		14.8	131	09.2	65	49.3	52	38	18	21 10	15 57 55	46 62		
5	253	34.0	+16	14.1	145	34.7	65	-22 52.0	50	19 32	20 09	20 57	15 46 55	23 57 61		
6	268	34.1	+16	13.4	160	00.1	64	-22 54.6	45	19 18	19 51	20 31	15 24 55	*** ** *		
7	283	34.1		12.7	174	25.6	65	57.0	40	19 06	36	20 12	15 06 56	*** ** *		
8	298	34.2		12.0	188	51.1	65	-22 59.3	35	18 57	24	19 57	14 51 56	*** ** *		
9	313	34.3		11.3	203	16.5	64	-23 01.4	30	48	19 14	44	38 56	0 10 56		
10	328	34.4		10.6	217	42.0	65	03.4	20	33	18 57	24	14 15 57	32 56		
11	343	34.5	+16	09.9	232	07.5	65	-23 05.3	10 N	18 21	18 43	19 08	13 56 57	0 51 56		
12	358	34.5	+16	09.2	246	33.0	65	-23 07.0	0	18 09	18 31	18 56	13 38 57	1 08 58		
13	13	34.6		08.5	260	58.5	65	08.5	10 S	17 58	19	45	20 57	26 58		
14	28	34.7		07.8	275	24.0	65	09.9	20	45	18 08	34	13 01 57	1 45 58		
15	43	34.8		07.1	289	49.5	65	11.2	30	31	17 56	25	12 39 57	2 06 59		
16	58	34.9		06.3	304	15.0	65	12.3	35	23	50	20	26 57	19 59		
17	73	35.0	+16	05.6	318	40.6	66	-23 13.3	40	17 14	17 43	18 15	12 11 57	2 34 59		
18	88	35.0	+16	04.9	333	06.2	66	-23 14.1	45	17 04	17 35	18 10	11 53 58	2 51 60		
19	103	35.1		04.2	347	31.7	65	14.8	50	16 51	25	04	32 57	3 13 60		
20	118	35.2		03.5	1	57.3	66	15.4	52	45	21	18 02	21 57	23 61		
21	133	35.3		02.8	16	23.0	67	15.8	54	38	17	17 59	11 09 57	35 61		
22	148	35.4		02.1	30	48.6	66	16.0	56	31	12	56	10 56 57	3 48 61		
23	163	35.5		01.4	45	14.3	67	16.2	58	23	06	53	40 57	4 03 62		
24	178	35.5	+16	00.6	59	39.9	66	-23 16.1	60 S	16 14	17 00	17 50	10 22 56	4 22 62		
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO							
	PMG: 2 ^h 54 ^m 9		Mag: -4.0 PMG: 11 ^h 58 ^m		Mag: +1.4 PMG: 9 ^h 08 ^m		Mag: -2.5 PMG: 5 ^h 25 ^m		Mag: +0.9 PMG: 15 ^h 44 ^m							
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄							
h	°	'	°	'	°	'	°	'	°	'						
0	316	09.6	180	34.3	+18	02.8	222	47.8	+23	47.0						
1	331	12.1	195	33.6		02.0	237	48.5		47.0						
2	346	14.5	210	33.0		01.1	252	49.1		47.0						
3	1	17.0	225	32.3	+18	00.3	267	49.8		47.0						
4	16	19.5	240	31.7	+17	59.5	282	50.4		47.0						
5	31	21.9	255	31.0	+17	58.7	297	51.1	+23	47.0						
6	46	24.4	270	30.3	+17	57.8	312	51.7	+23	47.0						
7	61	26.9	285	29.7		57.0	327	52.4		47.0						
8	76	29.3	300	29.0		56.2	342	53.0		46.9						
9	91	31.8	315	28.4		55.4	357	53.7		46.9						
10	106	34.3	330	27.7		54.5	372	54.3		46.9						
11	121	36.7	345	27.0	+17	53.7	387	55.0	+23	46.9						
12	136	39.2	0	26.4	+17	52.9	402	55.6	+23	46.9						
13	151	41.7	15	25.7		52.0	417	56.3		46.9						
14	166	44.1	30	25.1		51.2	432	56.9		46.9						
15	181	46.6	45	24.4		50.4	447	57.5		46.9						
16	196	49.0	60	23.7		49.6	462	58.2		46.9						
17	211	51.5	75	23.1	+17	48.7	477	58.8	+23	46.8						
18	226	54.0	90	22.4	+17	47.9	492	59.5	+23	46.8						
19	241	56.4	105	21.8		47.1	507	00.1		46.8						
20	256	58.9	120	21.1		46.2	522	00.8		46.8						
21	272	01.4	135	20.5		45.4	537	01.4		46.8						
22	287	03.8	150	19.8		44.5	552	02.1		46.8						
23	302	06.3	165	19.2		43.7	567	02.7		46.8						
24	317	08.8	180	18.5	+17	42.9	582	03.4	+23	46.7						
Dif	—		-7		-8		+6		0							

UT	SOL			LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15/8 PMG: 12 ^h 05 ^m 6			Edad: 9 ^d 2 PHE { SD: 15/7 PMG: 20 ^h 48 ^m 4 ^h : 57/7 12 ^h : 57/6 20 ^h : 57/4 R°: 55 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico		Civil	Hora		R°	Hora	R°	
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	178	35.5	+16	00.6	59	39.9	-23	16.1	1	60 N	1 33	3 04	3 59	17 51	35	23 49	78
1	193	35.6	+15	59.9	74	05.7	68	16.0	3	58	2 05	19	4 09	33 37	***	***	***
2	208	35.7		59.2	88	31.4	67	15.7	5	56	29	33	18	17 40	***	***	***
3	223	35.8		58.5	102	57.2	68	15.2	6	54	2 47	44	26	17 03	42	***	***
4	238	35.9		57.8	117	22.9	67	14.6	7	52	3 02	3 54	34	16 52	42	***	***
5	253	36.0	+15	57.1	131	48.8	69	-23	13.9	7	50	3 15	4 03	4 40	16 41	44	***
6	268	36.1	+15	56.4	146	14.6	68	-23	13.0	9	45	3 40	4 21	4 54	16 19	47	0 19
7	283	36.1		55.6	160	40.5	69	12.0	10	40	4 00	36	5 05	16 02	48	37	60
8	298	36.2		54.9	175	06.4	69	10.8	12	35	15	48	15	15 47	49	0 53	59
9	313	36.3		54.2	189	32.4	70	09.5	13	30	28	4 58	24	34 50		1 06	58
10	328	36.4		53.5	203	58.4	70	08.1	14	20	4 48	5 15	38	15 12	52	28	58
11	343	36.5	+15	52.8	218	24.4	70	-23	06.5	16	10 N	5 03	5 29	5 51	14 53	54	1 47
12	358	36.6	+15	52.0	232	50.5	71	-23	04.8	17	0	5 16	5 41	6 02	14 35	55	2 06
13	13	36.7		51.3	247	16.6	71	03.0	18	10 S	27	5 52	14	14 17	57	24	55
14	28	36.8		50.6	261	42.7	71	-23	01.0	20	20	37	6 03	26	13 58	58	2 43
15	43	36.8		49.9	276	08.9	72	-22	58.9	21	30	46	15	39	36 60	3 05	54
16	58	36.9		49.2	290	35.2	73	56.6	23	35	51	21	47	23 61	18	53	
17	73	37.0	+15	48.4	305	01.4	72	-22	54.2	24	40	5 56	6 28	6 56	13 08	62	3 33
18	88	37.1	+15	47.7	319	27.8	74	-22	51.7	25	45	6 01	6 36	7 07	12 51	63	3 51
19	103	37.2		47.0	333	54.1	73	49.1	26	50	07	45	19	29 65	4	13	49
20	118	37.3		46.3	348	20.6	75	46.3	28	52	09	49	25	18 66	24	48	
21	133	37.4		45.6	2	47.0	74	43.3	30	54	11	54	32	12 06	67	36	47
22	148	37.5		44.8	17	13.6	76	40.3	30	56	14	6 58	39	11 53	68	4 49	47
23	163	37.6		44.1	31	40.1	75	37.1	32	58	17	7 04	47	37 70	5 05	45	
24	178	37.7	+15	43.4	46	06.7	76	-22	33.8	33	60 S	6 20	7 10	7 56	11 18	72	5 24

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG 2 ^h 50 ^m 9		Mag: -4.0 PMG: 11 ^h 59 ^m			Mag: +1.4 PMG: 9 ^h 07 ^m			Mag: -2.5 PMG: 5 ^h 21 ^m			Mag: +0.9 PMG: 15 ^h 40 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	317	08.8	180	18.5	+17	42.9	223	03.4	+23	46.7	279	31.0	+13	27.2
1	332	11.2	195	17.9		42.0	238	04.0		46.7	294	33.3		27.3
2	347	13.7	210	17.2		41.2	253	04.7		46.7	309	35.5		27.3
3	2	16.2	225	16.5		40.3	268	05.4		46.7	324	37.8		27.3
4	17	18.6	240	15.9		39.5	283	06.0		46.7	339	40.1		27.4
5	32	21.1	255	15.2	+17	38.7	298	06.7	+23	46.7	354	42.4	+13	27.4
6	47	23.5	270	14.6	+17	37.8	313	07.3	+23	46.7	9	44.7	+13	27.5
7	62	26.0	285	13.9		37.0	328	08.0		46.6	24	47.0		27.5
8	77	28.5	300	13.3		36.1	343	08.6		46.6	39	49.3		27.6
9	92	30.9	315	12.6		35.3	358	09.3		46.6	54	51.6		27.6
10	107	33.4	330	12.0		34.4	13	09.9		46.6	69	53.9		27.7
11	122	35.9	345	11.4	+17	33.6	28	10.6	+23	46.6	84	56.2	+13	27.7
12	137	38.3	0	10.7	+17	32.7	43	11.2	+23	46.5	99	58.5	+13	27.8
13	152	40.8	15	10.1		31.9	58	11.9		46.5	115	00.8		27.8
14	167	43.3	30	09.4		31.0	73	12.5		46.5	130	03.1		27.8
15	182	45.7	45	08.8		30.2	88	13.2		46.5	145	05.4		27.9
16	197	48.2	60	08.1		29.3	103	13.8		46.5	160	07.7		27.9
17	212	50.7	75	07.5	+17	28.5	118	14.5	+23	46.4	175	10.0	+13	28.0
18	227	53.1	90	06.8	+17	27.6	133	15.1	+23	46.4	190	12.3	+13	28.0
19	242	55.6	105	06.2		26.7	148	15.8		46.4	205	14.6		28.1
20	257	58.0	120	05.5		25.9	163	16.4		46.4	220	16.9		28.1
21	273	00.5	135	04.9		25.0	178	17.1		46.4	235	19.2		28.1
22	288	03.0	150	04.3		24.2	193	17.7		46.3	250	21.5		28.2
23	303	05.4	165	03.6		23.3	208	18.4		46.3	265	23.8		28.2
24	318	07.9	180	03.0	+17	22.5	223	19.1	+23	46.3	280	26.1	+13	28.3
Dif	—		-6 -9		-9		+7 0		0		+23 0		0	

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15'8 PMG: 12 ^h 05 ^m 4			Edad: 10 ^d 2 PHE { SD: 15'6 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	h m m
0	178	37.7	+15 43.4	46	06.7	-22 33.8	60 N	20 08	21 02	22 27	18 26 22	** ** *	**	
1	193	37.7		60	33.4	77 35	58	19 58	20 47	21 58	18 10 26		0 08 75	
2	208	37.8		75	00.1	77 35	56		49	34	36	17 57 28	23 73	
3	223	37.9		89	26.9	78 37	54		41	23	19	45 31	37 70	
4	238	38.0		103	53.8	79 39	52		34	14	21 05	34 33	48 69	
5	253	38.1	+15 39.7	118	20.7	79 39	50	19 28	20 05	20 52	17 25 35		0 58 68	
6	268	38.2	+15 39.0	132	47.6	79 41	45	19 15	19 47	20 28	17 06 38		1 20 65	
7	283	38.3		147	14.6	80 42	40	19 04		33	20 09	16 50 40	37 63	
8	298	38.4		161	41.7	81 44	35	18 54		22	19 54	36 43	1 52 61	
9	313	38.5		176	08.8	81 44	30		46	19 12	42	24 45	2 04 60	
10	328	38.6		190	36.0	82 46	20		32	18 55	23	16 04 48	26 58	
11	343	38.7	+15 35.4	205	03.3	83 47	10 N	18 20	18 42	19 08	15 47 50		2 44 56	
12	358	38.8	+15 34.6	219	30.6	83 48	0	18 09	18 30	18 55	15 30 52		3 02 54	
13	13	38.9		233	58.0	84 50	10 S	17 58		19	45	15 14 54	19 52	
14	28	39.0		248	25.4	84 50	20		46	18 09	35	14 56 57	37 50	
15	43	39.0		262	52.9	85 52	30		33	17 57	26	36 60	3 59 47	
16	58	39.1		277	20.5	86 53	35		25	51	21	24 61	4 11 46	
17	73	39.2	+15 31.0	291	48.1	86 54	40	17 16	17 44	18 17	14 10 64		4 25 44	
18	88	39.3	+15 30.3	306	15.8	87 55	45	17 06	17 37	18 12	13 54 66		4 42 42	
19	103	39.4		320	43.6	88 57	50	16 54		28	07	34 69	5 02 40	
20	118	39.5		335	11.4	88 57	52		48	24	04	24 71	12 38	
21	133	39.6		349	39.4	90 59	54		42	20	02	13 73	23 36	
22	148	39.7		4	07.3	89 60	56		35	15	18 00	13 01 75	36 34	
23	163	39.8		18	35.4	91 61	58		27	10	17 57	12 47 78	5 50 32	
24	178	39.9	+15 25.9	33	03.5	91 62	60 S	16 18	17 04	17 54	12 30 81		6 07 29	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO				
	PMG: 2 ^h 47 ^m 0		Mag: -4.0 PMG: 12 ^h 00 ^m		Mag: +1.4 PMG: 9 ^h 06 ^m		Mag: -2.6 PMG: 5 ^h 17 ^m		Mag: +0.9 PMG: 15 ^h 37 ^m				
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec			
h	°	'	°	'	°	'	°	'	°	'			
0	318	07.9	180	03.0	+17 22.5	223 19.1	+23 46.3	280 26.1	+13 28.3	125 11.6	-2 59.9		
1	333	10.4	195	02.3		238 19.7	46.3	295 28.4		140 13.9	-3 00.0		
2	348	12.8	210	01.7		253 20.4	46.2	310 30.7		155 16.2	-3 00.1		
3	3	15.3	225	01.0		268 21.0	46.2	325 33.0		170 18.4	00.2		
4	18	17.8	240	00.4		283 21.7	46.2	340 35.3		185 20.7	00.3		
5	33	20.2	254	59.8	+17 18.1	298 22.3	+23 46.2	355 37.6	+13 28.5	200 23.0	-3 00.4		
6	48	22.7	269	59.1	+17 17.3	313 23.0	+23 46.2	10 39.9	+13 28.5	215 25.2	-3 00.5		
7	63	25.1	284	58.5		328 23.6	46.1	25 42.2		230 27.5	00.5		
8	78	27.6	299	57.9		343 24.3	46.1	40 44.5		245 29.8	00.6		
9	93	30.1	314	57.2		358 24.9	46.1	55 46.8		260 32.1	00.7		
10	108	32.5	329	56.6		13 25.6	46.0	70 49.1		275 34.3	00.8		
11	123	35.0	344	55.9	+17 12.9	28 26.3	+23 46.0	85 51.4	+13 28.7	290 36.6	-3 00.9		
12	138	37.5	359	55.3	+17 12.1	43 26.9	+23 46.0	100 53.7	+13 28.8	305 38.9	-3 01.0		
13	153	39.9	14	54.7		58 27.6	46.0	115 56.0		320 41.1	01.1		
14	168	42.4	29	54.0		73 28.2	45.9	130 58.4		335 43.4	01.2		
15	183	44.9	44	53.4		88 28.9	45.9	146 00.7		350 45.7	01.3		
16	198	47.3	59	52.8		103 29.5	45.9	161 03.0		5 47.9	01.3		
17	213	49.8	74	52.1	+17 07.7	118 30.2	+23 45.9	176 05.3	+13 29.0	20 50.2	-3 01.4		
18	228	52.3	89	51.5	+17 06.8	133 30.8	+23 45.8	191 07.6	+13 29.0	35 52.5	-3 01.5		
19	243	54.7	104	50.9		148 31.5	45.8	206 09.9		50 54.7	01.6		
20	258	57.2	119	50.2		163 32.2	45.8	221 12.2		65 57.0	01.7		
21	273	59.6	134	49.6		178 32.8	45.7	236 14.5		80 59.3	01.8		
22	289	02.1	149	49.0		193 33.5	45.7	251 16.8		96 01.6	01.9		
23	304	04.6	164	48.3		208 34.1	45.7	266 19.1		111 03.8	02.0		
24	319	07.0	179	47.7	+17 01.6	223 34.8	+23 45.6	281 21.4	+13 29.3	126 06.1	-3 02.1		
Dif	—		-6		-9	+7		0	+23	0	+23		-1

UT	SOL			O LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8			Edad: 11 ^d 2 PHE { 4 ^h : 56 ^m /7 12 ^h : 56 ^m /6 20 ^h : 56 ^m /4 Rº: 49 ^m													
	PMG: 12 ^h 05 ^m 3			SD: 15 ^h 5 PMG: 22 ^h 34 ^m													
	hG ☉		Dec	hG ☾		Dif	Dec	Dif		Náutico	Civil		Hora	Rº	Hora	Rº	
h	°	'	°	°	'	°	°	'	°	h	m	h	m	h	m	h	m
0	178	39.9	+15 25.9	33	03.5	-20 37.1			60 N	1	44	3	10	4	04	18	48 16
1	193	40.0		47	31.7	92 30.8		63	58	2	13		25	14		36	19 23 80
2	208	40.1	24.4	61	59.9	92 24.4		64	56		35		37	22		25	22 36 77
3	223	40.2	23.7	76	28.2	93 17.9		65	54	2	52		48	30		16	24 47 75
4	238	40.3	22.9	90	56.6	94 11.3		66	52	3	07	3	58	37		07	26 1 57 73
5	253	40.4	+15 22.2	105	25.1	95 -20 04.5		68	50	3	19	4	06	4	43	18	00 28 2 06 71
6	268	40.5	+15 21.4	119	53.6	95 -19 57.7		68	45	3	43	4	24	4	56	17	44 31 2 25 67
7	283	40.6	20.7	134	22.3	97 50.8		69	40	4	02		38	5	07	30	35 40 64
8	298	40.7	20.0	148	50.9	96 43.7		71	35		17		49	17		19	37 2 53 62
9	313	40.8	19.2	163	19.7	98 36.6		71	30		29	4	59	25		17	09 39 3 04 60
10	328	40.9	18.5	177	48.5	98 29.4		72	20	4	48	5	16	39		16	52 43 24 56
11	343	41.0	+15 17.7	192	17.4	99 -19 22.0		74	10 N	5	03	5	29	5	51	16	37 46 3 40 54
12	358	41.1	+15 17.0	206	46.4	100 -19 14.6		74	0	5	15	5	40	6	02	16	22 50 3 56 50
13	13	41.2	16.3	221	15.5	101 -19 07.1		75	10 S		26	5	51	13		16	08 52 4 11 48
14	28	41.3	15.5	235	44.6	101 -18 59.4		77	20		36	6	02	25		15	53 55 27 46
15	43	41.4	14.8	250	13.8	102 51.7		77	30		45		13	38		36	59 46 42
16	58	41.5	14.0	264	43.0	102 43.9		78	35		49		19	45		25	62 4 57 40
17	73	41.6	+15 13.3	279	12.4	104 -18 36.0		79	40	5	54	6	26	6	54	15	14 64 5 09 38
18	88	41.7	+15 12.6	293	41.8	104 -18 28.0		80	45	5	58	6	33	7	04	15	00 67 5 24 35
19	103	41.8	11.8	308	11.3	105 19.9		81	50	6	03		42	16		14	43 71 42 31
20	118	41.9	11.1	322	40.9	106 11.8		81	52		06		46	22		35	73 50 29
21	133	42.0	10.3	337	10.5	106 -18 03.5		83	54		08		50	28		26	75 5 59 28
22	148	42.1	09.6	351	40.2	107 -17 55.2		83	56		10	6	54	35		16	77 6 10 25
23	163	42.2	08.8	6	10.0	108 46.8		84	58		13	7	00	42		14	05 80 22 22
24	178	42.3	+15 08.1	20	39.9	109 -17 38.2		86	60 S	6	15	7	05	7	51	13	51 84 6 36 19

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 2 ^h 43 ^m 1		Mag: -4.0 PMG: 12 ^h 01 ^m			Mag: +1.4 PMG: 9 ^h 05 ^m			Mag: -2.6 PMG: 5 ^h 14 ^m			Mag: +0.9 PMG: 15 ^h 33 ^m		
	hG ♈		hG ♀ Dec			hG ♂ Dec			hG ♃ Dec			hG ♄ Dec		
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'
0	319	07.0	179	47.7	+17 01.6	223	34.8	+23 45.6	281	21.4	+13 29.3	126	06.1	-3 02.1
1	334	09.5	194	47.1	+17 00.7	238	35.4	45.6	296	23.7	29.3	141	08.4	02.2
2	349	12.0	209	46.5	+16 59.8	253	36.1	45.6	311	26.0	29.4	156	10.6	02.3
3	4	14.4	224	45.8	58.9	268	36.8	45.6	326	28.4	29.4	171	12.9	02.3
4	19	16.9	239	45.2	58.0	283	37.4	45.5	341	30.7	29.4	186	15.2	02.4
5	34	19.4	254	44.6	+16 57.2	298	38.1	+23 45.5	356	33.0	+13 29.5	201	17.4	-3 02.5
6	49	21.8	269	43.9	+16 56.3	313	38.7	+23 45.5	11	35.3	+13 29.5	216	19.7	-3 02.6
7	64	24.3	284	43.3	55.4	328	39.4	45.4	26	37.6	29.6	231	22.0	02.7
8	79	26.8	299	42.7	54.5	343	40.0	45.4	41	39.9	29.6	246	24.2	02.8
9	94	29.2	314	42.1	53.6	358	40.7	45.4	56	42.2	29.6	261	26.5	02.9
10	109	31.7	329	41.4	52.7	13	41.4	45.3	71	44.5	29.7	276	28.8	03.0
11	124	34.1	344	40.8	+16 51.8	28	42.0	+23 45.3	86	46.8	+13 29.7	291	31.0	-3 03.1
12	139	36.6	359	40.2	+16 50.9	43	42.7	+23 45.2	101	49.2	+13 29.8	306	33.3	-3 03.2
13	154	39.1	14	39.6	50.1	58	43.3	45.2	116	51.5	29.8	321	35.6	03.2
14	169	41.5	29	38.9	49.2	73	44.0	45.2	131	53.8	29.8	336	37.8	03.3
15	184	44.0	44	38.3	48.3	88	44.7	45.1	146	56.1	29.9	351	40.1	03.4
16	199	46.5	59	37.7	47.4	103	45.3	45.1	161	58.4	29.9	6	42.4	03.5
17	214	48.9	74	37.1	+16 46.5	118	46.0	+23 45.1	177	00.7	+13 30.0	21	44.6	-3 03.6
18	229	51.4	89	36.4	+16 45.6	133	46.6	+23 45.0	192	03.0	+13 30.0	36	46.9	-3 03.7
19	244	53.9	104	35.8	44.7	148	47.3	45.0	207	05.3	30.0	51	49.2	03.8
20	259	56.3	119	35.2	43.8	163	48.0	45.0	222	07.7	30.1	66	51.4	03.9
21	274	58.8	134	34.6	42.9	178	48.6	44.9	237	10.0	30.1	81	53.7	04.0
22	290	01.3	149	34.0	42.0	193	49.3	44.9	252	12.3	30.2	96	56.0	04.1
23	305	03.7	164	33.3	41.1	208	49.9	44.8	267	14.6	30.2	111	58.2	04.2
24	320	06.2	179	32.7	+16 40.2	223	50.6	+23 44.8	282	16.9	+13 30.2	127	00.5	-3 04.2
Dif	—		-6 -9			+7 0			+23 0			+23 -1		

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15/8 PMG: 12 ^h 05 ^m 1			Edad: 12 ^d 2 PHE { 4 ^h : 56/2 12 ^h : 56/1 20 ^h : 55/9 R°: 46 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	h m	h m	h m	h m m	h m m	h m m	h m m	
0	178	42.3	+15 08.1	20	39.9	-17 38.2	85	60 N	20 03	20 55	22 16	19 04 11	2 31 84		
1	193	42.4	07.3	35	09.8 ¹⁰⁹	29.7	85	58	19 53	41	21 50	18 55 14	43 80		
2	208	42.5	06.6	49	39.8 ¹¹⁰	21.0	87	56	45	29	29	47 17	2 53 77		
3	223	42.6	05.9	64	09.9 ¹¹¹	12.2	88	54	37	18	21 13	40 19	3 02 75		
4	238	42.7	05.1	78	40.0 ¹¹¹	-17 03.4	88	52	31	09	20 59	33 22	10 72		
5	253	42.8	+15 04.4	93	10.3 ¹¹³	-16 54.5	89	50	19 25	20 01	20 48	18 28 23	3 17 70		
6	268	42.9	+15 03.6	107	40.6 ¹¹³	-16 45.5	90	45	19 12	19 44	20 24	18 15 27	3 32 67		
7	283	43.0	02.9	122	10.9 ¹¹³	36.4	91	40	19 01	31	20 06	18 05 30	44 64		
8	298	43.1	02.1	136	41.4 ¹¹⁵	27.3	91	35	18 52	19	19 52	17 56 33	3 55 61		
9	313	43.3	01.4	151	11.9 ¹¹⁵	18.1	92	30	44	19 10	40	48 35	4 04 58		
10	328	43.4	+15 00.6	165	42.5 ¹¹⁶	-16 08.8	93	20	31	18 54	21	35 39	20 54		
11	343	43.5	+14 59.9	180	13.2 ¹¹⁷	-15 59.4	94	10 N	18 19	18 41	19 07	17 23 43	4 34 51		
12	358	43.6	+14 59.1	194	43.9 ¹¹⁷	-15 50.0	94	0	18 08	18 30	18 55	17 12 46	4 46 48		
13	13	43.7	58.4	209	14.7 ¹¹⁸	40.5	95	10 S	17 58	19	45	17 00 50	4 59 45		
14	28	43.8	57.6	223	45.6 ¹¹⁹	30.9	96	20	46	18 09	35	16 48 54	5 13 41		
15	43	43.9	56.9	238	16.5 ¹¹⁹	21.3	96	30	34	17 58	27	35 57	28 37		
16	58	44.0	56.1	252	47.5 ¹²⁰	11.5	97	35	26	53	23	27 59	37 35		
17	73	44.1	+14 55.4	267	18.6 ¹²¹	-15 01.8	98	40	17 18	17 46	18 18	16 18 62	5 47 32		
18	88	44.2	+14 54.6	281	49.8 ¹²²	-14 51.9	99	45	17 08	17 39	18 14	16 07 66	5 59 29		
19	103	44.3	53.9	296	21.0 ¹²²	42.0	99	50	16 57	31	09	15 54 70	6 13 25		
20	118	44.4	53.1	310	52.3 ¹²³	32.1	99	52	51	27	07	48 72	19 24		
21	133	44.5	52.4	325	23.7 ¹²⁴	22.1	100	54	45	23	05	41 74	27 21		
22	148	44.6	51.6	339	55.1 ¹²⁴	12.0	101	56	39	19	03	33 77	35 19		
23	163	44.8	50.8	354	26.6 ¹²⁵	-14 01.8	102	58	31	14	18 00	25 79	44 17		
24	178	44.9	+14 50.1	8	58.2 ¹²⁶	-13 51.6	102	60 S	16 23	17 08	17 58	15 15 83	6 55 13		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 2 ^h 39 ^m 2		Mag: -4.0 PMG: 12 ^h 02 ^m		Mag: +1.4 PMG: 9 ^h 04 ^m		Mag: -2.6 PMG: 5 ^h 10 ^m		Mag: +0.9 PMG: 15 ^h 30 ^m					
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	320	06.2	179	32.7	+16 40.2	223	50.6	+23 44.8	282	16.9	+13 30.2	127	00.5	-3 04.2
1	335	08.6	194	32.1	39.3	238	51.3	44.8	297	19.2	30.3	142	02.8	04.3
2	350	11.1	209	31.5	38.4	253	51.9	44.7	312	21.6	30.3	157	05.0	04.4
3	5 13.6	224	30.9	37.5	268	52.6	44.7	327	23.9	30.3	172	07.3	04.5	
4	20 16.0	239	30.2	36.6	283	53.2	44.6	342	26.2	30.4	187	09.6	04.6	
5	35 18.5	254	29.6	+16 35.7	298	53.9	+23 44.6	357	28.5	+13 30.4	202	11.8	-3 04.7	
6	50 21.0	269	29.0	+16 34.8	313	54.6	+23 44.6	12 30.8	+13 30.5	217	14.1	-3 04.8		
7	65 23.4	284	28.4	33.9	328	55.2	44.5	27 33.1	30.5	232	16.4	04.9		
8	80 25.9	299	27.8	33.0	343	55.9	44.5	42 35.5	30.5	247	18.6	05.0		
9	95 28.4	314	27.2	32.1	358	56.5	44.4	57 37.8	30.6	262	20.9	05.1		
10	110 30.8	329	26.6	31.2	13 57.2	44.4		72 40.1	30.6	277	23.1	05.2		
11	125 33.3	344	25.9	+16 30.3	28 57.9	+23 44.4		87 42.4	+13 30.6	292	25.4	-3 05.3		
12	140 35.7	359	25.3	+16 29.3	43 58.5	+23 44.3		102 44.7	+13 30.7	307	27.7	-3 05.3		
13	155 38.2	14 24.7	28.4	58 59.2	44.3			117 47.1	30.7	322	29.9	05.4		
14	170 40.7	29 24.1	27.5	73 59.9	44.2			132 49.4	30.8	337	32.2	05.5		
15	185 43.1	44 23.5	26.6	89 00.5	44.2			147 51.7	30.8	352	34.5	05.6		
16	200 45.6	59 22.9	25.7	104 01.2	44.1			162 54.0	30.8	7 36.7	05.7			
17	215 48.1	74 22.3	+16 24.8	119 01.8	+23 44.1			177 56.3	+13 30.9	22 39.0	-3 05.8			
18	230 50.5	89 21.7	+16 23.9	134 02.5	+23 44.0			192 58.7	+13 30.9	37 41.3	-3 05.9			
19	245 53.0	104 21.0	23.0	149 03.2	44.0			208 01.0	30.9	52 43.5	06.0			
20	260 55.5	119 20.4	22.0	164 03.8	44.0			223 03.3	31.0	67 45.8	06.1			
21	275 57.9	134 19.8	21.1	179 04.5	43.9			238 05.6	31.0	82 48.1	06.2			
22	291 00.4	149 19.2	20.2	194 05.2	43.9			253 08.0	31.1	97 50.3	06.3			
23	306 02.9	164 18.6	19.3	209 05.8	43.8			268 10.3	31.1	112 52.6	06.4			
24	321 05.3	179 18.0	+16 18.4	224 06.5	+23 43.8			283 12.6	+13 31.1	127 54.8	-3 06.4			
Dif	—		-6	-9	+7	0		+23	0	+23	-1			

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 15/8 PMG: 12 ^h 04 ^m 9			Edad: 13 ^d 2 PHE { SD: 15/2 PMG: **h **m 4 ^h : 55/7 12 ^h : 55/6 20 ^h : 55/4 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	44.9	+14	50.1	8	58.2	-13	51.6	60 N	1 54	3 16	4 08	19 15	9	3 55	82		
1	193	45.0		49.3	23	29.8 ¹²⁶		41.4 ¹⁰²	58	2 21	30	18	09	12	4 03	79		
2	208	45.1		48.6	38	01.5 ¹²⁷		31.1 ¹⁰³	56	41	42	26	19 04	14	10	76		
3	223	45.2		47.8	52	33.3 ¹²⁸		20.7 ¹⁰⁴	54	2 58	3 52	33	18 59	16	17	73		
4	238	45.3		47.1	67	05.1 ¹²⁸	-13	10.3 ¹⁰⁴	52	3 11	4 01	40	55	18	22	72		
5	253	45.4	+14	46.3	81	37.0 ¹²⁹	-12	59.8 ¹⁰⁵	50	3 23	4 10	4 46	18 51	20	4 27	70		
6	268	45.5	+14	45.6	96	08.9 ¹²⁹	-12	49.3 ¹⁰⁵	45	3 47	4 26	4 59	18 42	24	4 39	65		
7	283	45.6		44.8	110	41.0 ¹³¹		38.7 ¹⁰⁶	40	4 04	40	5 09	35	27	48	62		
8	298	45.7		44.0	125	13.1 ¹³¹		28.1 ¹⁰⁶	35	19	4 51	18	29	30	4 56	59		
9	313	45.9		43.3	139	45.2 ¹³¹		17.4 ¹⁰⁷	30	31	5 01	26	23	33	5 02	57		
10	328	46.0		42.5	154	17.4 ¹³²	-12	06.7 ¹⁰⁷	20	4 49	16	39	14	37	14	53		
11	343	46.1	+14	41.8	168	49.7 ¹³³	-11	55.9 ¹⁰⁸	10 N	5 04	5 29	5 51	18 06	40	5 25	48		
12	358	46.2	+14	41.0	183	22.0 ¹³³	-11	45.1 ¹⁰⁸	0	5 15	5 40	6 02	17 58	44	5 34	45		
13	13	46.3		40.2	197	54.4 ¹³⁴		34.2 ¹⁰⁹	10 S	25	5 50	12	50	47	44	41		
14	28	46.4		39.5	212	26.8 ¹³⁴		23.3 ¹⁰⁹	20	34	6 01	23	42	51	5 54	38		
15	43	46.5		38.7	226	59.4 ¹³⁶		12.4 ¹⁰⁹	30	43	11	36	32	56	6 05	34		
16	58	46.6		38.0	241	31.9 ¹³⁵	-11	01.4 ¹¹⁰	35	47	17	43	26	59	12	31		
17	73	46.7	+14	37.2	256	04.5 ¹³⁶	-10	50.3 ¹¹¹	40	5 51	6 23	6 51	17 20	61	6 19	29		
18	88	46.9	+14	36.4	270	37.2 ¹³⁷	-10	39.3 ¹¹⁰	45	5 56	6 30	7 01	17 13	64	6 28	25		
19	103	47.0		35.7	285	10.0 ¹³⁸		28.2 ¹¹¹	50	6 00	38	12	04	68	38	22		
20	118	47.1		34.9	299	42.8 ¹³⁸		17.0 ¹¹²	52	02	42	18	17 00	70	43	20		
21	133	47.2		34.1	314	15.6 ¹³⁸	-10	05.8 ¹¹²	54	04	46	24	16 55	73	48	18		
22	148	47.3		33.4	328	48.5 ¹³⁹	-9	54.6 ¹¹²	56	06	50	30	50	75	6 54	16		
23	163	47.4		32.6	343	21.5 ¹⁴⁰		43.4 ¹¹²	58	09	6 55	37	44	78	7 01	13		
24	178	47.5	+14	31.8	357	54.5 ¹⁴⁰	-9	32.1 ¹¹³	60 S	6 11	7 00	7 46	16 38	81	7 08	10		
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO					
	PMG: 2 ^h 35 ^m 2			Mag: -4.0 PMG: 12 ^h 03 ^m			Mag: +1.4 PMG: 9 ^h 03 ^m			Mag: -2.6 PMG: 5 ^h 06 ^m			Mag: +0.9 PMG: 15 ^h 26 ^m					
	hG ♈			hG ♀		Dec	hG ♂		Dec	hG ♉		Dec	hG ♊		Dec			
h		°	'	°	'	°	'	°	'	°	'	°	'	°	'			
0	321	05.3	179	18.0	+16	18.4	224	06.5	+23	43.8	283	12.6	+13	31.1	127	54.8	-3	06.4
1	336	07.8	194	17.4		17.5	239	07.2		43.7	298	14.9		31.2	142	57.1		06.5
2	351	10.2	209	16.8		16.5	254	07.8		43.7	313	17.2		31.2	157	59.4		06.6
3	6	12.7	224	16.2		15.6	269	08.5		43.6	328	19.6		31.2	173	01.6		06.7
4	21	15.2	239	15.6		14.7	284	09.2		43.6	343	21.9		31.3	188	03.9		06.8
5	36	17.6	254	15.0	+16	13.8	299	09.8	+23	43.5	358	24.2	+13	31.3	203	06.2	-3	06.9
6	51	20.1	269	14.4	+16	12.9	314	10.5	+23	43.5	13	26.5	+13	31.3	218	08.4	-3	07.0
7	66	22.6	284	13.8		11.9	329	11.1		43.4	28	28.9		31.4	233	10.7		07.1
8	81	25.0	299	13.2		11.0	344	11.8		43.4	43	31.2		31.4	248	12.9		07.2
9	96	27.5	314	12.6		10.1	359	12.5		43.3	58	33.5		31.4	263	15.2		07.3
10	111	30.0	329	11.9		09.1	14	13.1		43.3	73	35.9		31.5	278	17.5		07.4
11	126	32.4	344	11.3	+16	08.2	29	13.8	+23	43.2	88	38.2	+13	31.5	293	19.7	-3	07.5
12	141	34.9	359	10.7	+16	07.3	44	14.5	+23	43.2	103	40.5	+13	31.5	308	22.0	-3	07.6
13	156	37.4	14	10.1		06.4	59	15.1		43.1	118	42.8		31.6	323	24.3		07.6
14	171	39.8	29	09.5		05.4	74	15.8		43.1	133	45.2		31.6	338	26.5		07.7
15	186	42.3	44	08.9		04.5	89	16.5		43.0	148	47.5		31.6	353	28.8		07.8
16	201	44.7	59	08.3		03.6	104	17.1		43.0	163	49.8		31.7	8	31.0		07.9
17	216	47.2	74	07.7	+16	02.6	119	17.8	+23	42.9	178	52.1	+13	31.7	23	33.3	-3	08.0
18	231	49.7	89	07.1	+16	01.7	134	18.5	+23	42.9	193	54.5	+13	31.8	38	35.6	-3	08.1
19	246	52.1	104	06.5	+16	00.8	149	19.1		42.8	208	56.8		31.8	53	37.8		08.2
20	261	54.6	119	05.9	+15	59.8	164	19.8		42.8	223	59.1		31.8	68	40.1		08.3
21	276	57.1	134	05.3		58.9	179	20.5		42.7	239	01.5		31.9	83	42.3		08.4
22	291	59.5	149	04.7		58.0	194	21.1		42.6	254	03.8		31.9	98	44.6		08.5
23	307	02.0	164	04.1		57.0	209	21.8		42.6	269	06.1		31.9	113	46.9		08.6
24	322	04.5	179	03.6	+15	56.1	224	22.5	+23	42.5	284	08.5	+13	32.0	128	49.1	-3	08.7
Dif	—		-6		-9		+7		-1		+23		0		+23		-1	

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna					
	SD: 15/8 PMG: 12 ^h 04 ^m 7			Edad: 14 ^d 2 PHE { SD: 15/1 PMG: 0 ^h 09 ^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	47.5	+14	31.8	357	54.5	-9	32.1	60 N	19 57	20 49	22 06	19 24	8	5 17 79			
1	193	47.7		31.1	12	27.5 ¹⁴⁰		20.7 ¹¹⁴	58	48	35	21 42	21	10	22 76			
2	208	47.8		30.3	27	00.7 ¹⁴²		-9 09.4 ¹¹³	56	40	24	23	18	13	26 74			
3	223	47.9		29.6	41	33.8 ¹⁴¹		-8 58.0 ¹¹⁴	54	33	14	21 07	15	15	30 72			
4	238	48.0		28.8	56	07.0 ¹⁴²		46.6 ¹¹⁴	52	27	20 05	20 54	13	17	34 69			
5	253	48.1	+14	28.0	70	40.3 ¹⁴³		-8 35.1 ¹¹⁵	50	19 21	19 57	20 43	19 11	18	5 37 68			
6	268	48.2	+14	27.3	85	13.6 ¹⁴³		-8 23.7 ¹¹⁴	45	19 09	19 41	20 20	19 06	23	5 44 64			
7	283	48.4		26.5	99	47.0 ¹⁴⁴		12.2 ¹¹⁵	40	18 59	28	20 03	19 02	26	50 60			
8	298	48.5		25.7	114	20.4 ¹⁴⁴		-8 00.6 ¹¹⁶	35	50	17	19 49	18 59	28	55 57			
9	313	48.6		24.9	128	53.8 ¹⁴⁴		-7 49.1 ¹¹⁵	30	43	19 08	38	56	31	5 59 55			
10	328	48.7		24.2	143	27.3 ¹⁴⁵		37.5 ¹¹⁶	20	30	18 53	20	51	35	6 07 50			
11	343	48.8	+14	23.4	158	00.9 ¹⁴⁶		-7 25.9 ¹¹⁶	10 N	18 18	18 40	19 06	18 46	39	6 13 47			
12	358	48.9	+14	22.6	172	34.5 ¹⁴⁶		-7 14.3 ¹¹⁶	0	18 08	18 29	18 54	18 42	42	6 19 43			
13	13	49.1		21.9	187	08.1 ¹⁴⁶		-7 02.6 ¹¹⁷	10 S	17 58	20	45	37	46	25 40			
14	28	49.2		21.1	201	41.8 ¹⁴⁷		-6 51.0 ¹¹⁶	20	47	10	36	33	50	32 36			
15	43	49.3		20.3	216	15.5 ¹⁴⁷		39.3 ¹¹⁷	30	35	18 00	28	28	54	39 32			
16	58	49.4		19.6	230	49.3 ¹⁴⁸		27.6 ¹¹⁷	35	28	17 54	24	25	56	43 29			
17	73	49.5	+14	18.8	245	23.1 ¹⁴⁸		-6 15.8 ¹¹⁸	40	17 20	17 48	18 20	18 21	60	6 48 26			
18	88	49.7	+14	18.0	259	56.9 ¹⁴⁸		-6 04.1 ¹¹⁷	45	17 11	17 41	18 16	18 17	63	6 53 23			
19	103	49.8		17.2	274	30.8 ¹⁴⁹		-5 52.3 ¹¹⁸	50	16 59	33	12	12	67	7 00 19			
20	118	49.9		16.5	289	04.7 ¹⁴⁹		40.6 ¹¹⁷	52	54	30	10	10	69	03 17			
21	133	50.0		15.7	303	38.7 ¹⁵⁰		28.8 ¹¹⁸	54	49	26	08	08	70	06 16			
22	148	50.1		14.9	318	12.7 ¹⁵⁰		17.0 ¹¹⁸	56	42	22	06	05	73	10 13			
23	163	50.2		14.1	332	46.7 ¹⁵⁰		-5 05.1 ¹¹⁹	58	35	17	04	18	02 76	14 11			
24	178	50.4	+14	13.4	347	20.8 ¹⁵¹		-4 53.3 ¹¹⁸	60 S	16 27	17 12	18 02	17 59	78	7 18 8			
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO					
	PMG: 2 ^h 31 ^m 3			Mag: -4.0 PMG: 12 ^h 04 ^m			Mag: +1.4 PMG: 9 ^h 02 ^m			Mag: -2.6 PMG: 5 ^h 03 ^m			Mag: +0.9 PMG: 15 ^h 22 ^m					
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec				
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°			
0	322	04.5	179	03.6	+15	56.1	224	22.5	+23	42.5	284	08.5	+13	32.0	128	49.1	-3	08.7
1	337	06.9	194	03.0		55.2	239	23.1		42.5	299	10.8		32.0	143	51.4		08.8
2	352	09.4	209	02.4		54.2	254	23.8		42.4	314	13.1		32.0	158	53.6		08.9
3	7	11.8	224	01.8		53.3	269	24.5		42.4	329	15.4		32.1	173	55.9		08.9
4	22	14.3	239	01.2		52.3	284	25.2		42.3	344	17.8		32.1	188	58.2		09.0
5	37	16.8	254	00.6	+15	51.4	299	25.8	+23	42.3	359	20.1	+13	32.1	204	00.4	-3	09.1
6	52	19.2	269	00.0	+15	50.5	314	26.5	+23	42.2	14	22.4	+13	32.2	219	02.7	-3	09.2
7	67	21.7	283	59.4		49.5	329	27.2		42.1	29	24.8		32.2	234	05.0		09.3
8	82	24.2	298	58.8		48.6	344	27.8		42.1	44	27.1		32.2	249	07.2		09.4
9	97	26.6	313	58.2		47.6	359	28.5		42.0	59	29.4		32.2	264	09.5		09.5
10	112	29.1	328	57.6		46.7	14	29.2		42.0	74	31.8		32.3	279	11.7		09.6
11	127	31.6	343	57.0	+15	45.7	29	29.8	+23	41.9	89	34.1	+13	32.3	294	14.0	-3	09.7
12	142	34.0	358	56.4	+15	44.8	44	30.5	+23	41.9	104	36.5	+13	32.3	309	16.2	-3	09.8
13	157	36.5	13	55.8		43.8	59	31.2		41.8	119	38.8		32.4	324	18.5		09.9
14	172	39.0	28	55.2		42.9	74	31.8		41.7	134	41.1		32.4	339	20.8		10.0
15	187	41.4	43	54.7		42.0	89	32.5		41.7	149	43.5		32.4	354	23.0		10.1
16	202	43.9	58	54.1		41.0	104	33.2		41.6	164	45.8		32.5	9	25.3		10.2
17	217	46.3	73	53.5	+15	40.1	119	33.9	+23	41.6	179	48.1	+13	32.5	24	27.5	-3	10.3
18	232	48.8	88	52.9	+15	39.1	134	34.5	+23	41.5	194	50.5	+13	32.5	39	29.8	-3	10.3
19	247	51.3	103	52.3		38.1	149	35.2		41.4	209	52.8		32.6	54	32.1		10.4
20	262	53.7	118	51.7		37.2	164	35.9		41.4	224	55.1		32.6	69	34.3		10.5
21	277	56.2	133	51.1		36.2	179	36.5		41.3	239	57.5		32.6	84	36.6		10.6
22	292	58.7	148	50.5		35.3	194	37.2		41.2	254	59.8		32.7	99	38.8		10.7
23	308	01.1	163	50.0		34.3	209	37.9		41.2	270	02.2		32.7	114	41.1		10.8
24	323	03.6	178	49.4	+15	33.4	224	38.6	+23	41.1	285	04.5	+13	32.7	129	43.4	-3	10.9
Dif	—			-6 -9			+7 -1			+23 0			+23 -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 5				Edad: 15 ^d 2 PHE { 4 ^h : 54'9 12 ^h : 54'8 20 ^h : 54'6 SD: 15'0 PMG: 0 ^h 52 ^m R°: 42 ^m												
	hG ☉		Dec		hG ☾ Dif		Dec Dif			Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	178	50.4	+14	13.4	347	20.8	-4	53.3	60 N	2	04	3	21	4	13	19	32
1	193	50.5		12.6	1	54.9 ¹⁵¹		41.4 ¹¹⁹	58		28		35	22		31	10
2	208	50.6		11.8	16	29.0 ¹⁵¹		29.6 ¹¹⁸	56	2	47		46	30		31	12
3	223	50.7		11.0	31	03.2 ¹⁵²		17.7 ¹¹⁹	54	3	03	3	56	37		30	15
4	238	50.9		10.3	45	37.4 ¹⁵²	-4	05.8 ¹¹⁹	52		16	4	05	43		30	16
5	253	51.0	+14	09.5	60	11.6 ¹⁵²	-3	54.0 ¹¹⁸	50	3	27	4	13	4	49	19	29
6	268	51.1	+14	08.7	74	45.9 ¹⁵³	-3	42.1 ¹¹⁹	45	3	50	4	29	5	01	19	29
7	283	51.2		07.9	89	20.2 ¹⁵³		30.2 ¹¹⁹	40	4	07		42	11		28	25
8	298	51.3		07.2	103	54.5 ¹⁵³		18.2 ¹²⁰	35		21	4	53	20		27	28
9	313	51.5		06.4	118	28.8 ¹⁵³	-3	06.3 ¹¹⁹	30		32	5	02	27		27	30
10	328	51.6		05.6	133	03.2 ¹⁵⁴	-2	54.4 ¹¹⁹	20	4	50		17	40		26	34
11	343	51.7	+14	04.8	147	37.6 ¹⁵⁴	-2	42.5 ¹¹⁹	10 N	5	04	5	29	5	51	19	25
12	358	51.8	+14	04.1	162	12.0 ¹⁵⁴	-2	30.6 ¹¹⁹	0	5	15	5	40	6	01	19	24
13	13	52.0		03.3	176	46.5 ¹⁵⁵		18.6 ¹²⁰	10 S		25		50	11		23	45
14	28	52.1		02.5	191	21.0 ¹⁵⁵	-2	06.7 ¹¹⁹	20		33	5	59	22		23	48
15	43	52.2		01.7	205	55.5 ¹⁵⁵	-1	54.8 ¹¹⁹	30		41	6	09	34		22	53
16	58	52.3		00.9	220	30.0 ¹⁵⁵		42.8 ¹²⁰	35		45		15	41		21	56
17	73	52.4	+14	00.2	235	04.6 ¹⁵⁶	-1	30.9 ¹¹⁹	40	5	49	6	21	6	49	19	21
18	88	52.6	+13	59.4	249	39.1 ¹⁵⁵	-1	19.0 ¹¹⁹	45	5	53	6	27	6	58	19	20
19	103	52.7		58.6	264	13.7 ¹⁵⁶	-1	07.1 ¹¹⁹	50		57		35	7	09	19	66
20	118	52.8		57.8	278	48.3 ¹⁵⁶	-0	55.1 ¹²⁰	52	5	59		38	14		19	67
21	133	52.9		57.0	293	22.9 ¹⁵⁶		43.2 ¹¹⁹	54	6	00		42	19		18	70
22	148	53.1		56.2	307	57.6 ¹⁵⁷		31.3 ¹¹⁹	56		02		46	26		18	72
23	163	53.2		55.5	322	32.3 ¹⁵⁷		19.4 ¹¹⁹	58		04		51	33		18	74
24	178	53.3	+13	54.7	337	06.9 ¹⁵⁶	-0	07.5 ¹¹⁹	60 S	6	06	6	56	7	40	19	17

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 2 ^h 27 ^m 4		Mag: -4.0 PMG: 12 ^h 05 ^m		Mag: +1.4 PMG: 9 ^h 01 ^m		Mag: -2.6 PMG: 4 ^h 59 ^m		Mag: +0.9 PMG: 15 ^h 19 ^m	
	hG ♈		hG ♀ Dec		hG ♂ Dec		hG ♃ Dec		hG ♄ Dec	
h	°	'	°	'	°	'	°	'	°	'
0	323	03.6	178	49.4	+15	33.4	224	38.6	+23	41.1
1	338	06.1	193	48.8		32.4	239	39.2		41.1
2	353	08.5	208	48.2		31.5	254	39.9		41.0
3	8	11.0	223	47.6		30.5	269	40.6		40.9
4	23	13.5	238	47.0		29.6	284	41.2		40.9
5	38	15.9	253	46.4	+15	28.6	299	41.9	+23	40.8
6	53	18.4	268	45.9	+15	27.6	314	42.6	+23	40.7
7	68	20.8	283	45.3		26.7	329	43.3		40.7
8	83	23.3	298	44.7		25.7	344	43.9		40.6
9	98	25.8	313	44.1		24.7	359	44.6		40.5
10	113	28.2	328	43.5		23.8	14	45.3		40.5
11	128	30.7	343	43.0	+15	22.8	29	45.9	+23	40.4
12	143	33.2	358	42.4	+15	21.9	44	46.6	+23	40.3
13	158	35.6	13	41.8		20.9	59	47.3		40.3
14	173	38.1	28	41.2		19.9	74	48.0		40.2
15	188	40.6	43	40.6		19.0	89	48.6		40.1
16	203	43.0	58	40.1		18.0	104	49.3		40.1
17	218	45.5	73	39.5	+15	17.0	119	50.0	+23	40.0
18	233	47.9	88	38.9	+15	16.1	134	50.7	+23	39.9
19	248	50.4	103	38.3		15.1	149	51.3		39.9
20	263	52.9	118	37.8		14.1	164	52.0		39.8
21	278	55.3	133	37.2		13.1	179	52.7		39.7
22	293	57.8	148	36.6		12.2	194	53.4		39.7
23	309	00.3	163	36.0		11.2	209	54.0		39.6
24	324	02.7	178	35.4	+15	10.2	224	54.7	+23	39.5
Dif	—		-6		-10		+7		-1	
							+23		0	
									+23	
									-1	

UT	SOL			☉ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna				
	SD: 15 ^h 8			Edad: 16 ^d 2 PHE { 4 ^h : 54 ^m 5 12 ^h : 54 ^m 4 20 ^h : 54 ^m 3														
	PMG: 12 ^h 04 ^m 3			SD: 14 ^h 9 PMG: 1 ^h 34 ^m R°: 42 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°			
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m	m	h m	m			
0	178	53.3	+13 54.7	337	06.9	-0 07.5		60 N	19 51	20 42	21 56	19 39	8	7 54	77			
1	193	53.5	53.9	351	41.6 ¹⁵⁷	+0 04.4 ¹¹⁹		58	43	29	34	41	11	53	74			
2	208	53.6	53.1	6	16.3 ¹⁵⁷	16.3 ¹¹⁹		56	35	18	16	43	13	53	71			
3	223	53.7	52.3	20	51.1 ¹⁵⁸	28.2 ¹¹⁹		54	29	09	21 01	45	15	52	69			
4	238	53.8	51.5	35	25.8 ¹⁵⁷	40.1 ¹¹⁹		52	23	20 00	20 49	46	17	51	68			
5	253	54.0	+13 50.8	50	00.5 ¹⁵⁷	+0 52.0 ¹¹⁹		50	19 17	19 53	20 38	19 47	19	7 51	65			
6	268	54.1	+13 50.0	64	35.3 ¹⁵⁸	+1 03.8 ¹¹⁸		45	19 06	19 37	20 16	19 50	23	7 50	61			
7	283	54.2	49.2	79	10.1 ¹⁵⁸	15.7 ¹¹⁹		40	18 56	25	20 00	53	25	49	58			
8	298	54.3	48.4	93	44.9 ¹⁵⁸	27.5 ¹¹⁸		35	48	14	19 46	55	28	48	56			
9	313	54.5	47.6	108	19.7 ¹⁵⁸	39.3 ¹¹⁸		30	41	19 06	35	19 57	30	47	53			
10	328	54.6	46.8	122	54.4 ¹⁵⁷	+1 51.1 ¹¹⁸		20	28	18 51	18	20 00	35	46	49			
11	343	54.7	+13 46.0	137	29.3 ¹⁵⁹	+2 02.9 ¹¹⁸		10 N	18 18	18 39	19 05	20 03	38	7 45	45			
12	358	54.9	+13 45.2	152	04.1 ¹⁵⁸	+2 14.7 ¹¹⁸		0	18 08	18 29	18 54	20 06	41	7 44	42			
13	13	55.0	44.5	166	38.9 ¹⁵⁸	26.5 ¹¹⁸		10 S	17 58	20	44	08	45	43	38			
14	28	55.1	43.7	181	13.7 ¹⁵⁸	38.2 ¹¹⁷		20	48	10	36	11	49	42	34			
15	43	55.2	42.9	195	48.5 ¹⁵⁸	+2 50.0 ¹¹⁸		30	36	18 01	29	15	53	41	30			
16	58	55.4	42.1	210	23.4 ¹⁵⁹	+3 01.7 ¹¹⁷		35	29	17 55	25	17	55	40	28			
17	73	55.5	+13 41.3	224	58.2 ¹⁵⁸	+3 13.4 ¹¹⁷		40	17 22	17 50	18 22	20 19	58	7 39	25			
18	88	55.6	+13 40.5	239	33.0 ¹⁵⁸	+3 25.1 ¹¹⁷		45	17 13	17 43	18 18	20 22	61	7 38	22			
19	103	55.8	39.7	254	07.9 ¹⁵⁹	36.8 ¹¹⁷		50	17 02	36	14	25	65	37	18			
20	118	55.9	38.9	268	42.7 ¹⁵⁸	+3 48.4 ¹¹⁶		52	16 57	33	13	26	68	37	16			
21	133	56.0	38.1	283	17.6 ¹⁵⁹	+4 00.0 ¹¹⁶		54	52	29	11	28	69	36	15			
22	148	56.1	37.3	297	52.4 ¹⁵⁸	+4 11.6 ¹¹⁶		56	46	25	09	30	71	35	13			
23	163	56.3	36.5	312	27.2 ¹⁵⁸	23.2 ¹¹⁶		58	39	21	08	32	74	35	10			
24	178	56.4	+13 35.8	327	02.1 ¹⁵⁹	+4 34.8 ¹¹⁶		60 S	16 32	17 17	18 06	20 34	77	7 34	8			
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 2 ^h 23 ^m 4		Mag: -4.0 PMG: 12 ^h 06 ^m			Mag: +1.4 PMG: 9 ^h 00 ^m			Mag: -2.6 PMG: 4 ^h 55 ^m			Mag: +0.9 PMG: 15 ^h 15 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°			
0	324	02.7	178 35.4	+15 10.2	224 54.7	+23 39.5	286 00.7	+13 33.4	130 37.5	-3 13.2								
1	339	05.2	193 34.9	09.3	239 55.4	39.4	301 03.1	33.5	145 39.8	13.3								
2	354	07.7	208 34.3	08.3	254 56.1	39.4	316 05.4	33.5	160 42.0	13.4								
3	9	10.1	223 33.7	07.3	269 56.7	39.3	331 07.7	33.5	175 44.3	13.5								
4	24	12.6	238 33.2	06.3	284 57.4	39.2	346 10.1	33.5	190 46.5	13.6								
5	39	15.1	253 32.6	+15 05.4	299 58.1	+23 39.2	1	12.4	+13 33.6	205 48.8	-3 13.6							
6	54	17.5	268 32.0	+15 04.4	314 58.8	+23 39.1	16	14.8	+13 33.6	220 51.1	-3 13.7							
7	69	20.0	283 31.4	03.4	329 59.4	39.0	31	17.1	33.6	235 53.3	13.8							
8	84	22.4	298 30.9	02.4	345 00.1	38.9	46	19.5	33.7	250 55.6	13.9							
9	99	24.9	313 30.3	01.4	0 00.8	38.9	61	21.8	33.7	265 57.8	14.0							
10	114	27.4	328 29.7	+15 00.5	15 01.5	38.8	76	24.2	33.7	281 00.1	14.1							
11	129	29.8	343 29.2	+14 59.5	30 02.2	+23 38.7	91	26.5	+13 33.7	296 02.3	-3 14.2							
12	144	32.3	358 28.6	+14 58.5	45 02.8	+23 38.6	106	28.9	+13 33.8	311 04.6	-3 14.3							
13	159	34.8	13 28.0	57.5	60 03.5	38.6	121	31.2	33.8	326 06.8	14.4							
14	174	37.2	28 27.5	56.5	75 04.2	38.5	136	33.6	33.8	341 09.1	14.5							
15	189	39.7	43 26.9	55.5	90 04.9	38.4	151	35.9	33.8	356 11.3	14.6							
16	204	42.2	58 26.3	54.6	105 05.5	38.3	166	38.3	33.9	11 13.6	14.7							
17	219	44.6	73 25.7	+14 53.6	120 06.2	+23 38.3	181	40.6	+13 33.9	26 15.9	-3 14.8							
18	234	47.1	88 25.2	+14 52.6	135 06.9	+23 38.2	196	43.0	+13 33.9	41 18.1	-3 14.9							
19	249	49.5	103 24.6	51.6	150 07.6	38.1	211	45.3	34.0	56 20.4	15.0							
20	264	52.0	118 24.0	50.6	165 08.3	38.0	226	47.7	34.0	71 22.6	15.1							
21	279	54.5	133 23.5	49.6	180 08.9	37.9	241	50.0	34.0	86 24.9	15.2							
22	294	56.9	148 22.9	48.6	195 09.6	37.9	256	52.4	34.0	101 27.1	15.3							
23	309	59.4	163 22.4	47.7	210 10.3	37.8	271	54.8	34.1	116 29.4	15.4							
24	325	01.9	178 21.8	+14 46.7	225 11.0	+23 37.7	286	57.1	+13 34.1	131 31.6	-3 15.5							
Dif	—		-6		-10		+7		-1		+24		0		+23		-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 1				Edad: 17 ^d 2 PHE { 4 ^h : 54 ^h /3 12 ^h : 54 ^h /2 20 ^h : 54 ^h /2 R°: 41 ^m													
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m
0	178	56.4	+13	35.8	327	02.1	+4	34.8	60 N	2	13	3	27	4	18	19	47	10
1	193	56.5		35.0	341	36.9 ¹⁵⁸		46.3 ¹¹⁵	58		36		40		26		52	12
2	208	56.7		34.2	356	11.7 ¹⁵⁸	+4	57.8 ¹¹⁵	56	2	53	3	51	34	19	56	14	04
3	223	56.8		33.4	10	46.5 ¹⁵⁸	+5	09.3 ¹¹⁵	54	3	08	4	00	41	20	00	16	9
4	238	56.9		32.6	25	21.3 ¹⁵⁸		20.8 ¹¹⁵	52		20		09	47		03	18	8
5	253	57.1	+13	31.8	39	56.2 ¹⁵⁹	+5	32.2 ¹¹⁴	50	3	31	4	16	4	52	20	06	20
6	268	57.2	+13	31.0	54	30.9 ¹⁵⁷	+5	43.7 ¹¹⁵	45	3	53	4	32	5	03	20	13	23
7	283	57.3		30.2	69	05.7 ¹⁵⁸	+5	55.0 ¹¹³	40	4	09		44	13		18	27	
8	298	57.5		29.4	83	40.5 ¹⁵⁸	+6	06.4 ¹¹⁴	35		22	4	54	21		23	29	
9	313	57.6		28.6	98	15.3 ¹⁵⁸		17.7 ¹¹³	30		33	5	03	28		27	32	
10	328	57.7		27.8	112	50.1 ¹⁵⁸		29.0 ¹¹³	20	4	51		18	40		35	35	
11	343	57.9	+13	27.0	127	24.8 ¹⁵⁷	+6	40.3 ¹¹³	10 N	5	04	5	29	5	51	20	41	39
12	358	58.0	+13	26.2	141	59.5 ¹⁵⁷	+6	51.6 ¹¹³	0	5	15	5	40	6	01	20	47	43
13	13	58.1		25.4	156	34.3 ¹⁵⁸	+7	02.8 ¹¹²	10 S		24		49	10		20	53	46
14	28	58.3		24.6	171	09.0 ¹⁵⁷		14.0 ¹¹²	20		32	5	58	21		21	00	49
15	43	58.4		23.8	185	43.7 ¹⁵⁷		25.1 ¹¹¹	30		39	6	08	32		08	53	
16	58	58.5		23.0	200	18.4 ¹⁵⁷		36.2 ¹¹¹	35		43		13	39		12	56	
17	73	58.7	+13	22.2	214	53.0 ¹⁵⁶	+7	47.3 ¹¹¹	40	5	46	6	18	6	46	21	17	58
18	88	58.8	+13	21.4	229	27.7 ¹⁵⁷	+7	58.4 ¹¹¹	45	5	50	6	24	6	55	21	23	61
19	103	58.9		20.6	244	02.3 ¹⁵⁶	+8	09.4 ¹¹⁰	50		54		32	7	05		30	65
20	118	59.1		19.8	258	36.9 ¹⁵⁶		20.4 ¹¹⁰	52		55		35	10		34	67	
21	133	59.2		19.0	273	11.5 ¹⁵⁶		31.3 ¹⁰⁹	54		57		38	15		37	69	
22	148	59.4		18.2	287	46.1 ¹⁵⁶		42.3 ¹¹⁰	56	5	58		42	21		41	71	
23	163	59.5		17.4	302	20.7 ¹⁵⁶	+8	53.1 ¹⁰⁸	58	6	00		46	28		46	73	
24	178	59.6	+13	16.6	316	55.2 ¹⁵⁵	+9	04.0 ¹⁰⁹	60 S	6	02		6	51	7	35	21	51

UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 2 ^h 19 ^m 5		Mag: -4.0 PMG: 12 ^h 07 ^m				Mag: +1.4 PMG: 8 ^h 59 ^m				Mag: -2.6 PMG: 4 ^h 51 ^m				Mag: +0.9 PMG: 15 ^h 12 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	325	01.9	178	21.8	+14	46.7	225	11.0	+23	37.7	286	57.1	+13	34.1	131	31.6	-3	15.5
1	340	04.3	193	21.2		45.7	240	11.6		37.6	301	59.5		34.1	146	33.9		15.6
2	355	06.8	208	20.7		44.7	255	12.3		37.6	317	01.8		34.1	161	36.1		15.6
3	10	09.3	223	20.1		43.7	270	13.0		37.5	332	04.2		34.2	176	38.4		15.7
4	25	11.7	238	19.5		42.7	285	13.7		37.4	347	06.5		34.2	191	40.6		15.8
5	40	14.2	253	19.0	+14	41.7	300	14.4	+23	37.3	2	08.9	+13	34.2	206	42.9	-3	15.9
6	55	16.7	268	18.4	+14	40.7	315	15.0	+23	37.2	17	11.2	+13	34.2	221	45.2	-3	16.0
7	70	19.1	283	17.9		39.7	330	15.7		37.2	32	13.6		34.3	236	47.4		16.1
8	85	21.6	298	17.3		38.7	345	16.4		37.1	47	15.9		34.3	251	49.7		16.2
9	100	24.0	313	16.7		37.7	0	17.1		37.0	62	18.3		34.3	266	51.9		16.3
10	115	26.5	328	16.2		36.7	15	17.8		36.9	77	20.7		34.3	281	54.2		16.4
11	130	29.0	343	15.6	+14	35.7	30	18.4	+23	36.8	92	23.0	+13	34.4	296	56.4	-3	16.5
12	145	31.4	358	15.1	+14	34.7	45	19.1	+23	36.7	107	25.4	+13	34.4	311	58.7	-3	16.6
13	160	33.9	13	14.5		33.7	60	19.8		36.7	122	27.7		34.4	327	00.9		16.7
14	175	36.4	28	13.9		32.7	75	20.5		36.6	137	30.1		34.4	342	03.2		16.8
15	190	38.8	43	13.4		31.7	90	21.2		36.5	152	32.5		34.5	357	05.4		16.9
16	205	41.3	58	12.8		30.7	105	21.9		36.4	167	34.8		34.5	12	07.7		17.0
17	220	43.8	73	12.3	+14	29.7	120	22.5	+23	36.3	182	37.2	+13	34.5	27	09.9	-3	17.1
18	235	46.2	88	11.7	+14	28.7	135	23.2	+23	36.2	197	39.5	+13	34.5	42	12.2	-3	17.2
19	250	48.7	103	11.2		27.7	150	23.9		36.2	212	41.9		34.6	57	14.4		17.3
20	265	51.1	118	10.6		26.7	165	24.6		36.1	227	44.2		34.6	72	16.7		17.4
21	280	53.6	133	10.1		25.7	180	25.3		36.0	242	46.6		34.6	87	18.9		17.5
22	295	56.1	148	09.5		24.7	195	25.9		35.9	257	49.0		34.6	102	21.2		17.6
23	310	58.5	163	08.9		23.7	210	26.6		35.8	272	51.3		34.7	117	23.4		17.7
24	326	01.0	178	08.4	+14	22.7	225	27.3	+23	35.7	287	53.7	+13	34.7	132	25.7	-3	17.8
Dif	—		-6		-10		+7		-1		+24		0		+23		-	

UT	SOL				LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 15 ^h 8				Edad: 18 ^d 2 PHE { 4 ^h : 54 ^m 1 12 ^h : 54 ^m 1 20 ^h : 54 ^m 1													
	PMG: 12 ^h 03 ^m 9				SD: 14 ^h 7 PMG: 2 ^h 57 ^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	59.6	+13	16.6	316	55.2	+9	04.0	60 N	19 46	20 35	21 47	19 57	12	10 27	77		
1	193	59.8		15.8	331	29.7 ¹⁵⁵		14.8 ¹⁰⁸	58	38	23	26	20 04	15	21	74		
2	208	59.9		15.0	346	04.2 ¹⁵⁵		25.5 ¹⁰⁷	56	31	13	21 09	10 18		15	72		
3	224	00.0		14.2	0	38.7 ¹⁵⁵		36.3 ¹⁰⁸	54	24	20 04	20 55	16 20		10	69		
4	239	00.2		13.4	15	13.1 ¹⁵⁴		46.9 ¹⁰⁶	52	19	19 56	44	21 22		06	67		
5	254	00.3	+13	12.6	29	47.5 ¹⁵⁴	+9	57.6 ¹⁰⁷	50	19 13	19 49	20 33	20 26	23	10 02	65		
6	269	00.4	+13	11.8	44	21.9 ¹⁵⁴	+10	08.2 ¹⁰⁶	45	19 02	19 34	20 13	20 36	27	9 53	61		
7	284	00.6		11.0	58	56.3 ¹⁵⁴		18.7 ¹⁰⁵	40	18 53	22	19 57	45 30		45	58		
8	299	00.7		10.2	73	30.6 ¹⁵³		29.3 ¹⁰⁶	35	45	12	44	52 32		39	56		
9	314	00.9		09.4	88	05.0 ¹⁵⁴		39.7 ¹⁰⁴	30	39	19 04	33	20 59	34	33	54		
10	329	01.0		08.6	102	39.2 ¹⁵²	+10	50.2 ¹⁰⁵	20	27	18 50	16	21 10	38	24	49		
11	344	01.1	+13	07.8	117	13.5 ¹⁵³	+11	00.5 ¹⁰³	10 N	18 17	18 38	19 04	21 20	41	9 15	47		
12	359	01.3	+13	07.0	131	47.7 ¹⁵²	+11	10.9 ¹⁰⁴	0	18 07	18 28	18 53	21 30	43	9 08	43		
13	14	01.4		06.2	146	21.9 ¹⁵²		21.2 ¹⁰³	10 S	17 58	19	44	39 47		9 00	40		
14	29	01.6		05.4	160	56.1 ¹⁵²		31.4 ¹⁰²	20	48	11	37	21 49	50	8 51	37		
15	44	01.7		04.5	175	30.2 ¹⁵¹		41.6 ¹⁰²	30	37	18 02	30	22 01	54	42	33		
16	59	01.8		03.7	190	04.3 ¹⁵¹	+11	51.8 ¹⁰²	35	31	17 57	26	08 55		36	31		
17	74	02.0	+13	02.9	204	38.4 ¹⁵¹	+12	01.9 ¹⁰¹	40	17 24	17 51	18 23	22 15	59	8 30	28		
18	89	02.1	+13	02.1	219	12.5 ¹⁵¹	+12	11.9 ¹⁰⁰	45	17 15	17 46	18 20	22 24	62	8 23	25		
19	104	02.3		01.3	233	46.5 ¹⁵⁰		21.9 ¹⁰⁰	50	05	39	17	35 65		15	21		
20	119	02.4	+13	00.5	248	20.4 ¹⁴⁹		31.9 ¹⁰⁰	52	17 01	36	15	41 66		11	19		
21	134	02.5	+12	59.7	262	54.4 ¹⁵⁰		41.8 ⁹⁹	54	16 56	33	14	46 69		06	18		
22	149	02.7		58.9	277	28.3 ¹⁴⁹	+12	51.7 ⁹⁹	56	50	29	13	52 72		8 02	15		
23	164	02.8		58.1	292	02.1 ¹⁴⁸	+13	01.5 ⁹⁸	58	44	25	11	22 59	74	7 56	14		
24	179	03.0	+12	57.3	306	35.9 ¹⁴⁸	+13	11.2 ⁹⁷	60 S	16 37	17 21	18 10	23 08	77	7 50	11		
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 2 ^h 15 ^m 6		Mag: -4.0 PMG: 12 ^h 08 ^m				Mag: +1.4 PMG: 8 ^h 58 ^m				Mag: -2.6 PMG: 4 ^h 48 ^m				Mag: +0.9 PMG: 15 ^h 08 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	326	01.0	178	08.4	+14	22.7	225	27.3	+23	35.7	287	53.7	+13	34.7	132	25.7	-3	17.8
1	341	03.5	193	07.8		21.7	240	28.0		35.6	302	56.1		34.7	147	27.9		17.9
2	356	05.9	208	07.3		20.7	255	28.7		35.6	317	58.4		34.7	162	30.2		18.0
3	11	08.4	223	06.7		19.7	270	29.4		35.5	333	00.8		34.7	177	32.4		18.1
4	26	10.9	238	06.2		18.7	285	30.0		35.4	348	03.1		34.8	192	34.7		18.1
5	41	13.3	253	05.6	+14	17.6	300	30.7	+23	35.3	3	05.5	+13	34.8	207	36.9	-3	18.2
6	56	15.8	268	05.1	+14	16.6	315	31.4	+23	35.2	18	07.9	+13	34.8	222	39.2	-3	18.3
7	71	18.3	283	04.5		15.6	330	32.1		35.1	33	10.2		34.8	237	41.4		18.4
8	86	20.7	298	04.0		14.6	345	32.8		35.0	48	12.6		34.9	252	43.7		18.5
9	101	23.2	313	03.4		13.6	0	33.5		34.9	63	15.0		34.9	267	45.9		18.6
10	116	25.6	328	02.9		12.6	15	34.2		34.8	78	17.3		34.9	282	48.2		18.7
11	131	28.1	343	02.3	+14	11.6	30	34.8	+23	34.8	93	19.7	+13	34.9	297	50.4	-3	18.8
12	146	30.6	358	01.8	+14	10.6	45	35.5	+23	34.7	108	22.1	+13	34.9	312	52.7	-3	18.9
13	161	33.0	13	01.2		09.5	60	36.2		34.6	123	24.4		35.0	327	54.9		19.0
14	176	35.5	28	00.7		08.5	75	36.9		34.5	138	26.8		35.0	342	57.2		19.1
15	191	38.0	43	00.1		07.5	90	37.6		34.4	153	29.2		35.0	357	59.4		19.2
16	206	40.4	57	59.6		06.5	105	38.3		34.3	168	31.5		35.0	13	01.7		19.3
17	221	42.9	72	59.1	+14	05.5	120	39.0	+23	34.2	183	33.9	+13	35.1	28	03.9	-3	19.4
18	236	45.4	87	58.5	+14	04.4	135	39.6	+23	34.1	198	36.3	+13	35.1	43	06.2	-3	19.5
19	251	47.8	102	58.0		03.4	150	40.3		34.0	213	38.6		35.1	58	08.4		19.6
20	266	50.3	117	57.4		02.4	165	41.0		33.9	228	41.0		35.1	73	10.7		19.7
21	281	52.8	132	56.9		01.4	180	41.7		33.8	243	43.4		35.1	88	12.9		19.8
22	296	55.2	147	56.3	+14	00.4	195	42.4		33.8	258	45.7		35.2	103	15.2		19.9
23	311	57.7	162	55.8	+13	59.3	210	43.1		33.7	273	48.1		35.2	118	17.4		20.0
24	327	00.1	177	55.2	+13	58.3	225	43.8	+23	33.6	288	50.5	+13	35.2	133	19.7	-3	20.1
Dif	—		-5		-10		+7		-1		+24		0		+22		-1	

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15/8 PMG: 12 ^h 03 ^m 7			Edad: 19 ^d 2 PHE { 4 ^h : 54/1 12 ^h : 54/2 20 ^h : 54/2 PMG: 3 ^h 40 ^m R°: 44 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	179	03.0	+12 57.3	306	35.9	+13 11.2	60 N	2 22	3 33	4 23		20 09	16	11 44	77
1	194	03.1		321	09.7 ¹⁴⁸	20.9 ⁹⁷	58	43	45	31		19 20		35	73
2	209	03.2		335	43.5 ¹⁴⁸	30.6 ⁹⁷	56	2 59	3 55	38		28 22		27	70
3	224	03.4		350	17.2 ¹⁴⁷	40.1 ⁹⁵	54	3 13	4 04	44		36 24		19	66
4	239	03.5		4	50.9 ¹⁴⁷	49.7 ⁹⁶	52	25	12	50		43 26		13	66
5	254	03.7	+12 53.2	19	24.5 ¹⁴⁶	+13 59.1 ⁹⁴	50	3 35	4 19	4 55		20 49	28	11 07	64
6	269	03.8	+12 52.4	33	58.1 ¹⁴⁶	+14 08.6 ⁹⁵	45	3 56	4 34	5 06		21 03	31	10 54	61
7	284	04.0		48	31.6 ¹⁴⁵	17.9 ⁹³	40	4 11	46	15		15 33		43	59
8	299	04.1		63	05.1 ¹⁴⁵	27.2 ⁹³	35	24	4 56	23		24 36		35	56
9	314	04.2		77	38.6 ¹⁴⁵	36.5 ⁹³	30	35	5 04	29		33 38		27	54
10	329	04.4		92	12.0 ¹⁴⁴	45.7 ⁹²	20	4 51	18	41		21 48	41	13	51
11	344	04.5	+12 48.3	106	45.4 ¹⁴⁴	+14 54.8 ⁹¹	10 N	5 04	5 29	5 51		22 01	44	10 02	47
12	359	04.7	+12 47.5	121	18.7 ¹⁴³	+15 03.9 ⁹¹	0	5 14	5 39	6 00		22 13	46	9 51	44
13	14	04.8		135	52.0 ¹⁴³	12.9 ⁹⁰	10 S	23	48	10		26 48		40	42
14	29	05.0		150	25.2 ¹⁴²	21.8 ⁸⁹	20	31	5 57	19		39 51		28	39
15	44	05.1		164	58.4 ¹⁴²	30.7 ⁸⁹	30	38	6 06	30		22 55	54	15	35
16	59	05.2		179	31.6 ¹⁴²	39.5 ⁸⁸	35	41	10	36		23 03	57	9 07	34
17	74	05.4	+12 43.4	194	04.7 ¹⁴¹	+15 48.3 ⁸⁸	40	5 44	6 16	6 43		23 14	58	8 58	32
18	89	05.5	+12 42.6	208	37.7 ¹⁴⁰	+15 57.0 ⁸⁷	45	5 47	6 21	6 52		23 26	61	8 48	29
19	104	05.7		223	10.7 ¹⁴⁰	+16 05.6 ⁸⁶	50	50	28	7 01		40 65		36	25
20	119	05.8		237	43.7 ¹⁴⁰	14.2 ⁸⁶	52	51	31	06		47 66		30	24
21	134	06.0		252	16.6 ¹³⁹	22.6 ⁸⁴	54	53	34	11		23 55	68	24	22
22	149	06.1		266	49.4 ¹³⁸	31.1 ⁸⁵	56	54	38	16		** ** *		17	20
23	164	06.3		281	22.2 ¹³⁸	39.4 ⁸³	58	55	41	23		** ** *		10	16
24	179	06.4	+12 37.7	295	55.0 ¹³⁸	+16 47.7 ⁸³	60 S	5 57	6 45	7 29		** ** *		8 01	14

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG 2 ^h 11 ^m 6		Mag: -4.0 PMG: 12 ^h 09 ^m		Mag: +1.4 PMG: 8 ^h 57 ^m		Mag: -2.6 PMG: 4 ^h 44 ^m		Mag: +0.9 PMG: 15 ^h 04 ^m						
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'					
0	327	00.1	177	55.2	+13 58.3	225	43.8	+23 33.6	288	50.5	+13 35.2				
1	342	02.6	192	54.7		57.3	240	44.4		303	52.8	35.2			
2	357	05.1	207	54.2		56.3	255	45.1		318	55.2	35.2			
3	12	07.5	222	53.6		55.2	270	45.8		333	57.6	35.3			
4	27	10.0	237	53.1		54.2	285	46.5		348	59.9	35.3			
5	42	12.5	252	52.5	+13 53.2	300	47.2	+23 33.1	4	02.3	+13 35.3				
6	57	14.9	267	52.0	+13 52.2	315	47.9	+23 33.0	19	04.7	+13 35.3				
7	72	17.4	282	51.5		51.1	330	48.6		34	07.1	35.3			
8	87	19.9	297	50.9		50.1	345	49.3		49	09.4	35.4			
9	102	22.3	312	50.4		49.1	0	49.9		64	11.8	35.4			
10	117	24.8	327	49.8		48.1	15	50.6		79	14.2	35.4			
11	132	27.2	342	49.3	+13 47.0	30	51.3	+23 32.5	94	16.5	+13 35.4				
12	147	29.7	357	48.8	+13 46.0	45	52.0	+23 32.4	109	18.9	+13 35.4				
13	162	32.2	12	48.2		45.0	60	52.7		124	21.3	35.5			
14	177	34.6	27	47.7		43.9	75	53.4		139	23.7	35.5			
15	192	37.1	42	47.2		42.9	90	54.1		154	26.0	35.5			
16	207	39.6	57	46.6		41.9	105	54.8		169	28.4	35.5			
17	222	42.0	72	46.1	+13 40.8	120	55.5	+23 31.9	184	30.8	+13 35.5				
18	237	44.5	87	45.5	+13 39.8	135	56.2	+23 31.8	199	33.2	+13 35.6				
19	252	47.0	102	45.0		38.8	150	56.8		214	35.5	35.6			
20	267	49.4	117	44.5		37.7	165	57.5		229	37.9	35.6			
21	282	51.9	132	43.9		36.7	180	58.2		244	40.3	35.6			
22	297	54.4	147	43.4		35.6	195	58.9		259	42.7	35.6			
23	312	56.8	162	42.9		34.6	210	59.6		274	45.0	35.7			
24	327	59.3	177	42.3	+13 33.6	226	00.3	+23 31.2	289	47.4	+13 35.7				
Dif	—		-5	-10		+7	-1		+24	0		+22	-1		

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15'8 PMG: 12 ^h 03 ^m 5			Edad: 20 ^d 2 PHE { 4 ^h : 54'3 12 ^h : 54'4 20 ^h : 54'5 PMG: 4 ^h 24 ^m R°: 47 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	'	°	'	°	h m	h m	h m	h m m		h m m	
0	179	06.4	+12 37.7	295	55.0	+16 47.7	60 N	19 40	20 29	21 38	20 25 24		13 01 74	
1	194	06.6	36.9	310	27.7 ¹³⁷	+16 55.9 ⁸²	58	32	17	18	39 26		12 48 71	
2	209	06.7	36.1	325	00.3 ¹³⁶	+17 04.1 ⁸²	56	26	20 08	21 03	20 50 29		37 69	
3	224	06.9	35.3	339	33.0 ¹³⁷	12.2 ⁸¹	54	20	19 59	20 50	21 00 31		28 66	
4	239	07.0	34.4	354	05.5 ¹³⁵	20.2 ⁸⁰	52	14	51	38	09 33		19 65	
5	254	07.2	+12 33.6	8	38.0 ¹³⁵	+17 28.1 ⁷⁹	50	19 09	19 45	20 29	21 17 34		12 11 64	
6	269	07.3	+12 32.8	23	10.4 ¹³⁴	+17 36.0 ⁷⁹	45	18 59	19 30	20 09	21 34 37		11 55 61	
7	284	07.4	32.0	37	42.8 ¹³⁴	43.8 ⁷⁸	40	50	19	19 53	21 48 39		42 58	
8	299	07.6	31.1	52	15.2 ¹³⁴	51.5 ⁷⁷	35	43	09	41	22 00 41		31 56	
9	314	07.7	30.3	66	47.5 ¹³³	+17 59.1 ⁷⁶	30	36	19 01	31	11 42		21 54	
10	329	07.9	29.5	81	19.7 ¹³²	+18 06.7 ⁷⁶	20	25	18 48	15	29 44		11 04 52	
11	344	08.0	+12 28.7	95	51.9 ¹³²	+18 14.2 ⁷⁵	10 N	18 16	18 37	19 02	22 45 46		10 49 49	
12	359	08.2	+12 27.9	110	24.0 ¹³¹	+18 21.6 ⁷⁴	0	18 07	18 28	18 53	22 59 49		10 35 48	
13	14	08.3	27.0	124	56.0 ¹³⁰	28.9 ⁷³	10 S	17 58	19	44	23 14 51		22 45	
14	29	08.5	26.2	139	28.1 ¹³¹	36.2 ⁷³	20	49	11	37	30 53		10 07 43	
15	44	08.6	25.4	154	00.0 ¹²⁹	43.4 ⁷²	30	38	18 03	31	23 49 55		9 50 40	
16	59	08.8	24.6	168	31.9 ¹²⁹	50.5 ⁷¹	35	32	17 58	28	*** ** *		41 38	
17	74	08.9	+12 23.7	183	03.7 ¹²⁸	+18 57.5 ⁷⁰	40	17 25	17 53	18 25	*** ** *		9 30 36	
18	89	09.1	+12 22.9	197	35.5 ¹²⁸	+19 04.5 ⁷⁰	45	17 18	17 48	18 22	*** ** *		9 17 33	
19	104	09.2	22.1	212	07.3 ¹²⁸	11.3 ⁶⁸	50	08	42	19	*** ** *		9 01 31	
20	119	09.4	21.3	226	38.9 ¹²⁶	18.1 ⁶⁸	52	17 04	39	18	*** ** *		8 54 29	
21	134	09.5	20.4	241	10.5 ¹²⁶	24.8 ⁶⁷	54	16 59	36	17	*** ** *		46 27	
22	149	09.7	19.6	255	42.1 ¹²⁶	31.4 ⁶⁶	56	54	33	16	0 04 70		37 25	
23	164	09.8	18.8	270	13.6 ¹²⁵	37.9 ⁶⁵	58	48	29	15	13 73		26 23	
24	179	10.0	+12 18.0	284	45.0 ¹²⁴	+19 44.4 ⁶⁵	60 S	16 41	17 25	18 14	0 25 76		8 15 19	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 2 ^h 07 ^m 7		Mag: -4.0 PMG: 12 ^h 10 ^m			Mag: +1.4 PMG: 8 ^h 56 ^m			Mag: -2.6 PMG: 4 ^h 40 ^m			Mag: +0.9 PMG: 15 ^h 01 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	327	59.3	177	42.3	+13 33.6	226	00.3	+23 31.2	289	47.4	+13 35.7	134	13.6	-3 22.4
1	343	01.7	192	41.8	32.5	241	01.0	31.1	304	49.8	35.7	149	15.9	22.5
2	358	04.2	207	41.3	31.5	256	01.7	31.0	319	52.2	35.7	164	18.1	22.6
3	13	06.7	222	40.7	30.4	271	02.4	30.9	334	54.6	35.7	179	20.4	22.7
4	28	09.1	237	40.2	29.4	286	03.1	30.8	349	56.9	35.7	194	22.6	22.8
5	43	11.6	252	39.7	+13 28.4	301	03.8	+23 30.7	4	59.3	+13 35.8	209	24.9	-3 22.9
6	58	14.1	267	39.2	+13 27.3	316	04.5	+23 30.6	20	01.7	+13 35.8	224	27.1	-3 23.0
7	73	16.5	282	38.6	26.3	331	05.1	30.5	35	04.1	35.8	239	29.3	23.1
8	88	19.0	297	38.1	25.2	346	05.8	30.4	50	06.5	35.8	254	31.6	23.2
9	103	21.5	312	37.6	24.2	1	06.5	30.3	65	08.8	35.8	269	33.8	23.3
10	118	23.9	327	37.0	23.1	16	07.2	30.2	80	11.2	35.9	284	36.1	23.4
11	133	26.4	342	36.5	+13 22.1	31	07.9	+23 30.1	95	13.6	+13 35.9	299	38.3	-3 23.5
12	148	28.8	357	36.0	+13 21.0	46	08.6	+23 30.0	110	16.0	+13 35.9	314	40.6	-3 23.6
13	163	31.3	12	35.5	20.0	61	09.3	29.9	125	18.4	35.9	329	42.8	23.7
14	178	33.8	27	34.9	19.0	76	10.0	29.8	140	20.7	35.9	344	45.1	23.8
15	193	36.2	42	34.4	17.9	91	10.7	29.7	155	23.1	35.9	359	47.3	23.9
16	208	38.7	57	33.9	16.9	106	11.4	29.5	170	25.5	36.0	14	49.6	24.0
17	223	41.2	72	33.4	+13 15.8	121	12.1	+23 29.4	185	27.9	+13 36.0	29	51.8	-3 24.1
18	238	43.6	87	32.8	+13 14.8	136	12.8	+23 29.3	200	30.3	+13 36.0	44	54.0	-3 24.2
19	253	46.1	102	32.3	13.7	151	13.5	29.2	215	32.6	36.0	59	56.3	24.3
20	268	48.6	117	31.8	12.7	166	14.2	29.1	230	35.0	36.0	74	58.5	24.4
21	283	51.0	132	31.3	11.6	181	14.9	29.0	245	37.4	36.0	90	00.8	24.5
22	298	53.5	147	30.7	10.5	196	15.6	28.9	260	39.8	36.1	105	03.0	24.6
23	313	56.0	162	30.2	09.5	211	16.2	28.8	275	42.2	36.1	120	05.3	24.7
24	328	58.4	177	29.7	+13 08.4	226	16.9	+23 28.7	290	44.6	+13 36.1	135	07.5	-3 24.8
Dif	—		-5 -10			+7 -1			+24 0			+22 -1		

UT	SOL				☾ LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15 ^h 8 PMG: 12 ^h 03 ^m 2				Edad: 21 ^d 2 PHE { 4 ^h : 54 ^m 6 12 ^h : 54 ^m 7 20 ^h : 54 ^m 9 PMG: 5 ^h 11 ^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	179	10.0	+12	18.0	284	45.0	+19	44.4	60 N	2	30	3	39	4	28	20	49	
1	194	10.1		17.1	299	16.4 ¹²⁴		50.7 ⁶³	58	2	49	3	50		35	21	05	
2	209	10.3		16.3	313	47.7 ¹²³	+19	57.0 ⁶²	56	3	05	4	00		42	19	39	
3	224	10.4		15.5	328	19.0 ¹²³	+20	03.2 ⁶¹	54		18		08		48	31	41	
4	239	10.6		14.6	342	50.2 ¹²²		09.3 ⁶¹	52		29		16		53	42	41	
5	254	10.7	+12	13.8	357	21.3 ¹²¹	+20	15.3 ⁶⁰	50	3	39	4	23	4	58	21	51	
6	269	10.9	+12	13.0	11	52.4 ¹²¹	+20	21.2 ⁵⁹	45	3	59	4	37	5	08	22	11	
7	284	11.1		12.2	26	23.5 ¹²¹		27.0 ⁵⁸	40	4	14		48		17	27	46	
8	299	11.2		11.3	40	54.4 ¹¹⁹		32.7 ⁵⁷	35		26	4	58		24	41	46	
9	314	11.4		10.5	55	25.3 ¹¹⁹		38.4 ⁵⁷	30		36	5	06		31	22	53	
10	329	11.5		09.7	69	56.2 ¹¹⁹		43.9 ⁵⁵	20	4	52		19		42	23	13	
11	344	11.7	+12	08.8	84	27.0 ¹¹⁸	+20	49.4 ⁵⁵	10 N	5	04	5	30	5	51	23	31	
12	359	11.8	+12	08.0	98	57.7 ¹¹⁷	+20	54.7 ⁵³	0	5	14	5	39	6	00	23	48	
13	14	12.0		07.2	113	28.4 ¹¹⁷	+21	00.0 ⁵³	10 S		22		47		09	**	**	
14	29	12.1		06.3	127	59.0 ¹¹⁶	+21	05.2 ⁵²	20		29	5	55		18	**	**	
15	44	12.3		05.5	142	29.6 ¹¹⁶		10.3 ⁵¹	30		36	6	04		28	**	**	
16	59	12.4		04.7	157	00.0 ¹¹⁴		15.2 ⁴⁹	35		38		08		34	0	00	
17	74	12.6	+12	03.8	171	30.5 ¹¹⁵	+21	20.1 ⁴⁹	40	5	41	6	13	6	41	0	12	
18	89	12.7	+12	03.0	186	00.9 ¹¹⁴	+21	24.9 ⁴⁸	45	5	44	6	18	6	48	0	27	
19	104	12.9		02.2	200	31.2 ¹¹³		29.6 ⁴⁷	50		47		24	6	58	45	62	
20	119	13.1		01.3	215	01.4 ¹¹²		34.2 ⁴⁶	52		48		27	7	02	0	53	
21	134	13.2	+12	00.5	229	31.6 ¹¹²		38.7 ⁴⁵	54		49		30		06	1	03	
22	149	13.4	+11	59.7	244	01.8 ¹¹²		43.1 ⁴⁴	56		50		33		12	14	67	
23	164	13.5		58.8	258	31.9 ¹¹¹		47.4 ⁴³	58		51		36		17	26	70	
24	179	13.7	+11	58.0	273	01.9 ¹¹⁰	+21	51.6 ⁴²	60 S	5	52	6	40	7	24	1	41	
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 2 ^h 03 ^m 8		Mag: -4.0 PMG: 12 ^h 10 ^m				Mag: +1.4 PMG: 8 ^h 54 ^m				Mag: -2.6 PMG: 4 ^h 36 ^m				Mag: +0.9 PMG: 14 ^h 57 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	328	58.4	177	29.7	+13	08.4	226	16.9	+23	28.7	290	44.6	+13	36.1	135	07.5	-3	24.8
1	344	00.9	192	29.2		07.4	241	17.6		28.6	305	47.0		36.1	150	09.8		24.9
2	359	03.3	207	28.6		06.3	256	18.3		28.5	320	49.3		36.1	165	12.0		25.0
3	14	05.8	222	28.1		05.3	271	19.0		28.4	335	51.7		36.1	180	14.2		25.1
4	29	08.3	237	27.6		04.2	286	19.7		28.2	350	54.1		36.1	195	16.5		25.2
5	44	10.7	252	27.1	+13	03.2	301	20.4	+23	28.1	5	56.5	+13	36.2	210	18.7	-3	25.3
6	59	13.2	267	26.6	+13	02.1	316	21.1	+23	28.0	20	58.9	+13	36.2	225	21.0	-3	25.4
7	74	15.7	282	26.0	+13	01.0	331	21.8		27.9	36	01.3		36.2	240	23.2		25.5
8	89	18.1	297	25.5	+13	00.0	346	22.5		27.8	51	03.7		36.2	255	25.5		25.6
9	104	20.6	312	25.0	+12	58.9	1	23.2		27.7	66	06.0		36.2	270	27.7		25.7
10	119	23.1	327	24.5		57.9	16	23.9		27.6	81	08.4		36.2	285	30.0		25.8
11	134	25.5	342	24.0	+12	56.8	31	24.6	+23	27.5	96	10.8	+13	36.2	300	32.2	-3	25.9
12	149	28.0	357	23.5	+12	55.7	46	25.3	+23	27.3	111	13.2	+13	36.3	315	34.4	-3	26.0
13	164	30.5	12	22.9		54.7	61	26.0		27.2	126	15.6		36.3	330	36.7		26.1
14	179	32.9	27	22.4		53.6	76	26.7		27.1	141	18.0		36.3	345	38.9		26.2
15	194	35.4	42	21.9		52.6	91	27.4		27.0	156	20.4		36.3	0	41.2		26.3
16	209	37.8	57	21.4		51.5	106	28.1		26.9	171	22.8		36.3	15	43.4		26.4
17	224	40.3	72	20.9	+12	50.4	121	28.8	+23	26.8	186	25.2	+13	36.3	30	45.7	-3	26.5
18	239	42.8	87	20.4	+12	49.4	136	29.5	+23	26.7	201	27.6	+13	36.3	45	47.9	-3	26.6
19	254	45.2	102	19.8		48.3	151	30.2		26.5	216	29.9		36.4	60	50.1		26.7
20	269	47.7	117	19.3		47.2	166	30.9		26.4	231	32.3		36.4	75	52.4		26.8
21	284	50.2	132	18.8		46.2	181	31.6		26.3	246	34.7		36.4	90	54.6		26.9
22	299	52.6	147	18.3		45.1	196	32.3		26.2	261	37.1		36.4	105	56.9		27.0
23	314	55.1	162	17.8		44.0	211	33.0		26.1	276	39.5		36.4	120	59.1		27.1
24	329	57.6	177	17.3	+12	43.0	226	33.7	+23	26.0	291	41.9	+13	36.4	136	01.3	-3	27.2
Dif	—		-5		-11		+7		-1		+24		0		+22		-	

UT	SOL		☾ LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15°8		Edad: 22 ^d 2	PHE { 4 ^h : 55°1 12 ^h : 55°3 20 ^h : 55°5	SD: 15°0	PMG: 6 ^h 00 ^m			R°: 51 ^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	179	13.7	+11 58.0	273	01.9	+21 51.6	40	60 N	19 34	20 22	21 29	21 24 52	15 24 57	
1	194	13.8	57.2	287	31.9 ¹¹⁰	55.6	40	58	27	12	21 11	43 51	15 05 57	
2	209	14.0	56.3	302	01.8 ¹⁰⁹	+21 59.6	40	56	21	20 02	20 56	21 58 52	14 50 56	
3	224	14.1	55.5	316	31.6 ¹⁰⁸	+22 03.5	39	54	15	19 54	44	22 12 52	37 56	
4	239	14.3	54.7	331	01.4 ¹⁰⁸	07.3	38	52	10	47	33	23 52	26 55	
5	254	14.5	+11 53.8	345	31.2 ¹⁰⁸	+22 10.9	36	50	19 06	19 40	20 24	22 33 53	14 15 56	
6	269	14.6	+11 53.0	0	00.9 ¹⁰⁷	+22 14.5	36	45	18 56	19 27	20 05	22 55 53	13 54 55	
7	284	14.8	52.1	14	30.5 ¹⁰⁶	18.0	35	40	47	16	19 50	23 13 52	37 54	
8	299	14.9	51.3	29	00.1 ¹⁰⁶	21.3	33	35	40	19 07	38	27 53	22 54	
9	314	15.1	50.5	43	29.6 ¹⁰⁵	24.5	32	30	34	18 59	28	23 40 53	13 10 53	
10	329	15.2	49.6	57	59.0 ¹⁰⁴	27.7	32	20	24	46	13	*** ** *	12 48 53	
11	344	15.4	+11 48.8	72	28.5 ¹⁰⁵	+22 30.7	30	10 N	18 15	18 36	19 01	*** ** *	12 30 52	
12	359	15.6	+11 47.9	86	57.8 ¹⁰³	+22 33.6	29	0	18 06	18 27	18 52	*** ** *	12 12 52	
13	14	15.7	47.1	101	27.1 ¹⁰³	36.4	28	10 S	17 58	19	44	0 05 52	11 55 51	
14	29	15.9	46.3	115	56.3 ¹⁰²	39.1	27	20	49	12	38	23 53	36 51	
15	44	16.0	45.4	130	25.5 ¹⁰²	41.7	26	30	39	18 04	32	44 54	15 50	
16	59	16.2	44.6	144	54.7 ¹⁰²	44.1	24	35	34	17 59	29	0 56 55	11 02 50	
17	74	16.4	+11 43.7	159	23.8 ¹⁰¹	+22 46.5	24	40	17 27	17 55	18 27	1 10 56	10 48 49	
18	89	16.5	+11 42.9	173	52.8 ¹⁰⁰	+22 48.7	22	45	17 20	17 50	18 24	1 27 56	10 31 48	
19	104	16.7	42.1	188	21.8 ¹⁰⁰	50.9	22	50	11	44	22	47 58	10 09 48	
20	119	16.8	41.2	202	50.7 ⁹⁹	52.9	20	52	07	42	21	1 57 59	9 59 47	
21	134	17.0	40.4	217	19.6 ⁹⁹	54.8	19	54	17 03	39	20	2 08 60	48 46	
22	149	17.2	39.5	231	48.4 ⁹⁸	56.6	18	56	16 58	36	20	21 61	35 45	
23	164	17.3	38.7	246	17.2 ⁹⁸	58.2	16	58	52	33	19	36 62	20 44	
24	179	17.5	+11 37.9	260	45.9 ⁹⁷	+22 59.8	16	60 S	16 46	17 29	18 18	2 53 64	9 02 43	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO		
	PMG: 1 ^h 59 ^m 8		Mag: -4.0 PMG: 12 ^h 11 ^m		Mag: +1.4 PMG: 8 ^h 53 ^m		Mag: -2.6 PMG: 4 ^h 32 ^m		Mag: +0.9 PMG: 14 ^h 54 ^m		
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	
0	329	57.6	177	17.3	+12 43.0	226 33.7	+23 26.0	291 41.9	+13 36.4	136 01.3	-3 27.2
1	345	00.0	192	16.8	41.9	241 34.4	25.9	306 44.3	36.4	151 03.6	27.3
2	0	02.5	207	16.3	40.8	256 35.1	25.7	321 46.7	36.5	166 05.8	27.4
3	15	05.0	222	15.7	39.7	271 35.8	25.6	336 49.1	36.5	181 08.1	27.5
4	30	07.4	237	15.2	38.7	286 36.5	25.5	351 51.5	36.5	196 10.3	27.6
5	45	09.9	252	14.7	+12 37.6	301 37.2	+23 25.4	6 53.9	+13 36.5	211 12.6	-3 27.7
6	60	12.3	267	14.2	+12 36.5	316 37.9	+23 25.3	21 56.3	+13 36.5	226 14.8	-3 27.8
7	75	14.8	282	13.7	35.5	331 38.6	25.1	36 58.7	36.5	241 17.0	27.9
8	90	17.3	297	13.2	34.4	346 39.3	25.0	52 01.1	36.5	256 19.3	28.0
9	105	19.7	312	12.7	33.3	1 40.0	24.9	67 03.5	36.5	271 21.5	28.1
10	120	22.2	327	12.2	32.2	16 40.7	24.8	82 05.9	36.6	286 23.8	28.2
11	135	24.7	342	11.7	+12 31.2	31 41.4	+23 24.7	97 08.3	+13 36.6	301 26.0	-3 28.3
12	150	27.1	357	11.2	+12 30.1	46 42.1	+23 24.5	112 10.6	+13 36.6	316 28.2	-3 28.4
13	165	29.6	12 10.7	29.0	61 42.8	24.4	24.4	127 13.0	36.6	331 30.5	28.5
14	180	32.1	27 10.1	27.9	76 43.5	24.3	24.3	142 15.4	36.6	346 32.7	28.6
15	195	34.5	42 09.6	26.9	91 44.2	24.2	24.2	157 17.8	36.6	1 35.0	28.7
16	210	37.0	57 09.1	25.8	106 44.9	24.1	24.1	172 20.2	36.6	16 37.2	28.8
17	225	39.4	72 08.6	+12 24.7	121 45.6	+23 23.9	23.9	187 22.6	+13 36.6	31 39.4	-3 28.9
18	240	41.9	87 08.1	+12 23.6	136 46.3	+23 23.8	23.8	202 25.0	+13 36.7	46 41.7	-3 29.0
19	255	44.4	102 07.6	22.5	151 47.0	23.7	23.7	217 27.4	36.7	61 43.9	29.1
20	270	46.8	117 07.1	21.5	166 47.7	23.6	23.6	232 29.8	36.7	76 46.2	29.2
21	285	49.3	132 06.6	20.4	181 48.4	23.4	23.4	247 32.2	36.7	91 48.4	29.3
22	300	51.8	147 06.1	19.3	196 49.1	23.3	23.3	262 34.6	36.7	106 50.6	29.4
23	315	54.2	162 05.6	18.2	211 49.8	23.2	23.2	277 37.0	36.7	121 52.9	29.5
24	330	56.7	177 05.1	+12 17.1	226 50.5	+23 23.1	23.1	292 39.4	+13 36.7	136 55.1	-3 29.6
Dif	—		-5	-11	+7	-1		+24	0	+22	-1

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15/8 PMG: 12 ^h 02 ^m 7			Edad: 23 ^d 2 PHE { 4 ^h : 55/7 12 ^h : 56/0 20 ^h : 56/2 PMG: 6 ^h 51 ^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	17.5	+11	37.9	260	45.9	+22 59.8	60 N	2 38	3 44	4 32	22 16 68	16 21 43		
1	194	17.6		37.0	275	14.6	+23 01.2	58	2 56	3 55	39	34 67	16 02 45		
2	209	17.8		36.2	289	43.2	02.5	56	3 10	4 04	46	22 50 65	15 46 46		
3	224	18.0		35.3	304	11.8	03.7	54	23	12	51	23 04 64	33 4		
4	239	18.1		34.5	318	40.4	04.8	52	33	20	4 56	15 64	21 48		
5	254	18.3	+11	33.6	333	08.9	+23 05.7	50	3 43	4 26	5 01	23 26 62	15 11 48		
6	269	18.4	+11	32.8	347	37.3	+23 06.6	45	4 01	4 39	5 11	23 48 61	14 49 49		
7	284	18.6		31.9	2	05.7	07.3	40	16	50	19	** ** *	31 50		
8	299	18.8		31.1	16	34.1	07.9	35	28	4 59	26	** ** *	16 51		
9	314	18.9		30.2	31	02.4	08.3	30	38	5 07	32	** ** *	14 03 52		
10	329	19.1		29.4	45	30.7	08.7	20	4 53	19	42	0 02 53	13 41 52		
11	344	19.2	+11	28.6	59	58.9	+23 08.9	10 N	5 05	5 30	5 51	0 21 53	13 22 53		
12	359	19.4	+11	27.7	74	27.1	+23 09.0	0	5 14	5 38	5 59	0 39 53	13 04 54		
13	14	19.6		26.9	88	55.2	09.0	10 S	21	46	6 08	0 57 52	12 46 54		
14	29	19.7		26.0	103	23.4	08.8	20	28	5 54	16	1 16 52	27 54		
15	44	19.9		25.2	117	51.4	08.6	2	30	34	6 02	38 52	12 05 55		
16	59	20.1		24.3	132	19.5	08.2	4	35	36	06	1 51 52	11 52 55		
17	74	20.2	+11	23.5	146	47.5	+23 07.7	40	5 39	6 10	6 38	2 06 52	11 37 56		
18	89	20.4	+11	22.6	161	15.4	+23 07.0	45	5 41	6 15	6 45	2 23 53	11 19 56		
19	104	20.6		21.8	175	43.3	06.3	50	43	21	54	45 53	10 57 57		
20	119	20.7		20.9	190	11.2	05.4	52	44	23	6 58	2 56 52	46 58		
21	134	20.9		20.1	204	39.1	04.3	54	44	26	7 02	3 08 52	34 58		
22	149	21.0		19.2	219	06.9	03.2	56	45	28	07	22 51	20 59		
23	164	21.2		18.4	233	34.7	01.9	58	46	32	12	38 51	10 04 59		
24	179	21.4	+11	17.5	248	02.5	+23 00.5	60 S	5 47	6 35	7 18	3 57 50	9 45 60		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 1 ^h 55 ^m 9		Mag: -4.0 PMG: 12 ^h 12 ^m		Mag: +1.4 PMG: 8 ^h 52 ^m		Mag: -2.6 PMG: 4 ^h 29 ^m		Mag: +0.9 PMG: 14 ^h 50 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	330	56.7	177	05.1	226	50.5	292	39.4	136	55.1
1	345	59.2	192	04.6	241	51.2	307	41.8	151	57.4
2	1	01.6	207	04.1	256	51.9	322	44.2	166	59.6
3	16	04.1	222	03.6	271	52.6	337	46.6	182	01.8
4	31	06.6	237	03.1	286	53.4	352	49.0	197	04.1
5	46	09.0	252	02.6	301	54.1	7	51.4	212	06.3
6	61	11.5	267	02.1	316	54.8	22	53.8	227	08.6
7	76	13.9	282	01.6	331	55.5	37	56.3	242	10.8
8	91	16.4	297	01.1	346	56.2	52	58.7	257	13.0
9	106	18.9	312	00.6	1	56.9	68	01.1	272	15.3
10	121	21.3	327	00.1	16	57.6	83	03.5	287	17.5
11	136	23.8	341	59.6	31	58.3	98	05.9	302	19.8
12	151	26.3	356	59.1	46	59.0	113	08.3	317	22.0
13	166	28.7	11	58.6	61	59.7	128	10.7	332	24.2
14	181	31.2	26	58.1	77	00.4	143	13.1	347	26.5
15	196	33.7	41	57.6	92	01.1	158	15.5	2	28.7
16	211	36.1	56	57.1	107	01.8	173	17.9	17	31.0
17	226	38.6	71	56.6	122	02.5	188	20.3	32	33.2
18	241	41.1	86	56.1	137	03.2	203	22.7	47	35.4
19	256	43.5	101	55.6	152	04.0	218	25.1	62	37.7
20	271	46.0	116	55.1	167	04.7	233	27.5	77	39.9
21	286	48.4	131	54.6	182	05.4	248	29.9	92	42.1
22	301	50.9	146	54.1	197	06.1	263	32.3	107	44.4
23	316	53.4	161	53.6	212	06.8	278	34.7	122	46.6
24	331	55.8	176	53.1	227	07.5	293	37.2	137	48.9
Dif	—		-5	-11	+7	-1	+24	0	+22	-1

UT	SOL				☾ LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna			Puesta de Luna		
	SD: 15'8 PMG: 12 ^h 02 ^m 4				Edad: 24 ^d 2 PHE { 4 ^h : 56'5 12 ^h : 56'8 20 ^h : 57'1 SD: 15'4 PMG: 7 ^h 45 ^m R°: 54 ^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	179	21.4	+11	17.5	248	02.5	+23	00.5	60 N	19 28	20 16	21 20	23 24 83		17 04 30				
1	194	21.5		16.7	262	30.2	+22	59.0	58	22	20 06	21 03	41 79		16 47 33				
2	209	21.7		15.8	276	57.9		57.3	56	16	19 57	20 50	23 55 77		32 36				
3	224	21.9		15.0	291	25.5		55.5	54	11	49	38	** ** *		20 38				
4	239	22.0		14.1	305	53.2		53.6	52	06	42	28	** ** *		16 09 39				
5	254	22.2	+11	13.3	320	20.8	+22	51.6	50	19 01	19 36	20 19	** ** *		15 59 41				
6	269	22.4	+11	12.4	334	48.4	+22	49.4	45	18 52	19 23	20 01	** ** *		15 38 43				
7	284	22.5		11.6	349	15.9		47.1	40	45	13	19 47	0 05 60		21 46				
8	299	22.7		10.7	3	43.5		44.6	35	38	19 04	35	20 59		15 07 47				
9	314	22.9		09.8	18	11.0		42.1	30	32	18 57	26	33 58		14 55 48				
10	329	23.0		09.0	32	38.4		39.4	20	22	45	11	0 55 56		33 51				
11	344	23.2	+11	08.1	47	05.9	+22	36.6	10 N	18 14	18 35	19 00	1 14 55		14 15 52				
12	359	23.4	+11	07.3	61	33.3	+22	33.6	0	18 06	18 27	18 51	1 32 54		13 58 54				
13	14	23.5		06.4	76	00.8		30.5	10 S	17 58	19	44	1 49 53		40 56				
14	29	23.7		05.6	90	28.2		27.3	20	50	12	38	2 08 52		21 58				
15	44	23.9		04.7	104	55.5		24.0	30	40	05	33	30 51		13 00 60				
16	59	24.0		03.9	119	22.9		20.5	35	35	18 01	30	43 49		12 47 62				
17	74	24.2	+11	03.0	133	50.2	+22	16.9	40	17 29	17 57	18 28	2 58 48		12 33 62				
18	89	24.4	+11	02.2	148	17.6	+22	13.1	45	17 22	17 52	18 26	3 16 46		12 15 65				
19	104	24.5		01.3	162	44.9		09.3	50	14	47	25	38 44		11 54 67				
20	119	24.7	+11	00.4	177	12.2		05.3	52	10	45	24	3 48 43		44 68				
21	134	24.9	+10	59.6	191	39.5	+22	01.1	54	06	42	24	4 00 42		32 70				
22	149	25.0		58.7	206	06.7	+21	56.9	56	17 01	40	23	13 41		19 71				
23	164	25.2		57.9	220	34.0		52.5	58	16 56	37	23	29 39		11 03 74				
24	179	25.4	+10	57.0	235	01.2	+21	48.0	60 S	16 50	17 34	18 22	4 47 37		10 45 76				
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 1 ^h 52 ^m 0			Mag: -4.0 PMG: 12 ^h 13 ^m			Mag: +1.4 PMG: 8 ^h 51 ^m			Mag: -2.6 PMG: 4 ^h 25 ^m			Mag: +0.9 PMG: 14 ^h 47 ^m						
	hG ♈		Dec	hG ♀		Dec	hG ♂		Dec	hG ♃		Dec	hG ♄		Dec				
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'			
0	331	55.8	176	53.1	+11	51.0	227	07.5	+23	20.0	293	37.2	+13	36.9	137	48.9			
1	346	58.3	191	52.7		49.9	242	08.2		19.9	308	39.6		37.0	152	51.1			
2	2	00.8	206	52.2		48.8	257	08.9		19.7	323	42.0		37.0	167	53.3			
3	17	03.2	221	51.7		47.7	272	09.6		19.6	338	44.4		37.0	182	55.6			
4	32	05.7	236	51.2		46.6	287	10.3		19.5	353	46.8		37.0	197	57.8			
5	47	08.2	251	50.7	+11	45.5	302	11.0	+23	19.4	8	49.2	+13	37.0	213	00.0			
6	62	10.6	266	50.2	+11	44.4	317	11.7	+23	19.2	23	51.6	+13	37.0	228	02.3			
7	77	13.1	281	49.7		43.3	332	12.5		19.1	38	54.0		37.0	243	04.5			
8	92	15.6	296	49.2		42.2	347	13.2		19.0	53	56.4		37.0	258	06.8			
9	107	18.0	311	48.7		41.1	2	13.9		18.8	68	58.9		37.0	273	09.0			
10	122	20.5	326	48.2		40.0	17	14.6		18.7	84	01.3		37.0	288	11.2			
11	137	22.9	341	47.7	+11	38.9	32	15.3	+23	18.5	99	03.7	+13	37.0	303	13.5			
12	152	25.4	356	47.3	+11	37.8	47	16.0	+23	18.4	114	06.1	+13	37.0	318	15.7			
13	167	27.9	11	46.8		36.7	62	16.7		18.3	129	08.5		37.0	333	17.9			
14	182	30.3	26	46.3		35.6	77	17.4		18.1	144	10.9		37.0	348	20.2			
15	197	32.8	41	45.8		34.4	92	18.1		18.0	159	13.3		37.1	3	22.4			
16	212	35.3	56	45.3		33.3	107	18.9		17.9	174	15.7		37.1	18	24.6			
17	227	37.7	71	44.8	+11	32.2	122	19.6	+23	17.7	189	18.2	+13	37.1	33	26.9			
18	242	40.2	86	44.3	+11	31.1	137	20.3	+23	17.6	204	20.6	+13	37.1	48	29.1			
19	257	42.7	101	43.8		30.0	152	21.0		17.5	219	23.0		37.1	63	31.4			
20	272	45.1	116	43.4		28.9	167	21.7		17.3	234	25.4		37.1	78	33.6			
21	287	47.6	131	42.9		27.8	182	22.4		17.2	249	27.8		37.1	93	35.8			
22	302	50.0	146	42.4		26.7	197	23.1		17.0	264	30.2		37.1	108	38.1			
23	317	52.5	161	41.9		25.6	212	23.8		16.9	279	32.7		37.1	123	40.3			
24	332	55.0	176	41.4	+11	24.5	227	24.6	+23	16.8	294	35.1	+13	37.1	138	42.5			
Dif	—		-5		-11		+7		-1		+24		0		+22		-1		

UT	SOL			 LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8			Edad: 25 ^d 2 PHE { 4 ^h : 57 ^m 4 12 ^h : 57 ^m 7 20 ^h : 58 ^m 0												
	PMG: 12 ^h 02 ^m 2			SD: 15 ^h 6 PMG: 8 ^h 39 ^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	25.4	+10 57.0	235	01.2	+21 48.0	47	60 N	2 45	3 50	4 37	** ** *		17 34	22	
1	194	25.6	56.1	249	28.5	83	43.3	58	3 02	4 00	44	** ** *		20 25		
2	209	25.7	55.3	263	55.7	82	38.5	56	16	09	50	** ** *		17 08	28	
3	224	25.9	54.4	278	22.9	82	33.6	54	27	16	4 55	0 08	74	16 58	30	
4	239	26.1	53.6	292	50.1	82	28.6	52	38	23	5 00	19	72	48	32	
5	254	26.2	+10 52.7	307	17.3	82	+21 23.4	50	3 46	4 29	5 04	0 28	71	16 40	34	
6	269	26.4	+10 51.9	321	44.5	82	+21 18.1	53	4 04	4 42	5 13	0 49	68	16 21	38	
7	284	26.6	51.0	336	11.7	82	12.7	54	18	4 52	21	1 05	66	16 07	40	
8	299	26.7	50.1	350	38.9	82	07.1	56	30	5 01	27	19	63	15 54	43	
9	314	26.9	49.3	5	06.1	82	+21 01.4	57	30	39	08	33	31	62	43	45
10	329	27.1	48.4	19	33.2	81	+20 55.6	58	20	4 54	20	43	1 51	60	24	49
11	344	27.3	+10 47.5	34	00.4	82	+20 49.6	60	10 N	5 05	5 30	5 51	2 09	57	15 07	52
12	359	27.4	+10 46.7	48	27.6	82	+20 43.6	60	0	5 13	5 38	5 59	2 26	54	14 52	54
13	14	27.6	45.8	62	54.8	82	37.4	62	10 S	21	45	6 07	2 42	53	36	57
14	29	27.8	45.0	77	21.9	81	31.0	64	20	26	52	15	3 00	50	19	60
15	44	27.9	44.1	91	49.1	82	24.6	64	30	32	5 59	24	21	46	14 00	63
16	59	28.1	43.2	106	16.3	82	18.0	66	35	34	6 03	29	32	46	13 49	65
17	74	28.3	+10 42.4	120	43.4	81	+20 11.3	67	40	5 36	6 07	6 35	3 46	43	13 35	68
18	89	28.5	+10 41.5	135	10.6	82	+20 04.4	69	45	5 38	6 12	6 42	4 02	41	13 20	71
19	104	28.6	40.6	149	37.8	82	+19 57.5	69	50	39	17	50	22	37	13 01	74
20	119	28.8	39.8	164	05.0	82	50.4	71	52	40	19	53	31	36	12 52	76
21	134	29.0	38.9	178	32.2	82	43.1	73	54	40	21	6 57	42	34	42	78
22	149	29.1	38.1	192	59.4	82	35.8	73	56	41	24	7 02	4 54	31	30	81
23	164	29.3	37.2	207	26.6	82	28.3	75	58	41	27	07	5 08	28	17	83
24	179	29.5	+10 36.3	221	53.8	82	+19 20.7	76	60 S	5 41	6 30	7 13	5 24	25	12 01	87

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 1 ^h 48 ^m 0		Mag: -4.0 PMG: 12 ^h 14 ^m			Mag: +1.4 PMG: 8 ^h 50 ^m			Mag: -2.7 PMG: 4 ^h 21 ^m			Mag: +0.9 PMG: 14 ^h 43 ^m		
	hG ♈		hG ♀ Dec			hG ♂ Dec			hG ♃ Dec			hG ♄ Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	332	55.0	176	41.4	+11 24.5	227	24.6	+23 16.8	294	35.1	+13 37.1	138	42.5	-3 34.4
1	347	57.4	191	40.9	23.4	242	25.3	16.6	309	37.5	37.1	153	44.8	34.5
2	2	59.9	206	40.4	22.3	257	26.0	16.5	324	39.9	37.1	168	47.0	34.6
3	18	02.4	221	40.0	21.1	272	26.7	16.4	339	42.3	37.1	183	49.2	34.7
4	33	04.8	236	39.5	20.0	287	27.4	16.2	354	44.7	37.1	198	51.5	34.8
5	48	07.3	251	39.0	+11 18.9	302	28.1	+23 16.1	9	47.2	+13 37.1	213	53.7	-3 34.9
6	63	09.8	266	38.5	+11 17.8	317	28.8	+23 15.9	24	49.6	+13 37.1	228	55.9	-3 35.0
7	78	12.2	281	38.0	16.7	332	29.6	15.8	39	52.0	37.1	243	58.2	35.1
8	93	14.7	296	37.6	15.6	347	30.3	15.7	54	54.4	37.1	259	00.4	35.2
9	108	17.2	311	37.1	14.5	2	31.0	15.5	69	56.8	37.2	274	02.6	35.3
10	123	19.6	326	36.6	13.3	17	31.7	15.4	84	59.3	37.2	289	04.9	35.4
11	138	22.1	341	36.1	+11 12.2	32	32.4	+23 15.2	100	01.7	+13 37.2	304	07.1	-3 35.5
12	153	24.5	356	35.6	+11 11.1	47	33.1	+23 15.1	115	04.1	+13 37.2	319	09.4	-3 35.6
13	168	27.0	11	35.2	10.0	62	33.9	14.9	130	06.5	37.2	334	11.6	35.7
14	183	29.5	26	34.7	08.9	77	34.6	14.8	145	08.9	37.2	349	13.8	35.9
15	198	31.9	41	34.2	07.8	92	35.3	14.7	160	11.4	37.2	4	16.1	36.0
16	213	34.4	56	33.7	06.6	107	36.0	14.5	175	13.8	37.2	19	18.3	36.1
17	228	36.9	71	33.2	+11 05.5	122	36.7	+23 14.4	190	16.2	+13 37.2	34	20.5	-3 36.2
18	243	39.3	86	32.8	+11 04.4	137	37.4	+23 14.2	205	18.6	+13 37.2	49	22.8	-3 36.3
19	258	41.8	101	32.3	03.3	152	38.2	14.1	220	21.1	37.2	64	25.0	36.4
20	273	44.3	116	31.8	02.2	167	38.9	13.9	235	23.5	37.2	79	27.2	36.5
21	288	46.7	131	31.3	+11 01.0	182	39.6	13.8	250	25.9	37.2	94	29.5	36.6
22	303	49.2	146	30.9	+10 59.9	197	40.3	13.7	265	28.3	37.2	109	31.7	36.7
23	318	51.7	161	30.4	58.8	212	41.0	13.5	280	30.8	37.2	124	33.9	36.8
24	333	54.1	176	29.9	+10 57.7	227	41.7	+23 13.4	295	33.2	+13 37.2	139	36.2	-3 36.9
Dif	—		-5 -11			+7 -1			+24 0			+22 -1		

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15'8 PMG: 12 ^h 01 ^m 9			Edad: 26 ^d 2 PHE { 4 ^h : 58'3 12 ^h : 58'6 20 ^h : 58'9 SD: 15'8 PMG: 9 ^h 33 ^m R°: 54 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m	m	h m	m
0	179	29.5	+10	36.3	221	53.8	+19	20.7	60 N	19 23	20 09	21 12	0 47 91	17 56 15	
1	194	29.7		35.5	236	21.0		13.0	58	16	20 00	20 56	1 00 88	45 19	
2	209	29.8		34.6	250	48.2	+19	05.2	56	11	19 51	43	12 84	36 22	
3	224	30.0		33.7	265	15.4	+18	57.2	54	06	44	32	22 82	28 24	
4	239	30.2		32.9	279	42.6		49.2	52	19 01	38	22	31 79	20 27	
5	254	30.4	+10	32.0	294	09.9	+18	41.0	50	18 57	19 32	20 14	1 39 77	17 14 29	
6	269	30.5	+10	31.1	308	37.1	+18	32.6	45	18 49	19 19	19 57	1 57 73	16 59 33	
7	284	30.7		30.3	323	04.4		24.2	40	42	10	43	2 11 69	47 37	
8	299	30.9		29.4	337	31.7		15.6	35	35	19 01	33	22 67	37 40	
9	314	31.1		28.5	351	59.0	+18	07.0	30	30	18 55	24	33 64	28 42	
10	329	31.2		27.7	6	26.3	+17	58.2	20	21	43	19 10	2 51 60	16 13 46	
11	344	31.4	+10	26.8	20	53.6	+17	49.3	10 N	18 13	18 34	18 59	3 06 57	15 59 50	
12	359	31.6	+10	25.9	35	20.9	+17	40.2	0	18 05	18 26	18 51	3 20 54	15 46 54	
13	14	31.8		25.0	49	48.2		31.1	10 S	17 58	19	44	35 51	33 58	
14	29	31.9		24.2	64	15.6		21.8	20	50	13	38	3 50 48	19 61	
15	44	32.1		23.3	78	42.9		12.5	30	42	06	34	4 07 44	15 03 66	
16	59	32.3		22.4	93	10.3	+17	03.0	35	37	18 02	32	18 41	14 54 68	
17	74	32.5	+10	21.6	107	37.7	+16	53.4	40	17 31	17 59	18 30	4 29 39	14 43 71	
18	89	32.6	+10	20.7	122	05.1	+16	43.7	45	17 25	17 54	18 29	4 43 35	14 31 74	
19	104	32.8		19.8	136	32.5		33.8	50	17	50	27	4 59 32	15 79	
20	119	33.0		19.0	150	59.9		23.9	52	13	48	27	5 07 29	08 81	
21	134	33.2		18.1	165	27.4		13.9	54	09	46	27	16 27	14 00 84	
22	149	33.3		17.2	179	54.8	+16	03.7	56	05	43	26	25 25	13 51 86	
23	164	33.5		16.3	194	22.3	+15	53.5	58	17 00	41	26	36 22	40 90	
24	179	33.7	+10	15.5	208	49.8	+15	43.1	60 S	16 55	17 38	18 26	5 49 18	13 28 94	
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG: 1 ^h 44 ^m 1		Mag: -4.0 PMG: 12 ^h 14 ^m		Mag: +1.4 PMG: 8 ^h 49 ^m		Mag: -2.7 PMG: 4 ^h 17 ^m		Mag: +0.9 PMG: 14 ^h 39 ^m						
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄						
h	°	'	°	'	°	'	°	'	°	'					
0	333	54.1	176	29.9	227	41.7	295	33.2	139	36.2					
1	348	56.6	191	29.4	242	42.5	310	35.6	154	38.4					
2	3	59.0	206	28.9	257	43.2	325	38.0	169	40.6					
3	19	01.5	221	28.5	272	43.9	340	40.5	184	42.9					
4	34	04.0	236	28.0	287	44.6	355	42.9	199	45.1					
5	49	06.4	251	27.5	302	45.3	10	45.3	214	47.3					
6	64	08.9	266	27.1	317	46.1	25	47.7	229	49.6					
7	79	11.4	281	26.6	332	46.8	40	50.2	244	51.8					
8	94	13.8	296	26.1	347	47.5	55	52.6	259	54.0					
9	109	16.3	311	25.6	2	48.2	70	55.0	274	56.3					
10	124	18.8	326	25.2	17	48.9	85	57.5	289	58.5					
11	139	21.2	341	24.7	32	49.7	100	59.9	305	00.7					
12	154	23.7	356	24.2	47	50.4	116	02.3	320	03.0					
13	169	26.2	11	23.8	62	51.1	131	04.7	335	05.2					
14	184	28.6	26	23.3	77	51.8	146	07.2	350	07.4					
15	199	31.1	41	22.8	92	52.5	161	09.6	5	09.7					
16	214	33.5	56	22.3	107	53.3	176	12.0	20	11.9					
17	229	36.0	71	21.9	122	54.0	191	14.5	35	14.1					
18	244	38.5	86	21.4	137	54.7	206	16.9	50	16.3					
19	259	40.9	101	20.9	152	55.4	221	19.3	65	18.6					
20	274	43.4	116	20.5	167	56.1	236	21.8	80	20.8					
21	289	45.9	131	20.0	182	56.9	251	24.2	95	23.0					
22	304	48.3	146	19.5	197	57.6	266	26.6	110	25.3					
23	319	50.8	161	19.1	212	58.3	281	29.1	125	27.5					
24	334	53.3	176	18.6	227	59.0	296	31.5	140	29.7					
Dif	—		-5		-11		+24		+22						

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 6				Edad: 27 ^d 2 PHE { 4 ^h : 59 ^m 1 12 ^h : 59 ^m 4 20 ^h : 59 ^m 6 R°: 54 ^m													
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m
0	179	33.7	+10	15.5	208	49.8	+15	43.1	60 N	2	53	3	55	4	42	2	18	95
1	194	33.9		14.6	223	17.3 85		32.6 105	58	3	08	4	05	48		28	91	18 04 16
2	209	34.1		13.7	237	44.8 85		22.1 105	56	21	13	54		36	88	17	58	18
3	224	34.2		12.8	252	12.4 86		11.4 107	54	32	20	4	58	44	85	52	22	
4	239	34.4		12.0	266	40.0 86	+15	00.6 108	52	42	27	5	03	50	83	47	24	
5	254	34.6	+10	11.1	281	07.5 85	+14	49.7 109	50	3	50	4	32	5	07	2	56	81
6	269	34.8	+10	10.2	295	35.1 86	+14	38.8 109	45	4	07	4	45	5	15	3	10	76
7	284	34.9		09.4	310	02.7 86		27.7 111	40	21	4	54	23	20	72	24	34	
8	299	35.1		08.5	324	30.4 87		16.5 112	35	31	5	02	29	29	69	17	37	
9	314	35.3		07.6	338	58.0 86	+14	05.2 113	30	40	09	34	37	67	17	10	40	
10	329	35.5		06.7	353	25.7 87	+13	53.9 113	20	4	54	21	43	3	51	62	16	59
11	344	35.7	+10	05.9	7	53.3 86	+13	42.4 115	10 N	5	05	5	30	5	51	4	03	58
12	359	35.8	+10	05.0	22	21.0 87	+13	30.8 116	0	5	13	5	37	5	58	4	14	54
13	14	36.0		04.1	36	48.7 87		19.2 116	10 S	20	44	6	05	26	49	31	57	
14	29	36.2		03.2	51	16.5 88	+13	07.4 118	20	25	51	13		38	45	20	62	
15	44	36.4		02.4	65	44.2 87	+12	55.6 118	30	29	5	57	22	51	41	09	66	
16	59	36.6		01.5	80	12.0 88		43.7 119	35	31	6	01	26	4	59	38	16	02
17	74	36.7	+10	00.6	94	39.7 87	+12	31.7 120	40	5	33	6	04	6	32	5	08	35
18	89	36.9	+9	59.7	109	07.5 88	+12	19.6 121	45	5	34	6	08	6	38	5	18	32
19	104	37.1		58.8	123	35.3 88	+12	07.4 122	50	35	13	46		31	27	34	82	
20	119	37.3		58.0	138	03.2 89	+11	55.1 123	52	36	15	49		36	25	29	84	
21	134	37.5		57.1	152	31.0 88		42.8 123	54	36	17	53		43	22	24	86	
22	149	37.6		56.2	166	58.9 89		30.4 124	56	36	19	6	57	50	20	17	90	
23	164	37.8		55.3	181	26.7 88		17.9 125	58	36	22	7	02	5	58	17	10	93
24	179	38.0	+9	54.5	195	54.6 89	+11	05.3 126	60 S	5	36	6	24	7	07	6	07	13
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO					
	PMG 1 ^h 40 ^m 2			Mag: -4.0 PMG: 12 ^h 15 ^m			Mag: +1.4 PMG: 8 ^h 48 ^m			Mag: -2.7 PMG: 4 ^h 13 ^m			Mag: +0.9 PMG: 14 ^h 36 ^m					
	hG ♈		Dec	hG ♀		Dec	hG ♂		Dec	hG ♃		Dec	hG ♄		Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	334	53.3	176	18.6	+10	30.6	227	59.0	+23	09.8	296	31.5	+13	37.3	140	29.7	-3	39.3
1	349	55.7	191	18.1		29.4	242	59.8		09.6	311	33.9		37.3	155	32.0		39.4
2	4	58.2	206	17.7		28.3	258	00.5		09.5	326	36.4		37.3	170	34.2		39.5
3	20	00.6	221	17.2		27.2	273	01.2		09.3	341	38.8		37.3	185	36.4		39.7
4	35	03.1	236	16.7		26.0	288	01.9		09.2	356	41.2		37.3	200	38.7		39.8
5	50	05.6	251	16.3	+10	24.9	303	02.7	+23	09.0	11	43.7	+13	37.3	215	40.9	-3	39.9
6	65	08.0	266	15.8	+10	23.8	318	03.4	+23	08.9	26	46.1	+13	37.3	230	43.1	-3	40.0
7	80	10.5	281	15.3		22.6	333	04.1		08.7	41	48.5		37.3	245	45.4		40.1
8	95	13.0	296	14.9		21.5	348	04.8		08.5	56	51.0		37.3	260	47.6		40.2
9	110	15.4	311	14.4		20.3	3	05.5		08.4	71	53.4		37.3	275	49.8		40.3
10	125	17.9	326	13.9		19.2	18	06.3		08.2	86	55.8		37.3	290	52.0		40.4
11	140	20.4	341	13.5	+10	18.1	33	07.0	+23	08.1	101	58.3	+13	37.3	305	54.3	-3	40.5
12	155	22.8	356	13.0	+10	16.9	48	07.7	+23	07.9	117	00.7	+13	37.3	320	56.5	-3	40.6
13	170	25.3	11	12.6		15.8	63	08.5		07.8	132	03.1		37.2	335	58.7		40.7
14	185	27.8	26	12.1		14.6	78	09.2		07.6	147	05.6		37.2	351	01.0		40.8
15	200	30.2	41	11.6		13.5	93	09.9		07.5	162	08.0		37.2	6	03.2		40.9
16	215	32.7	56	11.2		12.4	108	10.6		07.3	177	10.5		37.2	21	05.4		41.0
17	230	35.1	71	10.7	+10	11.2	123	11.4	+23	07.1	192	12.9	+13	37.2	36	07.7	-3	41.1
18	245	37.6	86	10.2	+10	10.1	138	12.1	+23	07.0	207	15.3	+13	37.2	51	09.9	-3	41.2
19	260	40.1	101	09.8		08.9	153	12.8		06.8	222	17.8		37.2	66	12.1		41.3
20	275	42.5	116	09.3		07.8	168	13.5		06.7	237	20.2		37.2	81	14.3		41.4
21	290	45.0	131	08.9		06.6	183	14.3		06.5	252	22.7		37.2	96	16.6		41.5
22	305	47.5	146	08.4		05.5	198	15.0		06.3	267	25.1		37.2	111	18.8		41.6
23	320	49.9	161	08.0		04.3	213	15.7		06.2	282	27.5		37.2	126	21.0		41.7
24	335	52.4	176	07.5	+10	03.2	228	16.4	+23	06.0	297	30.0	+13	37.2	141	23.3	-3	41.8
Dif	—		-5		-11		+7		-2		+24		0		+22		-	

UT	SOL		● LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 15'8 PMG: 12 ^h 01 ^m 3		Edad: 28 ^d 2 PHE { 4 ^h : 59'9 12 ^h : 60'1 20 ^h : 60'3 R°: 52 ^m												
	hG ☉	Dec	hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	h m	h m	h m	h m	h m	m	h m	m
0	179	38.0	+9	54.5	195	54.6	+11 05.3	60 N	19 17	20 03	21 04	3 53	97	18 23	11
1	194	38.2		53.6	210	22.5	89 +10 52.6	58	11	19 54	20 49	3 59	93	20	14
2	209	38.4		52.7	224	50.4	89 39.8	56	06	46	37	4 04	90	16	17
3	224	38.5		51.8	239	18.4	90 27.0	54	19 01	39	26	09	87	13	20
4	239	38.7		50.9	253	46.3	89 14.1	52	18 57	33	17	13	85	11	21
5	254	38.9	+9	50.1	268	14.3	90 +10 01.2	50	18 53	19 27	20 09	4 17	83	18 08	24
6	269	39.1	+9	49.2	282	42.2	89 +9 48.1	45	18 45	19 16	19 53	4 26	77	18 03	28
7	284	39.3		48.3	297	10.2	90 35.0	40	38	19 06	40	32	74	17 58	32
8	299	39.5		47.4	311	38.2	90 21.9	35	33	18 59	30	38	70	54	35
9	314	39.6		46.5	326	06.3	91 +9 08.6	30	28	52	21	44	67	50	39
10	329	39.8		45.6	340	34.3	90 +8 55.3	20	19	41	19 08	4 53	61	44	44
11	344	40.0	+9	44.8	355	02.3	90 +8 41.9	10 N	18 12	18 33	18 58	5 01	57	17 38	49
12	359	40.2	+9	43.9	9	30.4	91 +8 28.5	0	18 05	18 26	18 50	5 08	53	17 33	53
13	14	40.4		43.0	23	58.4	90 15.0	10 S	17 58	19	44	15	49	28	57
14	29	40.5		42.1	38	26.5	91 +8 01.5	20	51	13	39	23	44	22	62
15	44	40.7		41.2	52	54.6	91 +7 47.8	30	43	07	35	32	39	15	68
16	59	40.9		40.4	67	22.7	91 34.2	35	38	04	33	37	36	12	70
17	74	41.1	+9	39.5	81	50.8	91 +7 20.4	40	17 33	18 00	18 32	5 43	33	17 07	74
18	89	41.3	+9	38.6	96	18.9	91 +7 06.7	45	17 27	17 57	18 31	5 50	29	17 02	78
19	104	41.5		37.7	110	47.0	91 +6 52.8	50	20	53	30	5 58	24	16 56	83
20	119	41.7		36.8	125	15.1	91 39.0	52	17	51	30	6 01	23	53	85
21	134	41.8		35.9	139	43.3	92 25.0	54	13	49	30	05	20	50	88
22	149	42.0		35.0	154	11.4	91 +6 11.1	56	09	47	30	10	17	47	90
23	164	42.2		34.2	168	39.6	92 +5 57.0	58	05	45	30	15	14	43	93
24	179	42.4	+9	33.3	183	07.7	91 +5 43.0	60 S	17 00	17 42	18 31	6 20	12	16 38	98

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO		
	PMG: 1 ^h 36 ^m 2		Mag: -3.9 PMG: 12 ^h 16 ^m		Mag: +1.4 PMG: 8 ^h 46 ^m		Mag: -2.7 PMG: 4 ^h 09 ^m		Mag: +0.9 PMG: 14 ^h 32 ^m		
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	
0	335	52.4	176	07.5	+10 03.2	228 16.4	+23 06.0	297 30.0	+13 37.2	141 23.3	-3 41.8
1	350	54.9	191	07.0	02.1	243 17.2	05.9	312 32.4	37.2	156 25.5	41.9
2	5	57.3	206	06.6	+10 00.9	258 17.9	05.7	327 34.9	37.2	171 27.7	42.0
3	20	59.8	221	06.1	+9 59.8	273 18.6	05.5	342 37.3	37.2	186 30.0	42.1
4	36	02.3	236	05.7	58.6	288 19.4	05.4	357 39.8	37.2	201 32.2	42.2
5	51	04.7	251	05.2	+9 57.5	303 20.1	+23 05.2	12 42.2	+13 37.2	216 34.4	-3 42.3
6	66	07.2	266	04.7	+9 56.3	318 20.8	+23 05.1	27 44.6	+13 37.2	231 36.6	-3 42.5
7	81	09.6	281	04.3	55.2	333 21.5	04.9	42 47.1	37.2	246 38.9	42.6
8	96	12.1	296	03.8	54.0	348 22.3	04.7	57 49.5	37.2	261 41.1	42.7
9	111	14.6	311	03.4	52.9	3 23.0	04.6	72 52.0	37.2	276 43.3	42.8
10	126	17.0	326	02.9	51.7	18 23.7	04.4	87 54.4	37.2	291 45.6	42.9
11	141	19.5	341	02.5	+9 50.6	33 24.5	+23 04.3	102 56.9	+13 37.2	306 47.8	-3 43.0
12	156	22.0	356	02.0	+9 49.4	48 25.2	+23 04.1	117 59.3	+13 37.2	321 50.0	-3 43.1
13	171	24.4	11	01.6	48.3	63 25.9	03.9	133 01.8	37.2	336 52.2	43.2
14	186	26.9	26	01.1	47.1	78 26.7	03.8	148 04.2	37.2	351 54.5	43.3
15	201	29.4	41	00.7	45.9	93 27.4	03.6	163 06.6	37.2	6 56.7	43.4
16	216	31.8	56	00.2	44.8	108 28.1	03.4	178 09.1	37.2	21 58.9	43.5
17	231	34.3	70	59.7	+9 43.6	123 28.9	+23 03.3	193 11.5	+13 37.2	37 01.2	-3 43.6
18	246	36.7	85	59.3	+9 42.5	138 29.6	+23 03.1	208 14.0	+13 37.2	52 03.4	-3 43.7
19	261	39.2	100	58.8	41.3	153 30.3	02.9	223 16.4	37.2	67 05.6	43.8
20	276	41.7	115	58.4	40.2	168 31.0	02.8	238 18.9	37.2	82 07.8	43.9
21	291	44.1	130	57.9	39.0	183 31.8	02.6	253 21.3	37.2	97 10.1	44.0
22	306	46.6	145	57.5	37.9	198 32.5	02.4	268 23.8	37.2	112 12.3	44.1
23	321	49.1	160	57.0	36.7	213 33.2	02.3	283 26.2	37.2	127 14.5	44.2
24	336	51.5	175	56.6	+9 35.5	228 34.0	+23 02.1	298 28.7	+13 37.2	142 16.7	-3 44.3
Dif	—		-5	-12		+7	-2	+24	0	+22	-1

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 15/8 PMG: 12 ^h 01 ^m 0			Edad: 29 ^d 2 PHE { 4 ^h : 60/4 12 ^h : 60/6 20 ^h : 60/7 R°: 53 ^m PMG: 12 ^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	42.4	+9	33.3	183	07.7	+5 43.0	60 N	3 00	4 01	4 47	5 30	97	18 34	11			
1	194	42.6		32.4	197	35.9	28.9 ¹⁴¹	58	14	10	52	32	94	34	13			
2	209	42.8		31.5	212	04.0	14.7 ¹⁴²	56	26	17	4 58	34	91	33	17			
3	224	42.9		30.6	226	32.2	+5 00.5 ¹⁴²	54	37	24	5 02	36	88	33	19			
4	239	43.1		29.7	241	00.4	+4 46.3 ¹⁴²	52	46	30	06	38	86	32	22			
5	254	43.3	+9	28.8	255	28.6	+4 32.0 ¹⁴³	50	3 54	4 36	5 10	5 40	83	18 32	23			
6	269	43.5	+9	28.0	269	56.7	+4 17.7 ¹⁴³	45	4 10	4 47	5 18	5 43	78	18 31	28			
7	284	43.7		27.1	284	24.9	+4 03.4 ¹⁴³	40	23	4 56	24	46	74	30	32			
8	299	43.9		26.2	298	53.1	+3 49.0 ¹⁴⁴	35	33	5 04	30	48	71	29	36			
9	314	44.1		25.3	313	21.3	34.6 ¹⁴⁴	30	42	11	35	51	67	29	39			
10	329	44.2		24.4	327	49.5	20.2 ¹⁴⁴	20	4 55	21	44	54	62	28	44			
11	344	44.4	+9	23.5	342	17.7	+3 05.8 ¹⁴⁴	10 N	5 05	5 30	5 51	5 58	57	18 27	48			
12	359	44.6	+9	22.6	356	45.8	+2 51.3 ¹⁴⁵	0	5 12	5 37	5 58	6 01	53	18 26	53			
13	14	44.8		21.7	11	14.0	36.8 ¹⁴⁵	10 S	19	43	6 04	04	49	25	57			
14	29	45.0		20.9	25	42.2	22.3 ¹⁴⁵	20	23	49	11	07	44	24	62			
15	44	45.2		20.0	40	10.4	+2 07.7 ¹⁴⁶	30	27	55	19	11	39	23	67			
16	59	45.4		19.1	54	38.6	+1 53.2 ¹⁴⁵	35	29	5 58	24	13	36	22	71			
17	74	45.6	+9	18.2	69	06.7	+1 38.6 ¹⁴⁶	40	5 30	6 01	6 29	6 16	32	18 21	75			
18	89	45.7	+9	17.3	83	34.9	+1 24.0 ¹⁴⁶	45	5 31	6 05	6 35	6 19	28	18 20	79			
19	104	45.9		16.4	98	03.1	+1 09.4 ¹⁴⁶	50	31	09	42	22	24	19	84			
20	119	46.1		15.5	112	31.2	+0 54.8 ¹⁴⁶	52	32	11	45	24	21	18	86			
21	134	46.3		14.6	126	59.4	40.2 ¹⁴⁶	54	31	12	48	25	20	18	88			
22	149	46.5		13.7	141	27.5	25.6 ¹⁴⁶	56	31	14	52	27	17	17	91			
23	164	46.7		12.8	155	55.6	+0 10.9 ¹⁴⁷	58	31	16	6 56	29	14	16	95			
24	179	46.9	+9	12.0	170	23.8	-0 03.7 ¹⁴⁶	60 S	5 31	6 19	7 01	6 32	10	18 16	98			
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG 1 ^h 32 ^m 3		Mag: -3.9 PMG: 12 ^h 17 ^m			Mag: +1.4 PMG: 8 ^h 45 ^m			Mag: -2.7 PMG: 4 ^h 05 ^m			Mag: +0.9 PMG: 14 ^h 29 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	336	51.5	175	56.6	+9	35.5	228	34.0	+23	02.1	298	28.7	+13	37.2	142	16.7	-3	44.3
1	351	54.0	190	56.1		34.4	243	34.7		01.9	313	31.1		37.1	157	19.0		44.4
2	6	56.5	205	55.7		33.2	258	35.4		01.8	328	33.6		37.1	172	21.2		44.5
3	21	58.9	220	55.2		32.1	273	36.2		01.6	343	36.0		37.1	187	23.4		44.6
4	37	01.4	235	54.8		30.9	288	36.9		01.4	358	38.5		37.1	202	25.7		44.7
5	52	03.9	250	54.3	+9	29.7	303	37.6	+23	01.3	13	40.9	+13	37.1	217	27.9	-3	44.8
6	67	06.3	265	53.9	+9	28.6	318	38.4	+23	01.1	28	43.4	+13	37.1	232	30.1	-3	45.0
7	82	08.8	280	53.4		27.4	333	39.1		00.9	43	45.8		37.1	247	32.3		45.1
8	97	11.2	295	53.0		26.3	348	39.8		00.8	58	48.3		37.1	262	34.6		45.2
9	112	13.7	310	52.5		25.1	3	40.6		00.6	73	50.7		37.1	277	36.8		45.3
10	127	16.2	325	52.1		23.9	18	41.3		00.4	88	53.2		37.1	292	39.0		45.4
11	142	18.6	340	51.6	+9	22.8	33	42.1	+23	00.3	103	55.7	+13	37.1	307	41.2	-3	45.5
12	157	21.1	355	51.2	+9	21.6	48	42.8	+23	00.1	118	58.1	+13	37.1	322	43.5	-3	45.6
13	172	23.6	10	50.8		20.5	63	43.5	+22	59.9	134	00.6		37.1	337	45.7		45.7
14	187	26.0	25	50.3		19.3	78	44.3		59.8	149	03.0		37.1	352	47.9		45.8
15	202	28.5	40	49.9		18.1	93	45.0		59.6	164	05.5		37.1	7	50.1		45.9
16	217	31.0	55	49.4		17.0	108	45.7		59.4	179	07.9		37.1	22	52.4		46.0
17	232	33.4	70	49.0	+9	15.8	123	46.5	+22	59.2	194	10.4	+13	37.1	37	54.6	-3	46.1
18	247	35.9	85	48.5	+9	14.6	138	47.2	+22	59.1	209	12.8	+13	37.0	52	56.8	-3	46.2
19	262	38.3	100	48.1		13.5	153	47.9		58.9	224	15.3		37.0	67	59.0		46.3
20	277	40.8	115	47.6		12.3	168	48.7		58.7	239	17.7		37.0	83	01.3		46.4
21	292	43.3	130	47.2		11.1	183	49.4		58.6	254	20.2		37.0	98	03.5		46.5
22	307	45.7	145	46.8		10.0	198	50.2		58.4	269	22.7		37.0	113	05.7		46.6
23	322	48.2	160	46.3		08.8	213	50.9		58.2	284	25.1		37.0	128	08.0		46.7
24	337	50.7	175	45.9	+9	07.6	228	51.6	+22	58.0	299	27.6	+13	37.0	143	10.2	-3	46.8
Dif	—		-4		-12		+7		-2		+25		0		+22		-1	

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna		
	SD: 15 ^h 8			Edad: 30 ^d 2	PHE { 4 ^h : 60 ^h 7 12 ^h : 60 ^h 8 20 ^h : 60 ^h 8 R°: 54 ^m											
	PMG: 12 ^h 00 ^m 7					SD: 16 ^h 5			PMG: 13 ^h 06 ^m							
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°	
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	m	h m m	m	
0	179	46.9	+9 12.0	170	23.8	-0 03.7	91	60 N	19 11	19 56	20 56	7 07 99		18 45 12		
1	194	47.1	11.1	184	51.9	18.4	147	58	05	48	42	06 95		47 16		
2	209	47.2	10.2	199	20.0	33.0	146	56	19 01	40	30	05 92		50 18		
3	224	47.4	09.3	213	48.1	-0 47.6	146	54	18 56	34	21	04 89		52 20		
4	239	47.6	08.4	228	16.2	-1 02.3	147	52	53	28	12	04 86		54 23		
5	254	47.8	+9 07.5	242	44.2	-1 16.9	146	50	18 49	19 23	20 04	7 03 84		18 55 26		
6	269	48.0	+9 06.6	257	12.3	-1 31.6	147	45	18 42	19 12	19 49	7 01 79		18 59 30		
7	284	48.2	05.7	271	40.3	-1 46.2	146	40	35	19 03	36	7 00 75		19 02 34		
8	299	48.4	04.8	286	08.4	-2 00.8	146	35	30	18 56	27	6 59 71		05 37		
9	314	48.6	03.9	300	36.4	15.4	146	30	25	50	19	58 68		08 40		
10	329	48.8	03.0	315	04.4	30.0	146	20	17	40	19 06	56 63		12 45		
11	344	49.0	+9 02.1	329	32.4	-2 44.6	146	10 N	18 10	18 32	18 57	6 55 58		19 15 50		
12	359	49.1	+9 01.2	344	00.4	-2 59.1	145	0	18 04	18 25	18 49	6 54 53		19 19 54		
13	14	49.3	+9 00.3	358	28.3	-3 13.7	146	10 S	17 58	19	44	53 49		22 59		
14	29	49.5	+8 59.4	12	56.3	28.2	145	20	51	13	39	51 45		26 63		
15	44	49.7	58.5	27	24.2	42.7	145	30	44	08	36	50 39		30 68		
16	59	49.9	57.7	41	52.1	-3 57.2	145	35	40	05	34	49 36		33 71		
17	74	50.1	+8 56.8	56	20.0	-4 11.7	145	40	17 35	18 02	18 34	6 48 33		19 36 74		
18	89	50.3	+8 55.9	70	47.8	-4 26.1	144	45	17 29	17 59	18 33	6 47 29		19 39 79		
19	104	50.5	55.0	85	15.7	40.5	144	50	23	55	33	46 24		43 83		
20	119	50.7	54.1	99	43.5	-4 54.9	144	52	20	54	33	45 22		44 87		
21	134	50.9	53.2	114	11.3	-5 09.2	143	54	16	52	33	45 19		46 89		
22	149	51.1	52.3	128	39.0	23.5	143	56	13	51	34	44 17		48 92		
23	164	51.2	51.4	143	06.8	37.8	143	58	09	49	34	43 14		51 95		
24	179	51.4	+8 50.5	157	34.5	-5 52.0	142	60 S	17 04	17 47	18 35	6 42 11		19 54 98		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO				
	PMG: 1 ^h 28 ^m 4		Mag: -3.9 PMG: 12 ^h 17 ^m			Mag: +1.4 PMG: 8 ^h 44 ^m			Mag: -2.7 PMG: 4 ^h 02 ^m			Mag: +0.9 PMG: 14 ^h 25 ^m				
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	337	50.7	175	45.9	+9 07.6	228	51.6	+22 58.0	299	27.6	+13 37.0	143	10.2	-3 46.8		
1	352	53.1	190	45.4	06.5	243	52.4	57.9	314	30.0	37.0	158	12.4	46.9		
2	7	55.6	205	45.0	05.3	258	53.1	57.7	329	32.5	37.0	173	14.6	47.1		
3	22	58.1	220	44.5	04.1	273	53.8	57.5	344	35.0	37.0	188	16.9	47.2		
4	38	00.5	235	44.1	02.9	288	54.6	57.3	359	37.4	37.0	203	19.1	47.3		
5	53	03.0	250	43.7	+9 01.8	303	55.3	+22 57.2	14	39.9	+13 37.0	218	21.3	-3 47.4		
6	68	05.5	265	43.2	+9 00.6	318	56.1	+22 57.0	29	42.3	+13 37.0	233	23.5	-3 47.5		
7	83	07.9	280	42.8	+8 59.4	333	56.8	56.8	44	44.8	37.0	248	25.8	47.6		
8	98	10.4	295	42.3	58.3	348	57.5	56.6	59	47.3	36.9	263	28.0	47.7		
9	113	12.8	310	41.9	57.1	3	58.3	56.5	74	49.7	36.9	278	30.2	47.8		
10	128	15.3	325	41.5	55.9	18	59.0	56.3	89	52.2	36.9	293	32.4	47.9		
11	143	17.8	340	41.0	+8 54.7	33	59.8	+22 56.1	104	54.6	+13 36.9	308	34.7	-3 48.0		
12	158	20.2	355	40.6	+8 53.6	49	00.5	+22 55.9	119	57.1	+13 36.9	323	36.9	-3 48.1		
13	173	22.7	10	40.1	52.4	64	01.2	55.8	134	59.6	36.9	338	39.1	48.2		
14	188	25.2	25	39.7	51.2	79	02.0	55.6	150	02.0	36.9	353	41.3	48.3		
15	203	27.6	40	39.3	50.0	94	02.7	55.4	165	04.5	36.9	8	43.6	48.4		
16	218	30.1	55	38.8	48.9	109	03.5	55.2	180	06.9	36.9	23	45.8	48.5		
17	233	32.6	70	38.4	+8 47.7	124	04.2	+22 55.0	195	09.4	+13 36.9	38	48.0	-3 48.6		
18	248	35.0	85	37.9	+8 46.5	139	05.0	+22 54.9	210	11.9	+13 36.9	53	50.2	-3 48.7		
19	263	37.5	100	37.5	45.3	154	05.7	54.7	225	14.3	36.8	68	52.4	48.8		
20	278	39.9	115	37.1	44.2	169	06.4	54.5	240	16.8	36.8	83	54.7	48.9		
21	293	42.4	130	36.6	43.0	184	07.2	54.3	255	19.3	36.8	98	56.9	49.1		
22	308	44.9	145	36.2	41.8	199	07.9	54.1	270	21.7	36.8	113	59.1	49.2		
23	323	47.3	160	35.8	40.6	214	08.7	54.0	285	24.2	36.8	129	01.3	49.3		
24	338	49.8	175	35.3	+8 39.5	229	09.4	+22 53.8	300	26.7	+13 36.8	144	03.6	-3 49.4		
Dif	—	—	-4	-12		+7	-2		+25	0		+22		-1		

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15'8 PMG: 12 ^h 00 ^m 4			Edad: 1 ^d 9 PHE { 4 ^h : 60'7 12 ^h : 60'7 20 ^h : 60'6 R°: 55 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	179	51.4	+8 50.5	157	34.5	-5 52.0	60 N	3 06	4 06	4 51	8 46	98	18 57	14	
1	194	51.6		172	02.2	-6 06.2	58	20	14	4 57	41 95	19 03	18		
2	209	51.8		186	29.9		56	31	22	5 01	37 91	08 21			
3	224	52.0		200	57.6		54	41	28	06	33 89	12 24			
4	239	52.2		215	25.2	-6 48.6	52	50	34	09	30 86	17 26			
5	254	52.4	+8 46.0	229	52.8	-7 02.6	50	3 57	4 39	5 13	8 27	83	19 21	28	
6	269	52.6	+8 45.1	244	20.4	-7 16.6	45	4 13	4 50	5 20	8 20	79	19 29	33	
7	284	52.8		258	47.9	30.5	40	25	4 58	26	15 74	36 37			
8	299	53.0		273	15.4	44.4	35	35	5 06	32	10 71	42 40			
9	314	53.2		287	42.9	-7 58.2	30	43	12	36	8 06	68	48 42		
10	329	53.4		302	10.4	-8 12.0	20	4 55	22	44	7 59	63	19 57	47	
11	344	53.6	+8 40.6	316	37.8	-8 25.7	10 N	5 05	5 30	5 51	7 53	59	20 05	52	
12	359	53.7	+8 39.7	331	05.2	-8 39.4	0	5 12	5 36	5 57	7 47	55	20 13	55	
13	14	53.9		345	32.6	-8 53.0	10 S	18	42	6 03	42 50	21 59			
14	29	54.1		359	59.9	-9 06.5	20	22	48	10	36 46	29 63			
15	44	54.3		14	27.2	20.0	30	25	53	17	29 41	38 69			
16	59	54.5		28	54.5	33.5	35	26	56	21	25 38	44 71			
17	74	54.7	+8 35.2	43	21.7	-9 46.8	40	5 27	5 58	6 26	7 21	35	20 50	75	
18	89	54.9	+8 34.3	57	48.9	-10 00.1	45	5 28	6 01	6 31	7 16	31	20 58	78	
19	104	55.1		72	16.1	13.3	50	27	05	37	10 26	21 06	83		
20	119	55.3		86	43.3	26.5	52	27	06	40	07 25	11 85			
21	134	55.5		101	10.4	39.6	54	27	08	43	04 22	15 88			
22	149	55.7		115	37.4	-10 52.6	56	27	09	47	7 01	19	20 91		
23	164	55.9		130	04.5	-11 05.5	58	26	11	51	6 57	17	26 94		
24	179	56.1	+8 28.9	144	31.5	-11 18.4	60 S	5 25	6 13	6 55	6 53	13	21 32	98	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG 1 ^h 24 ^m 4		Mag: -3.9 PMG: 12 ^h 18 ^m			Mag: +1.4 PMG: 8 ^h 43 ^m			Mag: -2.7 PMG: 3 ^h 58 ^m			Mag: +0.9 PMG: 14 ^h 22 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°
0	338	49.8	175	35.3	+8 39.5	229	09.4	+22 53.8	300	26.7	+13 36.8	144	03.6	-3 49.4	
1	353	52.3	190	34.9	38.3	244	10.2	53.6	315	29.1	36.8	159	05.8	49.5	
2	8	54.7	205	34.5	37.1	259	10.9	53.4	330	31.6	36.8	174	08.0	49.6	
3	23	57.2	220	34.0	35.9	274	11.6	53.2	345	34.1	36.8	189	10.2	49.7	
4	38	59.7	235	33.6	34.7	289	12.4	53.1	0	36.5	36.8	204	12.5	49.8	
5	54	02.1	250	33.2	+8 33.6	304	13.1	+22 52.9	15	39.0	+13 36.7	219	14.7	-3 49.9	
6	69	04.6	265	32.7	+8 32.4	319	13.9	+22 52.7	30	41.5	+13 36.7	234	16.9	-3 50.0	
7	84	07.1	280	32.3	31.2	334	14.6	52.5	45	43.9	36.7	249	19.1	50.1	
8	99	09.5	295	31.9	30.0	349	15.4	52.3	60	46.4	36.7	264	21.4	50.2	
9	114	12.0	310	31.4	28.8	4	16.1	52.2	75	48.9	36.7	279	23.6	50.3	
10	129	14.4	325	31.0	27.7	19	16.9	52.0	90	51.3	36.7	294	25.8	50.4	
11	144	16.9	340	30.6	+8 26.5	34	17.6	+22 51.8	105	53.8	+13 36.7	309	28.0	-3 50.5	
12	159	19.4	355	30.1	+8 25.3	49	18.3	+22 51.6	120	56.3	+13 36.7	324	30.2	-3 50.6	
13	174	21.8	10	29.7	24.1	64	19.1	51.4	135	58.8	36.7	339	32.5	50.7	
14	189	24.3	25	29.3	22.9	79	19.8	51.2	151	01.2	36.6	354	34.7	50.9	
15	204	26.8	40	28.8	21.7	94	20.6	51.1	166	03.7	36.6	9	36.9	51.0	
16	219	29.2	55	28.4	20.5	109	21.3	50.9	181	06.2	36.6	24	39.1	51.1	
17	234	31.7	70	28.0	+8 19.4	124	22.1	+22 50.7	196	08.6	+13 36.6	39	41.4	-3 51.2	
18	249	34.2	85	27.5	+8 18.2	139	22.8	+22 50.5	211	11.1	+13 36.6	54	43.6	-3 51.3	
19	264	36.6	100	27.1	17.0	154	23.6	50.3	226	13.6	36.6	69	45.8	51.4	
20	279	39.1	115	26.7	15.8	169	24.3	50.1	241	16.1	36.6	84	48.0	51.5	
21	294	41.6	130	26.3	14.6	184	25.1	49.9	256	18.5	36.6	99	50.2	51.6	
22	309	44.0	145	25.8	13.4	199	25.8	49.8	271	21.0	36.6	114	52.5	51.7	
23	324	46.5	160	25.4	12.2	214	26.6	49.6	286	23.5	36.5	129	54.7	51.8	
24	339	48.9	175	25.0	+8 11.1	229	27.3	+22 49.4	301	26.0	+13 36.5	144	56.9	-3 51.9	
Dif	—		-4	-12		+7	-2		+25	0		+22	-1		

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8			Edad: 2 ^d 9	PHE { 4 ^h : 60 ^h /5 12 ^h : 60 ^h /4 20 ^h : 60 ^h /2 R°: 57 ^m									
	PMG: 12 ^h 00 ^m 1					SD: 16 ^h 5			PMG: 14 ^h 55 ^m					
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	m	h m	m
0	179	56.1	+8 28.9	144	31.5	-11 18.4		60 N	19 05	19 50	20 48	10 24 97	19 11 20	
1	194	56.3		158	58.5	80 31.2 ¹²⁸		58	19 00	42	35	16 93	21 23	
2	209	56.5		173	25.4	79 43.9 ¹²⁷		56	18 56	35	24	08 90	29 27	
3	224	56.7		187	52.3	79 -11 56.5 ¹²⁶		54	52	29	15	10 02 86	36 30	
4	239	56.9		202	19.2	79 -12 09.0 ¹²⁵		52	48	23	20 07	9 56 84	43 32	
5	254	57.1	+8 24.3	216	46.0	78 -12 21.5 ¹²⁵		50	18 45	19 18	19 59	9 50 82	19 49 34	
6	269	57.3	+8 23.4	231	12.8	78 -12 33.9 ¹²⁴		45	18 38	19 08	19 45	9 39 77	20 02 38	
7	284	57.5		245	39.5	77 46.2 ¹²³		40	32	19 00	33	29 74	13 41	
8	299	57.7		260	06.3	78 -12 58.4 ¹²²		35	27	18 53	24	21 71	22 44	
9	314	57.8		274	32.9	76 -13 10.5 ¹²¹		30	23	47	16	14 68	30 47	
10	329	58.0		288	59.6	77 22.5 ¹²⁰		20	16	38	19 04	9 02 64	44 51	
11	344	58.2	+8 18.9	303	26.2	76 -13 34.4 ¹¹⁹		10 N	18 09	18 31	18 55	8 52 59	20 57 53	
12	359	58.4	+8 18.0	317	52.8	76 -13 46.3 ¹¹⁹		0	18 03	18 24	18 49	8 42 56	21 08 57	
13	14	58.6		332	19.3	75 -13 58.0 ¹¹⁷		10 S	17 58	19	43	32 53	20 60	
14	29	58.8		346	45.8	75 -14 09.7 ¹¹⁷		20	52	14	39	22 49	32 64	
15	44	59.0		1	12.3	75 21.2 ¹¹⁵		30	45	09	37	10 44	47 67	
16	59	59.2		15	38.7	74 32.7 ¹¹⁵		35	41	06	36	8 03 42	21 55 70	
17	74	59.4	+8 13.5	30	05.1	74 -14 44.0 ¹¹³		40	17 37	18 04	18 35	7 56 39	22 05 72	
18	89	59.6	+8 12.6	44	31.4	73 -14 55.3 ¹¹³		45	17 32	18 01	18 35	7 47 35	22 16 76	
19	104	59.8		58	57.8	74 -15 06.4 ¹¹¹		50	26	17 58	36	36 31	29 80	
20	120	00.0		73	24.0	72 17.4 ¹¹⁰		52	23	57	36	32 28	36 82	
21	135	00.2		87	50.3	73 28.4 ¹¹⁰		54	20	56	37	26 27	43 84	
22	150	00.4		102	16.5	72 39.2 ¹⁰⁸		56	17	54	37	20 24	22 51 87	
23	165	00.6		116	42.7	72 -15 49.9 ¹⁰⁷		58	13	53	38	14 21	23 00 90	
24	180	00.8	+8 07.1	131	08.8	71 -16 00.5 ¹⁰⁶		60 S	17 09	17 51	18 39	7 06 18	23 10 94	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 1 ^h 20 ^m 5		Mag: -3.9 PMG: 12 ^h 19 ^m			Mag: +1.4 PMG: 8 ^h 42 ^m			Mag: -2.7 PMG: 3 ^h 54 ^m			Mag: +0.9 PMG: 14 ^h 18 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	'	°	°	'	°	°	'	°	°	'	°
0	339	48.9	175	25.0	+8 11.1	229	27.3	+22 49.4	301	26.0	+13 36.5	144	56.9	-3 51.9
1	354	51.4	190	24.5	09.9	244	28.1	49.2	316	28.4	36.5	159	59.1	52.0
2	9	53.9	205	24.1	08.7	259	28.8	49.0	331	30.9	36.5	175	01.4	52.1
3	24	56.3	220	23.7	07.5	274	29.6	48.8	346	33.4	36.5	190	03.6	52.2
4	39	58.8	235	23.3	06.3	289	30.3	48.6	1	35.9	36.5	205	05.8	52.3
5	55	01.3	250	22.8	+8 05.1	304	31.1	+22 48.4	16	38.3	+13 36.5	220	08.0	-3 52.4
6	70	03.7	265	22.4	+8 03.9	319	31.8	+22 48.3	31	40.8	+13 36.5	235	10.2	-3 52.6
7	85	06.2	280	22.0	02.7	334	32.6	48.1	46	43.3	36.4	250	12.5	52.7
8	100	08.7	295	21.6	01.5	349	33.3	47.9	61	45.8	36.4	265	14.7	52.8
9	115	11.1	310	21.1	+8 00.3	4	34.1	47.7	76	48.2	36.4	280	16.9	52.9
10	130	13.6	325	20.7	+7 59.2	19	34.8	47.5	91	50.7	36.4	295	19.1	53.0
11	145	16.0	340	20.3	+7 58.0	34	35.6	+22 47.3	106	53.2	+13 36.4	310	21.3	-3 53.1
12	160	18.5	355	19.8	+7 56.8	49	36.3	+22 47.1	121	55.7	+13 36.4	325	23.6	-3 53.2
13	175	21.0	10	19.4	55.6	64	37.1	46.9	136	58.2	36.4	340	25.8	53.3
14	190	23.4	25	19.0	54.4	79	37.8	46.7	152	00.6	36.3	355	28.0	53.4
15	205	25.9	40	18.6	53.2	94	38.6	46.6	167	03.1	36.3	10	30.2	53.5
16	220	28.4	55	18.2	52.0	109	39.3	46.4	182	05.6	36.3	25	32.4	53.6
17	235	30.8	70	17.7	+7 50.8	124	40.1	+22 46.2	197	08.1	+13 36.3	40	34.7	-3 53.7
18	250	33.3	85	17.3	+7 49.6	139	40.8	+22 46.0	212	10.6	+13 36.3	55	36.9	-3 53.8
19	265	35.8	100	16.9	48.4	154	41.6	45.8	227	13.0	36.3	70	39.1	53.9
20	280	38.2	115	16.5	47.2	169	42.3	45.6	242	15.5	36.3	85	41.3	54.0
21	295	40.7	130	16.0	46.0	184	43.1	45.4	257	18.0	36.2	100	43.5	54.1
22	310	43.2	145	15.6	44.8	199	43.8	45.2	272	20.5	36.2	115	45.8	54.3
23	325	45.6	160	15.2	43.6	214	44.6	45.0	287	23.0	36.2	130	48.0	54.4
24	340	48.1	175	14.8	+7 42.4	229	45.4	+22 44.8	302	25.4	+13 36.2	145	50.2	-3 54.5
Dif	—		-4	-12		+8	-2		+25		0	+22		-1

UT	SOL			 LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15 ^h 8			Edad: 3 ^d 9	PHE { 4 ^h : 60 ^h 0 12 ^h : 59 ^h 9 20 ^h : 59 ^h 7												
	PMG: 11 ^h 59 ^m 8					SD: 16 ^h 4				PMG: 15 ^h 52 ^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
0	180	00.8	+8 07.1	131	08.8		-16 00.5		60 N	3 13	4 11	4 56	12 01	91	19 31	29	
1	195	01.0		145	34.9	71		11.0 ¹⁰⁵	58	26	19	5 01	11 49	86	44	33	
2	210	01.2		160	01.0	71		21.4 ¹⁰⁴	56	37	26	05	38	84	19 56	35	
3	225	01.4		174	27.0	70		31.7 ¹⁰³	54	46	32	09	28	82	20 06	38	
4	240	01.6		188	53.0	70		41.9 ¹⁰²	52	3 54	37	13	20	79	15	39	
5	255	01.8	+8 02.6	203	18.9	69		-16 51.9 ¹⁰⁰	50	4 01	4 42	5 16	11 12	78	20 23	41	
6	270	02.0	+8 01.7	217	44.9	70		-17 01.8 ⁹⁹	45	4 16	4 52	5 23	10 56	74	20 40	44	
7	285	02.2	+8 00.8	232	10.8	69		11.7 ⁹⁹	40	27	5 00	28	43	71	20 54	47	
8	300	02.4	+7 59.8	246	36.6	68		21.4 ⁹⁷	35	37	07	33	32	68	21 06	49	
9	315	02.6		261	02.4	68		30.9 ⁹⁵	30	44	13	37	22	67	17	50	
10	330	02.8		275	28.2	68		40.4 ⁹⁵	20	4 56	22	45	10 06	63	35	53	
11	345	03.0	+7 57.1	289	54.0	68		-17 49.7 ⁹³	10 N	5 05	5 30	5 51	9 51	61	21 50	56	
12	0	03.2	+7 56.2	304	19.7	67		-17 58.9 ⁹²	0	5 11	5 36	5 57	9 38	57	22 05	58	
13	15	03.4		318	45.4	67		-18 08.0 ⁹¹	10 S	16	41	6 02	25	54	20	60	
14	30	03.6		333	11.1	67		17.0 ⁹⁰	20	20	46	08	9 11	51	36	62	
15	45	03.8		347	36.7	66		25.8 ⁸⁸	30	23	51	15	8 54	49	22 54	65	
16	60	04.0		2	02.3	66		34.5 ⁸⁷	35	24	53	18	45	47	23 05	66	
17	75	04.2	+7 51.6	16	27.9	66		-18 43.1 ⁸⁶	40	5 24	5 55	6 23	8 35	44	23 17	69	
18	90	04.4	+7 50.7	30	53.4	65		-18 51.6 ⁸⁵	45	5 24	5 58	6 27	8 22	41	23 32	70	
19	105	04.6		45	19.0	66		-18 59.9 ⁸³	50	23	6 01	33	07	38	49	74	
20	120	04.8		59	44.4	64		-19 08.1 ⁸²	52	23	02	36	8 00	36	23 58	75	
21	135	05.0		74	09.9	65		16.2 ⁸¹	54	22	03	39	7 53	33	** ** *	**	
22	150	05.2		88	35.4	65		24.1 ⁷⁹	56	22	05	42	44	31	** ** *	**	
23	165	05.4		103	00.8	64		31.9 ⁷⁸	58	21	06	45	35	27	** ** *	**	
24	180	05.6	+7 45.2	117	26.2	64		-19 39.6 ⁷⁷	60 S	5 19	6 07	6 49	7 24	24	** ** *	**	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO					
	PMG: 1 ^h 16 ^m 6		Mag: -3.9 PMG: 12 ^h 19 ^m			Mag: +1.4 PMG: 8 ^h 41 ^m			Mag: -2.7 PMG: 3 ^h 50 ^m			Mag: +0.9 PMG: 14 ^h 15 ^m					
	hG ♈		hG ♀			hG ♂			hG ♃			hG ♄					
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°	°	
0	340	48.1		175	14.8		229	45.4	+22 44.8	302	25.4	+13 36.2	145	50.2	-3 54.5		
1	355	50.5		190	14.3		244	46.1	44.6	317	27.9	36.2	160	52.4	54.6		
2	10	53.0		205	13.9		259	46.9	44.4	332	30.4	36.2	175	54.6	54.7		
3	25	55.5		220	13.5		274	47.6	44.2	347	32.9	36.2	190	56.9	54.8		
4	40	57.9		235	13.1		289	48.4	44.0	2	35.4	36.1	205	59.1	54.9		
5	56	00.4		250	12.7	+7 36.4	304	49.1	+22 43.9	17	37.9	+13 36.1	221	01.3	-3 55.0		
6	71	02.9		265	12.2	+7 35.2	319	49.9	+22 43.7	32	40.3	+13 36.1	236	03.5	-3 55.1		
7	86	05.3		280	11.8		334	50.6	43.5	47	42.8	36.1	251	05.7	55.2		
8	101	07.8		295	11.4		349	51.4	43.3	62	45.3	36.1	266	08.0	55.3		
9	116	10.3		310	11.0		4	52.1	43.1	77	47.8	36.1	281	10.2	55.4		
10	131	12.7		325	10.6		19	52.9	42.9	92	50.3	36.0	296	12.4	55.5		
11	146	15.2		340	10.2	+7 29.2	34	53.7	+22 42.7	107	52.8	+13 36.0	311	14.6	-3 55.6		
12	161	17.6		355	09.7	+7 28.0	49	54.4	+22 42.5	122	55.3	+13 36.0	326	16.8	-3 55.8		
13	176	20.1		10	09.3		64	55.2	42.3	137	57.7	36.0	341	19.1	55.9		
14	191	22.6		25	08.9		79	55.9	42.1	153	00.2	36.0	356	21.3	56.0		
15	206	25.0		40	08.5		94	56.7	41.9	168	02.7	36.0	11	23.5	56.1		
16	221	27.5		55	08.1		109	57.4	41.7	183	05.2	35.9	26	25.7	56.2		
17	236	30.0		70	07.6	+7 22.0	124	58.2	+22 41.5	198	07.7	+13 35.9	41	27.9	-3 56.3		
18	251	32.4		85	07.2	+7 20.8	139	59.0	+22 41.3	213	10.2	+13 35.9	56	30.2	-3 56.4		
19	266	34.9		100	06.8		154	59.7	41.1	228	12.7	35.9	71	32.4	56.5		
20	281	37.4		115	06.4		170	00.5	40.9	243	15.2	35.9	86	34.6	56.6		
21	296	39.8		130	06.0		185	01.2	40.7	258	17.7	35.9	101	36.8	56.7		
22	311	42.3		145	05.6		200	02.0	40.5	273	20.1	35.8	116	39.0	56.8		
23	326	44.8		160	05.1		215	02.8	40.3	288	22.6	35.8	131	41.2	56.9		
24	341	47.2		175	04.7	+7 13.6	230	03.5	+22 40.1	303	25.1	+13 35.8	146	43.5	-3 57.0		
Dif	—		-4			-12	+8			-2	+25		0	+22			-1

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 15'9 PMG: 11 ^h 59 ^m 5			Edad: 4 ^d 9 SD: 16'2 PMG: 16 ^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	180	05.6	+7 45.2	117	26.2	-19 39.6	75	60 N	18 59	19 43	20 40	13 32 77	20 00 43		
1	195	05.8		44.3	131 51.5	47.1	75	58	54	36	28	15 75	17 45		
2	210	06.0		43.4	146 16.9		74	56	50	29	18	13 02 73	31 47		
3	225	06.2		42.5	160 42.2	-20 01.8	73	54	47	24	09	12 50 71	44 48		
4	240	06.4		41.6	175 07.5	08.9	71	52	44	19	20 01	39 70	20 54 50		
5	255	06.6	+7 40.7	189	32.8	-20 15.9	70	50	18 41	19 14	19 55	12 30 69	21 04 50		
6	270	06.8	+7 39.8	203	58.0	-20 22.7	68	45	18 34	19 04	19 41	12 10 67	21 24 52		
7	285	07.0		38.8	218 23.3	29.5	68	40	29	18 57	30	11 54 65	41 53		
8	300	07.2		37.9	232 48.5	36.0	65	35	25	50	21	40 65	21 55 54		
9	315	07.4		37.0	247 13.7	42.5	65	30	21	45	13	29 63	22 07 55		
10	330	07.6		36.1	261 38.9	48.8	63	20	14	36	19 02	11 09 61	28 56		
11	345	07.8	+7 35.2	276	04.1	-20 54.9	61	10 N	18 08	18 29	18 54	10 52 59	22 46 57		
12	0	08.1	+7 34.3	290	29.3	-21 00.9	60	0	18 03	18 24	18 48	10 35 58	23 03 58		
13	15	08.3		33.3	304 54.4	06.8	59	10 S	17 57	19	43	19 57	20 59		
14	30	08.5		32.4	319 19.6	12.5	57	20	52	14	40	10 02 55	38 60		
15	45	08.7		31.5	333 44.7	18.1	56	30	46	10	38	9 43 53	23 59 61		
16	60	08.9		30.6	348 09.8	23.6	55	35	42	08	37	32 51	** ** *		
17	75	09.1	+7 29.7	2	34.9	-21 28.9	53	40	17 38	18 06	18 37	9 19 50	** ** *		
18	90	09.3	+7 28.8	17	00.0	-21 34.0	51	45	17 34	18 03	18 37	9 03 48	** ** *		
19	105	09.5		27.8	31 25.1	39.0	50	50	29	01	39	8 45 45	** ** *		
20	120	09.7		26.9	45 50.2	43.9	49	52	26	18 00	39	36 44	** ** *		
21	135	09.9		26.0	60 15.3	48.6	47	54	23	17 59	40	26 43	0 07 77		
22	150	10.1		25.1	74 40.4	53.2	46	56	21	58	41	15 41	18 79		
23	165	10.3		24.2	89 05.5	-21 57.7	45	58	17	57	42	8 02 39	30 81		
24	180	10.5	+7 23.2	103	30.6	-22 01.9	42	60 S	17 14	17 56	18 44	7 48 35	0 44 85		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO		
	PMG		Mag: -3.9		Mag: +1.4		Mag: -2.7		Mag: +0.9		
	1 ^h 12 ^m 7		PMG: 12 ^h 20 ^m		PMG: 8 ^h 39 ^m		PMG: 3 ^h 46 ^m		PMG: 14 ^h 11 ^m		
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	
0	341	47.2	175	04.7	+7 13.6	230 03.5	+22 40.1	303 25.1	+13 35.8	146 43.5	-3 57.0
1	356	49.7	190	04.3	12.4	245 04.3	39.9	318 27.6	35.8	161 45.7	57.1
2	11	52.1	205	03.9	11.2	260 05.0	39.7	333 30.1	35.8	176 47.9	57.3
3	26	54.6	220	03.5	10.0	275 05.8	39.5	348 32.6	35.8	191 50.1	57.4
4	41	57.1	235	03.1	08.8	290 06.6	39.3	3 35.1	35.7	206 52.3	57.5
5	56	59.5	250	02.7	+7 07.6	305 07.3	+22 39.1	18 37.6	+13 35.7	221 54.6	-3 57.6
6	72	02.0	265	02.2	+7 06.3	320 08.1	+22 38.9	33 40.1	+13 35.7	236 56.8	-3 57.7
7	87	04.5	280	01.8	05.1	335 08.8	38.7	48 42.6	35.7	251 59.0	57.8
8	102	06.9	295	01.4	03.9	350 09.6	38.5	63 45.1	35.7	267 01.2	57.9
9	117	09.4	310	01.0	02.7	5 10.4	38.3	78 47.6	35.6	282 03.4	58.0
10	132	11.9	325	00.6	01.5	20 11.1	38.1	93 50.1	35.6	297 05.6	58.1
11	147	14.3	340	00.2	+7 00.3	35 11.9	+22 37.9	108 52.5	+13 35.6	312 07.9	-3 58.2
12	162	16.8	354	59.8	+6 59.1	50 12.6	+22 37.7	123 55.0	+13 35.6	327 10.1	-3 58.3
13	177	19.3	9	59.4	57.9	65 13.4	37.5	138 57.5	35.6	342 12.3	58.4
14	192	21.7	24	58.9	56.7	80 14.2	37.3	154 00.0	35.6	357 14.5	58.5
15	207	24.2	39	58.5	55.5	95 14.9	37.1	169 02.5	35.5	12 16.7	58.7
16	222	26.6	54	58.1	54.2	110 15.7	36.9	184 05.0	35.5	27 18.9	58.8
17	237	29.1	69	57.7	+6 53.0	125 16.5	+22 36.7	199 07.5	+13 35.5	42 21.2	-3 58.9
18	252	31.6	84	57.3	+6 51.8	140 17.2	+22 36.5	214 10.0	+13 35.5	57 23.4	-3 59.0
19	267	34.0	99	56.9	50.6	155 18.0	36.3	229 12.5	35.5	72 25.6	59.1
20	282	36.5	114	56.5	49.4	170 18.8	36.1	244 15.0	35.4	87 27.8	59.2
21	297	39.0	129	56.1	48.2	185 19.5	35.8	259 17.5	35.4	102 30.0	59.3
22	312	41.4	144	55.7	47.0	200 20.3	35.6	274 20.0	35.4	117 32.2	59.4
23	327	43.9	159	55.3	45.8	215 21.0	35.4	289 22.5	35.4	132 34.5	59.5
24	342	46.4	174	54.8	+6 44.5	230 21.8	+22 35.2	304 25.0	+13 35.4	147 36.7	-3 59.6
Dif	—		-4	-12		+8	-2	+25	0	+22	-1

UT	SOL			 LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15'9			Edad: 5 ^d 9	PHE { 4 ^h : 58'8 12 ^h : 58'5 20 ^h : 58'3										
	PMG: 11 ^h 59 ^m 1					SD: 16'0			R°: 57 ^m						
	hG ☉		Dec	hG ☾ Dif		Dec Dif		Náutico	Civil		Hora	R°	Hora	R°	
h	o	'	°	o	'	°	°	h	m	h	m	h	m	h	m
0	180	10.5	+7 23.2	103	30.6	-22 01.9	60 N	3 19	4 17	5 01	14 49	59	20 43	60	
1	195	10.7		117	55.7	06.1 42	58	31	24	05	30 59		21 02	60	
2	210	10.9		132	20.8	10.1 40	56	41	30	09	15 58		18 60		
3	225	11.1		146	45.9	13.9 38	54	50	36	13	14 01	59	32 59		
4	240	11.3		161	11.0	17.7 38	52	3 58	41	16	13 49	59	44 59		
5	255	11.5	+7 18.6	175	36.1	-22 21.2 35	50	4 05	4 45	5 19	13 39	58	21 54	59	
6	270	11.7	+7 17.7	190	01.2	-22 24.6 34	45	4 19	4 55	5 25	13 17	58	22 16	59	
7	285	11.9		204	26.3	27.9 33	40	30	5 02	30	12 59	59	34 58		
8	300	12.1		218	51.4	31.0 31	35	38	09	35	45 58		22 49	58	
9	315	12.3		233	16.6	34.0 30	30	46	14	38	32 58		23 02	58	
10	330	12.6		247	41.7	36.8 28	20	4 57	23	45	12 10	58	24 57		
11	345	12.8	+7 13.1	262	06.9	-22 39.5 27	10 N	5 05	5 29	5 51	11 51	58	23 43	57	
12	0	13.0	+7 12.2	276	32.0	-22 42.0 24	0	5 11	5 35	5 56	11 33	58	** ** *	**	
13	15	13.2		290	57.2	44.4 25	10 S	15	40	6 01	11 16	57	** ** *	**	
14	30	13.4		305	22.5	46.7 23	20	19	44	06	10 57	57	** ** *	**	
15	45	13.6		319	47.7	48.8 21	30	21	48	12	36 56		** ** *	**	
16	60	13.8		334	12.9	50.7 19	35	21	50	16	23 56		0 11	62	
17	75	14.0	+7 07.6	348	38.2	-22 52.5 18	40	5 21	5 52	6 19	10 09	55	0 26	62	
18	90	14.2	+7 06.7	3	03.5	-22 54.2 17	45	5 20	5 54	6 24	9 51	56	0 42	63	
19	105	14.4		17	28.8	55.7 15	50	19	57	29	30 55		1 03	64	
20	120	14.6		31	54.1	57.0 13	52	19	58	31	20 54		13 65		
21	135	14.8		46	19.5	58.3 13	54	18	5 59	34	9 09	54	24 65		
22	150	15.0		60	44.9	-22 59.3 10	56	17	6 00	37	8 56	53	37 66		
23	165	15.2		75	10.3	-23 00.3 10	58	15	01	40	41 53		1 51	68	
24	180	15.4	+7 01.1	89	35.8	-23 01.1 8	60 S	5 14	6 02	6 44	8 23	52	2 09	68	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG: 1 ^h 08 ^m 7		Mag: -3.9 PMG: 12 ^h 21 ^m		Mag: +1.4 PMG: 8 ^h 38 ^m		Mag: -2.7 PMG: 3 ^h 42 ^m		Mag: +0.9 PMG: 14 ^h 07 ^m						
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄						
h	o	'	o	'	o	'	o	'	o	'					
0	342	46.4	174	54.8	+6 44.5	230	21.8	+22 35.2	304	25.0	+13 35.4	147	36.7	-3 59.6	
1	357	48.8	189	54.4	43.3	245	22.6	35.0	319	27.5	35.3	162	38.9	59.7	
2	12	51.3	204	54.0	42.1	260	23.3	34.8	334	30.0	35.3	177	41.1	59.8	
3	27	53.8	219	53.6	40.9	275	24.1	34.6	349	32.5	35.3	192	43.3	-3 59.9	
4	42	56.2	234	53.2	39.7	290	24.9	34.4	4	35.0	35.3	207	45.5	-4 00.1	
5	57	58.7	249	52.8	+6 38.5	305	25.6	+22 34.2	19	37.5	+13 35.3	222	47.8	-4 00.2	
6	73	01.1	264	52.4	+6 37.3	320	26.4	+22 34.0	34	40.0	+13 35.2	237	50.0	-4 00.3	
7	88	03.6	279	52.0	36.0	335	27.2	33.8	49	42.5	35.2	252	52.2	00.4	
8	103	06.1	294	51.6	34.8	350	27.9	33.6	64	45.0	35.2	267	54.4	00.5	
9	118	08.5	309	51.2	33.6	5	28.7	33.4	79	47.5	35.2	282	56.6	00.6	
10	133	11.0	324	50.8	32.4	20	29.5	33.2	94	50.0	35.2	297	58.8	00.7	
11	148	13.5	339	50.4	+6 31.2	35	30.2	+22 32.9	109	52.5	+13 35.1	313	01.1	-4 00.8	
12	163	15.9	354	50.0	+6 30.0	50	31.0	+22 32.7	124	55.0	+13 35.1	328	03.3	-4 00.9	
13	178	18.4	9	49.5	28.7	65	31.8	32.5	139	57.5	35.1	343	05.5	01.0	
14	193	20.9	24	49.1	27.5	80	32.5	32.3	155	00.0	35.1	358	07.7	01.1	
15	208	23.3	39	48.7	26.3	95	33.3	32.1	170	02.5	35.0	13	09.9	01.2	
16	223	25.8	54	48.3	25.1	110	34.1	31.9	185	05.0	35.0	28	12.1	01.4	
17	238	28.2	69	47.9	+6 23.9	125	34.9	+22 31.7	200	07.5	+13 35.0	43	14.3	-4 01.5	
18	253	30.7	84	47.5	+6 22.6	140	35.6	+22 31.5	215	10.0	+13 35.0	58	16.6	-4 01.6	
19	268	33.2	99	47.1	21.4	155	36.4	31.3	230	12.5	35.0	73	18.8	01.7	
20	283	35.6	114	46.7	20.2	170	37.2	31.1	245	15.1	34.9	88	21.0	01.8	
21	298	38.1	129	46.3	19.0	185	37.9	30.8	260	17.6	34.9	103	23.2	01.9	
22	313	40.6	144	45.9	17.8	200	38.7	30.6	275	20.1	34.9	118	25.4	02.0	
23	328	43.0	159	45.5	16.5	215	39.5	30.4	290	22.6	34.9	133	27.6	02.1	
24	343	45.5	174	45.1	+6 15.3	230	40.2	+22 30.2	305	25.1	+13 34.8	148	29.8	-4 02.2	
Dif	—		-4		-12	+8		-2	+25		0	+22		-1	

UT	SOL			 LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15°9 PMG: 11 ^h 58 ^m 8			Edad: 6 ^d 9 PHE { 4 ^h : 58'0 12 ^h : 57'8 SD: 15°8 20 ^h : 57'6 PMG: 18 ^h 44 ^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	180	15.4	+7 01.1	89	35.8	-23 01.1	6	60 N	18 53	19 37	20 33	15 48 39	21 43 74	
1	195	15.7	+7 00.2	104	01.3	01.7	6	58	49	30	21	29 42	22 02 71	
2	210	15.9	+6 59.3	118	26.8	02.2	5	56	45	24	12	13 44	18 69	
3	225	16.1	58.4	132	52.3	02.6	4	54	42	19	20 04	15 00 45	31 68	
4	240	16.3	57.4	147	17.9	02.8	2	52	39	14	19 56	14 48 46	43 66	
5	255	16.5	+6 56.5	161	43.5	-23 02.8	0	50	18 36	19 10	19 50	14 37 47	22 53 66	
6	270	16.7	+6 55.6	176	09.2	-23 02.8	0	45	18 31	19 01	19 36	14 15 49	23 15 63	
7	285	16.9	54.7	190	34.8	02.6	2	40	26	18 53	26	13 58 50	32 62	
8	300	17.1	53.7	205	00.6	02.2	4	35	22	47	18	43 51	23 47 60	
9	315	17.3	52.8	219	26.3	01.7	5	30	18	42	11	30 52	** ** *	
10	330	17.5	51.9	233	52.2	01.1	6	20	12	34	19 00	13 08 53	** ** *	
11	345	17.7	+6 51.0	248	18.0	-23 00.3	8	10 N	18 07	18 28	18 53	12 49 54	** ** *	
12	0	17.9	+6 50.0	262	43.9	-22 59.4	9	0	18 02	18 23	18 47	12 31 55	0 01 57	
13	15	18.2	49.1	277	09.8	58.3	11	10 S	17 57	18	43	12 13 56	19 56	
14	30	18.4	48.2	291	35.8	57.1	12	20	52	15	40	11 54 57	0 38 56	
15	45	18.6	47.2	306	01.9	55.8	13	30	47	11	39	32 59	1 00 55	
16	60	18.8	46.3	320	27.9	54.4	14	35	44	09	39	19 59	13 55	
17	75	19.0	+6 45.4	334	54.1	-22 52.8	16	40	17 40	18 07	18 39	11 04 60	1 28 54	
18	90	19.2	+6 44.5	349	20.3	-22 51.0	18	45	17 36	18 06	18 40	10 47 61	1 45 54	
19	105	19.4	43.5	3	46.5	49.1	19	50	32	04	41	25 62	2 07 53	
20	120	19.6	42.6	18	12.8	47.1	20	52	29	03	42	14 64	18 52	
21	135	19.8	41.7	32	39.1	45.0	21	54	27	02	43	10 03 64	29 52	
22	150	20.0	40.8	47	05.5	42.7	23	56	24	02	45	9 49 65	43 51	
23	165	20.2	39.8	61	31.9	40.3	24	58	21	01	46	34 65	2 59 50	
24	180	20.5	+6 38.9	75	58.4	-22 37.8	25	60 S	17 18	18 00	18 48	9 15 67	3 17 49	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 1 ^h 04 ^m 8		Mag: -3.9 PMG: 12 ^h 21 ^m		Mag: +1.4 PMG: 8 ^h 37 ^m		Mag: -2.7 PMG: 3 ^h 38 ^m		Mag: +0.9 PMG: 14 ^h 04 ^m					
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	343	45.5	174	45.1	+6 15.3	230	40.2	+22 30.2	305	25.1	+13 34.8	148	29.8	-4 02.2
1	358	48.0	189	44.7	14.1	245	41.0	30.0	320	27.6	34.8	163	32.1	02.3
2	13	50.4	204	44.3	12.9	260	41.8	29.8	335	30.1	34.8	178	34.3	02.4
3	28	52.9	219	43.9	11.7	275	42.6	29.6	350	32.6	34.8	193	36.5	02.5
4	43	55.4	234	43.5	10.4	290	43.3	29.4	5	35.1	34.8	208	38.7	02.6
5	58	57.8	249	43.1	+6 09.2	305	44.1	+22 29.1	20	37.6	+13 34.7	223	40.9	-4 02.8
6	74	00.3	264	42.7	+6 08.0	320	44.9	+22 28.9	35	40.1	+13 34.7	238	43.1	-4 02.9
7	89	02.7	279	42.3	06.8	335	45.6	28.7	50	42.6	34.7	253	45.4	03.0
8	104	05.2	294	41.9	05.5	350	46.4	28.5	65	45.1	34.7	268	47.6	03.1
9	119	07.7	309	41.5	04.3	5	47.2	28.3	80	47.7	34.6	283	49.8	03.2
10	134	10.1	324	41.1	03.1	20	48.0	28.1	95	50.2	34.6	298	52.0	03.3
11	149	12.6	339	40.7	+6 01.9	35	48.7	+22 27.9	110	52.7	+13 34.6	313	54.2	-4 03.4
12	164	15.1	354	40.3	+6 00.6	50	49.5	+22 27.6	125	55.2	+13 34.6	328	56.4	-4 03.5
13	179	17.5	9	39.9	+5 59.4	65	50.3	27.4	140	57.7	34.5	343	58.6	03.6
14	194	20.0	24	39.5	58.2	80	51.0	27.2	156	00.2	34.5	359	00.8	03.7
15	209	22.5	39	39.1	57.0	95	51.8	27.0	171	02.7	34.5	14	03.1	03.8
16	224	24.9	54	38.7	55.7	110	52.6	26.8	186	05.2	34.5	29	05.3	04.0
17	239	27.4	69	38.3	+5 54.5	125	53.4	+22 26.6	201	07.8	+13 34.4	44	07.5	-4 04.1
18	254	29.9	84	37.9	+5 53.3	140	54.1	+22 26.3	216	10.3	+13 34.4	59	09.7	-4 04.2
19	269	32.3	99	37.5	52.1	155	54.9	26.1	231	12.8	34.4	74	11.9	04.3
20	284	34.8	114	37.1	50.8	170	55.7	25.9	246	15.3	34.4	89	14.1	04.4
21	299	37.2	129	36.7	49.6	185	56.5	25.7	261	17.8	34.3	104	16.3	04.5
22	314	39.7	144	36.3	48.4	200	57.2	25.5	276	20.3	34.3	119	18.6	04.6
23	329	42.2	159	35.9	47.1	215	58.0	25.2	291	22.8	34.3	134	20.8	04.7
24	344	44.6	174	35.5	+5 45.9	230	58.8	+22 25.0	306	25.4	+13 34.3	149	23.0	-4 04.8
Dif	—		-4 -12		+8 -2		+25 0		+22 -1		—		—	

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15°9 PMG: 11 ^h 58 ^m 5			Edad: 7 ^d 9	PHE { 4 ^h : 57/4 12 ^h : 57/1 20 ^h : 56/9 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	20.5	+6	38.9	75	58.4	-22	37.8	60 N	3 26	4 22	5 06	16 27	26	22 57	81
1	195	20.7		38.0	90	25.0		35.1	58	37	28	10	16 11	29	23 13	78
2	210	20.9		37.0	104	51.6		32.3	56	46	34	13	15 57	32	27	75
3	225	21.1		36.1	119	18.3		29.4	54	3 55	40	16	45	33	39	77
4	240	21.3		35.2	133	45.0		26.3	52	4 02	44	19	34	36	49	71
5	255	21.5	+6	34.3	148	11.8	-22	23.2	50	4 08	4 48	5 22	15 24	37	23 59	69
6	270	21.7	+6	33.3	162	38.6	-22	19.8	45	4 21	4 57	5 27	15 04	40	** ** *	**
7	285	21.9		32.4	177	05.6		16.4	40	32	5 04	32	14 48	42	** ** *	**
8	300	22.1		31.5	191	32.5		12.8	35	40	10	36	34	44	** ** *	**
9	315	22.4		30.5	205	59.6		09.2	30	47	15	39	22	46	0 00	59
10	330	22.6		29.6	220	26.7		05.3	20	4 57	23	45	14 01	49	21	58
11	345	22.8	+6	28.7	234	53.8	-22	01.4	10 N	5 05	5 29	5 50	13 43	51	0 40	56
12	0	23.0	+6	27.7	249	21.1	-21	57.4	0	5 10	5 34	5 55	13 26	53	0 58	54
13	15	23.2		26.8	263	48.4		53.2	10 S	14	39	6 00	13 09	55	1 15	53
14	30	23.4		25.9	278	15.7		48.9	20	17	42	05	12 51	57	34	51
15	45	23.6		25.0	292	43.2		44.5	30	18	46	10	31	59	1 55	49
16	60	23.8		24.0	307	10.6		39.9	35	18	48	13	18	61	2 08	47
17	75	24.0	+6	23.1	321	38.2	-21	35.3	40	5 18	5 49	6 16	12 04	63	2 22	46
18	90	24.3	+6	22.2	336	05.8	-21	30.5	45	5 17	5 51	6 20	11 48	64	2 39	45
19	105	24.5		21.2	350	33.5		25.6	50	15	52	25	27	68	3 00	42
20	120	24.7		20.3	5	01.3		20.6	52	14	53	27	18	68	10	41
21	135	24.9		19.4	19	29.2		15.5	54	13	54	29	11 07	70	21	40
22	150	25.1		18.4	33	57.1		10.3	56	12	54	32	10 54	72	34	38
23	165	25.3		17.5	48	25.0	-21	05.0	58	10	55	34	39	75	3 49	35
24	180	25.5	+6	16.6	62	53.1	-20	59.5	60 S	5 08	5 56	6 38	10 22	78	4 06	33

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO										
	PMG 1 ^h 00 ^m 9		Mag: -3.9 PMG: 12 ^h 22 ^m		Mag: +1.4 PMG: 8 ^h 36 ^m		Mag: -2.7 PMG: 3 ^h 34 ^m		Mag: +0.9 PMG: 14 ^h 00 ^m										
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec									
h	°	'	°	'	°	'	°	'	°	'									
0	344	44.6	174	35.5	+5	45.9	230	58.8	+22	25.0	306	25.4	+13	34.3	149	23.0	-4	04.8	
1	359	47.1	189	35.1		44.7	245	59.6		24.8	321	27.9		34.2	164	25.2		04.9	
2	14	49.6	204	34.7		43.5	261	00.4		24.6	336	30.4		34.2	179	27.4		05.0	
3	29	52.0	219	34.3		42.2	276	01.1		24.4	351	32.9		34.2	194	29.6		05.2	
4	44	54.5	234	33.9		41.0	291	01.9		24.2	6	35.4		34.2	209	31.8		05.3	
5	59	57.0	249	33.5	+5	39.8	306	02.7	+22	23.9	21	37.9	+13	34.1	224	34.0	-4	05.4	
6	74	59.4	264	33.1	+5	38.5	321	03.5	+22	23.7	36	40.5	+13	34.1	239	36.3	-4	05.5	
7	90	01.9	279	32.7		37.3	336	04.2		23.5	51	43.0		34.1	254	38.5		05.6	
8	105	04.4	294	32.3		36.1	351	05.0		23.3	66	45.5		34.1	269	40.7		05.7	
9	120	06.8	309	31.9		34.8	6	05.8		23.0	81	48.0		34.0	284	42.9		05.8	
10	135	09.3	324	31.5		33.6	21	06.6		22.8	96	50.5		34.0	299	45.1		05.9	
11	150	11.7	339	31.1	+5	32.4	36	07.4	+22	22.6	111	53.0	+13	34.0	314	47.3	-4	06.0	
12	165	14.2	354	30.7	+5	31.2	51	08.1	+22	22.4	126	55.6	+13	34.0	329	49.5	-4	06.1	
13	180	16.7	9	30.3		29.9	66	08.9		22.2	141	58.1		33.9	344	51.7		06.2	
14	195	19.1	24	29.9		28.7	81	09.7		21.9	157	00.6		33.9	359	54.0		06.4	
15	210	21.6	39	29.5		27.5	96	10.5		21.7	172	03.1		33.9	14	56.2		06.5	
16	225	24.1	54	29.1		26.2	111	11.2		21.5	187	05.6		33.9	29	58.4		06.6	
17	240	26.5	69	28.7	+5	25.0	126	12.0	+22	21.3	202	08.2	+13	33.8	45	00.6	-4	06.7	
18	255	29.0	84	28.3	+5	23.8	141	12.8	+22	21.1	217	10.7	+13	33.8	60	02.8	-4	06.8	
19	270	31.5	99	28.0		22.5	156	13.6		20.8	232	13.2		33.8	75	05.0		06.9	
20	285	33.9	114	27.6		21.3	171	14.4		20.6	247	15.7		33.7	90	07.2		07.0	
21	300	36.4	129	27.2		20.1	186	15.2		20.4	262	18.2		33.7	105	09.4		07.1	
22	315	38.8	144	26.8		18.8	201	15.9		20.2	277	20.8		33.7	120	11.7		07.2	
23	330	41.3	159	26.4		17.6	216	16.7		19.9	292	23.3		33.7	135	13.9		07.3	
24	345	43.8	174	26.0	+5	16.4	231	17.5	+22	19.7	307	25.8	+13	33.6	150	16.1	-4	07.4	
Dif	—		-4	-12		+8	-2			-2	+25		0		+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 58 ^m 1			Edad: 8 ^d 9 PHE { SD: 15°5 PMG: 20 ^h 31 ^m 4 ^h : 56/7 12 ^h : 56/5 20 ^h : 56/3 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	h m m	h m m		
0	180	25.5	+6	16.6	62	53.1	−20	59.5	56	18 47	19 30	20 25	16 53 18	***	***	***		
1	195	25.7		15.6	77	21.2		53.9	56	43	24	15	40 21	***	***	***		
2	210	26.0		14.7	91	49.4		48.3	56	40	18	20 06	29 23	***	***	***		
3	225	26.2		13.8	106	17.7		42.5	58	37	13	19 58	18 26	***	***	***		
4	240	26.4		12.8	120	46.0		36.6	59	34	09	51	10 27	***	***	***		
5	255	26.6	+6	11.9	135	14.4	−20	30.6	60	18 32	19 05	19 45	16 01 30	***	***	***		
6	270	26.8	+6	11.0	149	42.9	−20	24.5	61	18 27	18 57	19 32	15 44 33		0 18 66			
7	285	27.0		10.0	164	11.5		18.3	62	23	50	23	30 36		34 63			
8	300	27.2		09.1	178	40.1		12.0	63	19	45	15	18 39		47 61			
9	315	27.4		08.2	193	08.8	−20	05.6	64	16	40	19 08	15 08 40		0 59 59			
10	330	27.7		07.2	207	37.6	−19	59.1	65	10	33	18 58	14 50 43		1 19 56			
11	345	27.9	+6	06.3	222	06.5	−19	52.5	66	18 06	18 27	18 51	14 34 47		1 36 54			
12	0	28.1	+6	05.4	236	35.4	−19	45.8	67	18 01	18 22	18 46	14 19 49		1 52 51			
13	15	28.3		04.4	251	04.4		39.0	68	17 57	18	43	14 04 52		2 08 49			
14	30	28.5		03.5	265	33.5		32.1	69	20	53	15 41	13 48 55		25 46			
15	45	28.7		02.6	280	02.6		25.1	70	30	48	12 40	30 58		44 43			
16	60	28.9		01.6	294	31.8		18.0	71	35	45	11 40	19 61		2 55 42			
17	75	29.2	+6	00.7	309	01.1	−19	10.8	72	17 42	18 09	18 41	13 07 63		3 08 40			
18	90	29.4	+5	59.7	323	30.5	−19	03.6	72	17 39	18 08	18 42	12 52 66		3 24 36			
19	105	29.6		58.8	338	00.0	−18	56.2	74	35	07	44	35 69		42 33			
20	120	29.8		57.9	352	29.5		48.7	75	33	06	45	26 71		3 51 32			
21	135	30.0		56.9	6	59.1		41.2	75	31	06	47	17 73		4 01 29			
22	150	30.2		56.0	21	28.7		33.5	77	28	05	49	12 06 76		12 27			
23	165	30.4		55.1	35	58.5		25.8	77	26	05	50	11 54 78		24 25			
24	180	30.7	+5	54.1	50	28.3	−18	18.0	78	17 23	18 05	18 53	11 40 82		4 39 22			
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO					
	PMG: 0 ^h 56 ^m 9			Mag: −3.9 PMG: 12 ^h 23 ^m			Mag: +1.4 PMG: 8 ^h 34 ^m			Mag: −2.7 PMG: 3 ^h 30 ^m			Mag: +0.9 PMG: 13 ^h 57 ^m					
	hG ♈			hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	345	43.8	174	26.0	+5	16.4	231	17.5	+22	19.7	307	25.8	+13	33.6	150	16.1	−4	07.4
1	0	46.2	189	25.6		15.1	246	18.3		19.5	322	28.3		33.6	165	18.3		07.6
2	15	48.7	204	25.2		13.9	261	19.1		19.3	337	30.9		33.6	180	20.5		07.7
3	30	51.2	219	24.8		12.6	276	19.8		19.0	352	33.4		33.6	195	22.7		07.8
4	45	53.6	234	24.4		11.4	291	20.6		18.8	7	35.9		33.5	210	24.9		07.9
5	60	56.1	249	24.0	+5	10.2	306	21.4	+22	18.6	22	38.4	+13	33.5	225	27.1	−4	08.0
6	75	58.6	264	23.6	+5	08.9	321	22.2	+22	18.4	37	41.0	+13	33.5	240	29.3	−4	08.1
7	91	01.0	279	23.2		07.7	336	23.0		18.1	52	43.5		33.4	255	31.6		08.2
8	106	03.5	294	22.8		06.5	351	23.8		17.9	67	46.0		33.4	270	33.8		08.3
9	121	06.0	309	22.5		05.2	6	24.5		17.7	82	48.5		33.4	285	36.0		08.4
10	136	08.4	324	22.1		04.0	21	25.3		17.4	97	51.1		33.4	300	38.2		08.5
11	151	10.9	339	21.7	+5	02.7	36	26.1	+22	17.2	112	53.6	+13	33.3	315	40.4	−4	08.6
12	166	13.3	354	21.3	+5	01.5	51	26.9	+22	17.0	127	56.1	+13	33.3	330	42.6	−4	08.8
13	181	15.8	9	20.9	+5	00.3	66	27.7		16.8	142	58.7		33.3	345	44.8		08.9
14	196	18.3	24	20.5	+4	59.0	81	28.5		16.5	158	01.2		33.2	0	47.0		09.0
15	211	20.7	39	20.1		57.8	96	29.2		16.3	173	03.7		33.2	15	49.2		09.1
16	226	23.2	54	19.7		56.6	111	30.0		16.1	188	06.2		33.2	30	51.5		09.2
17	241	25.7	69	19.3	+4	55.3	126	30.8	+22	15.8	203	08.8	+13	33.2	45	53.7	−4	09.3
18	256	28.1	84	18.9	+4	54.1	141	31.6	+22	15.6	218	11.3	+13	33.1	60	55.9	−4	09.4
19	271	30.6	99	18.5		52.8	156	32.4		15.4	233	13.8		33.1	75	58.1		09.5
20	286	33.1	114	18.2		51.6	171	33.2		15.2	248	16.4		33.1	91	00.3		09.6
21	301	35.5	129	17.8		50.4	186	34.0		14.9	263	18.9		33.0	106	02.5		09.7
22	316	38.0	144	17.4		49.1	201	34.8		14.7	278	21.4		33.0	121	04.7		09.9
23	331	40.5	159	17.0		47.9	216	35.5		14.5	293	23.9		33.0	136	06.9		10.0
24	346	42.9	174	16.6	+4	46.6	231	36.3	+22	14.2	308	26.5	+13	32.9	151	09.1	−4	10.1
Dif	—			−4 −12			+8 −2			+25 0			+22 −1					

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15'9 PMG: 11 ^h 57 ^m 8			Edad: 9 ^d 9 PHE { SD: 15'3 PMG: 21 ^h 20 ^m 4 ^h : 56'1 12 ^h : 56'0 20 ^h : 55'8 R°: 46 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico		Civil	Hora		R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	180	30.7	+5 54.1	50	28.3	-18 18.0	79	60 N	3 32	4 27	5 10	17 11	12	0 18	83		
1	195	30.9	53.2	64	58.2 ¹⁰⁹	10.1	79	58	42	33	14	17 01	16	31	79		
2	210	31.1	52.3	79	28.2 ¹¹⁰	-18 02.1	80	56	51	39	17	16 52	18	42	76		
3	225	31.3	51.3	93	58.2 ¹¹⁰	-17 54.0	81	54	3 59	43	20	44 21		0 51	74		
4	240	31.5	50.4	108	28.3 ¹¹¹	45.9	81	52	4 06	48	22	37 23		1 00	71		
5	255	31.7	+5 49.4	122	58.5 ¹¹²	-17 37.6	83	50	4 12	4 52	5 25	16 31	24	1 08	69		
6	270	31.9	+5 48.5	137	28.7 ¹¹²	-17 29.3	83	45	4 24	5 00	5 30	16 17	29	1 24	66		
7	285	32.2	47.6	151	59.1 ¹¹⁴	20.9	84	40	34	06	34	16 06	32	37	63		
8	300	32.4	46.6	166	29.5 ¹¹⁴	12.4	85	35	42	12	37	15 57	33	48	61		
9	315	32.6	45.7	180	59.9 ¹¹⁴	-17 03.9	85	30	48	16	41	48 36		1 58	58		
10	330	32.8	44.7	195	30.5 ¹¹⁶	-16 55.2	87	20	4 58	24	46	33 40		2 15	54		
11	345	33.0	+5 43.8	210	01.1 ¹¹⁶	-16 46.5	87	10 N	5 05	5 29	5 50	15 21	43	2 30	51		
12	0	33.2	+5 42.9	224	31.8 ¹¹⁷	-16 37.8	87	0	5 10	5 34	5 55	15 08	47	2 43	48		
13	15	33.5	41.9	239	02.6 ¹¹⁸	28.9	89	10 S	13	38	5 59	14 56	50	2 57	45		
14	30	33.7	41.0	253	33.4 ¹¹⁸	20.0	89	20	15	41	6 03	43 54		3 11	42		
15	45	33.9	40.1	268	04.3 ¹¹⁹	11.0	90	30	16	44	07	28 58		27	39		
16	60	34.1	39.1	282	35.3 ¹²⁰	-16 01.9	91	35	16	45	10	20 59		37	36		
17	75	34.3	+5 38.2	297	06.3 ¹²⁰	-15 52.8	91	40	5 15	5 46	6 13	14 10	62	3 48	33		
18	90	34.5	+5 37.2	311	37.4 ¹²¹	-15 43.5	93	45	5 13	5 47	6 16	13 58	65	4 00	31		
19	105	34.7	36.3	326	08.6 ¹²²	34.3	92	50	11	48	20	44 69		15	27		
20	120	35.0	35.4	340	39.8 ¹²²	24.9	94	52	10	49	22	37 72		23	25		
21	135	35.2	34.4	355	11.1 ¹²³	15.5	94	54	08	49	24	30 73		30	24		
22	150	35.4	33.5	9	42.5 ¹²⁴	-15 06.0	95	56	06	49	26	22 75		39	21		
23	165	35.6	32.5	24	14.0 ¹²⁵	-14 56.5	95	58	04	50	29	12 79		4 49	18		
24	180	35.8	+5 31.6	38	45.5 ¹²⁵	-14 46.9	96	60 S	5 02	5 50	6 32	13 02	81	5 01	15		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO					
	PMG 0 ^h 53 ^m 0		Mag: -3.9 PMG: 12 ^h 23 ^m			Mag: +1.4 PMG: 8 ^h 33 ^m			Mag: -2.7 PMG: 3 ^h 26 ^m			Mag: +0.9 PMG: 13 ^h 53 ^m					
	hG ♈		hG ♀ Dec			hG ♂ Dec			hG ♃ Dec			hG ♄ Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	346	42.9	174	16.6	+4 46.6	231	36.3	+22 14.2	308	26.5	+13 32.9	151	09.1	-4 10.1			
1	1	45.4	189	16.2	45.4	246	37.1	14.0	323	29.0	32.9	166	11.3	10.2			
2	16	47.8	204	15.8	44.2	261	37.9	13.8	338	31.5	32.9	181	13.6	10.3			
3	31	50.3	219	15.4	42.9	276	38.7	13.5	353	34.1	32.9	196	15.8	10.4			
4	46	52.8	234	15.1	41.7	291	39.5	13.3	8	36.6	32.8	211	18.0	10.5			
5	61	55.2	249	14.7	+4 40.4	306	40.3	+22 13.1	23	39.1	+13 32.8	226	20.2	-4 10.6			
6	76	57.7	264	14.3	+4 39.2	321	41.1	+22 12.8	38	41.7	+13 32.8	241	22.4	-4 10.7			
7	92	00.2	279	13.9	37.9	336	41.8	12.6	53	44.2	32.7	256	24.6	10.8			
8	107	02.6	294	13.5	36.7	351	42.6	12.4	68	46.7	32.7	271	26.8	11.0			
9	122	05.1	309	13.1	35.5	6	43.4	12.1	83	49.3	32.7	286	29.0	11.1			
10	137	07.6	324	12.7	34.2	21	44.2	11.9	98	51.8	32.6	301	31.2	11.2			
11	152	10.0	339	12.3	+4 33.0	36	45.0	+22 11.7	113	54.3	+13 32.6	316	33.4	-4 11.3			
12	167	12.5	354	12.0	+4 31.7	51	45.8	+22 11.4	128	56.9	+13 32.6	331	35.7	-4 11.4			
13	182	15.0	9	11.6	30.5	66	46.6	11.2	143	59.4	32.5	346	37.9	11.5			
14	197	17.4	24	11.2	29.2	81	47.4	11.0	159	02.0	32.5	1	40.1	11.6			
15	212	19.9	39	10.8	28.0	96	48.2	10.7	174	04.5	32.5	16	42.3	11.7			
16	227	22.3	54	10.4	26.7	111	49.0	10.5	189	07.0	32.5	31	44.5	11.8			
17	242	24.8	69	10.0	+4 25.5	126	49.7	+22 10.3	204	09.6	+13 32.4	46	46.7	-4 11.9			
18	257	27.3	84	09.6	+4 24.3	141	50.5	+22 10.0	219	12.1	+13 32.4	61	48.9	-4 12.1			
19	272	29.7	99	09.2	23.0	156	51.3	09.8	234	14.6	32.4	76	51.1	12.2			
20	287	32.2	114	08.9	21.8	171	52.1	09.6	249	17.2	32.3	91	53.3	12.3			
21	302	34.7	129	08.5	20.5	186	52.9	09.3	264	19.7	32.3	106	55.5	12.4			
22	317	37.1	144	08.1	19.3	201	53.7	09.1	279	22.3	32.3	121	57.7	12.5			
23	332	39.6	159	07.7	18.0	216	54.5	08.9	294	24.8	32.2	136	59.9	12.6			
24	347	42.1	174	07.3	+4 16.8	231	55.3	+22 08.6	309	27.3	+13 32.2	152	02.2	-4 12.7			
Dif	—		-4 -12			+8 -2			+25 0			+22 -1					

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna			
	SD: 15°9 PMG: 11 ^h 57 ^m 4			Edad: 10 ^d 9 SD: 15°2 PMG: 22 ^h 06 ^m	PHE { 4 ^h : 55/6 12 ^h : 55/5 20 ^h : 55/3 R°: 44 ^m												
	hG ☉	Dec				hG ☾			Dif	Dec	Dif	Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	h	m	h	m	h	m	m	h	m	m
0	180	35.8	+5	31.6	38	45.5	-14 46.9	60 N	18 41	19 24	20 18	17 23	10		1 41	81	
1	195	36.0		30.7	53	17.1 ¹²⁶	37.2 ⁹⁷	58	37	18	08	17	12		50	78	
2	210	36.3		29.7	67	48.7 ¹²⁶	27.5 ⁹⁷	56	35	13	20 00	10	16		1 58	75	
3	225	36.5		28.8	82	20.4 ¹²⁷	17.7 ⁹⁸	54	32	08	19 52	05	17		2 05	73	
4	240	36.7		27.8	96	52.2 ¹²⁸	-14 07.9 ⁹⁸	52	30	04	46	17 00	19		11	71	
5	255	36.9	+5	26.9	111	24.0 ¹²⁸	-13 58.0 ⁹⁹	50	18 28	19 01	19 40	16 55	22		2 17	69	
6	270	37.1	+5	25.9	125	55.9 ¹²⁹	-13 48.0 ¹⁰⁰	45	18 23	18 53	19 28	16 46	25		2 30	64	
7	285	37.3		25.0	140	27.9 ¹³⁰	38.0 ¹⁰⁰	40	19	47	19	38	28		40	61	
8	300	37.6		24.1	154	59.9 ¹³⁰	27.9 ¹⁰¹	35	16	42	12	30	31		49	58	
9	315	37.8		23.1	169	32.0 ¹³¹	17.8 ¹⁰¹	30	13	37	19 06	24	33		2 56	56	
10	330	38.0		22.2	184	04.2 ¹³²	-13 07.6 ¹⁰²	20	09	31	18 57	13	38		3 09	52	
11	345	38.2	+5	21.2	198	36.4 ¹³²	-12 57.4 ¹⁰²	10 N	18 04	18 26	18 50	16 04	41		3 21	48	
12	0	38.4	+5	20.3	213	08.7 ¹³³	-12 47.1 ¹⁰³	0	18 01	18 21	18 46	15 55	44		3 31	46	
13	15	38.7		19.3	227	41.0 ¹³³	36.8 ¹⁰³	10 S	17 57	18	43	46	48		42	42	
14	30	38.9		18.4	242	13.4 ¹³⁴	26.4 ¹⁰⁴	20	53	15	41	37	51		3 53	38	
15	45	39.1		17.5	256	45.8 ¹³⁴	16.0 ¹⁰⁴	30	49	13	41	26	55		4 06	34	
16	60	39.3		16.5	271	18.3 ¹³⁵	-12 05.5 ¹⁰⁵	35	47	12	41	19	58		13	32	
17	75	39.5	+5	15.6	285	50.9 ¹³⁶	-11 55.0 ¹⁰⁵	40	17 44	18 11	18 42	15 12	61		4 21	30	
18	90	39.7	+5	14.6	300	23.5 ¹³⁶	-11 44.4 ¹⁰⁶	45	17 41	18 10	18 44	15 03	65		4 31	26	
19	105	40.0		13.7	314	56.2 ¹³⁷	33.8 ¹⁰⁶	50	37	10	47	14 53	68		42	23	
20	120	40.2		12.7	329	28.9 ¹³⁷	23.1 ¹⁰⁷	52	36	10	49	49	69		48	21	
21	135	40.4		11.8	344	01.7 ¹³⁸	12.4 ¹⁰⁷	54	34	09	50	43	72		4 54	18	
22	150	40.6		10.9	358	34.6 ¹³⁹	-11 01.7 ¹⁰⁷	56	32	09	52	37	75		5 00	17	
23	165	40.8		09.9	13	07.4 ¹³⁸	-10 50.9 ¹⁰⁸	58	30	09	55	31	77		07	15	
24	180	41.1	+5	09.0	27	40.4 ¹⁴⁰	-10 40.1 ¹⁰⁸	60 S	17 27	18 09	18 57	14 23	81		5 16	11	
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO				
	PMG: 0 ^h 49 ^m 1			Mag: -3.9 PMG: 12 ^h 24 ^m			Mag: +1.4 PMG: 8 ^h 32 ^m			Mag: -2.8 PMG: 3 ^h 22 ^m			Mag: +0.9 PMG: 13 ^h 50 ^m				
	hG ♈		Dec	hG ♀		Dec	hG ♂		Dec	hG ♃		Dec	hG ♄		Dec		
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°	'	
0	347	42.1	174 07.3	+4	16.8	231 55.3	+22	08.6	309 27.3	+13	32.2	152 02.2	-4	12.7			
1	2	44.5	189 06.9		15.5	246 56.1		08.4	324 29.9		32.2	167 04.4		12.8			
2	17	47.0	204 06.6		14.3	261 56.9		08.2	339 32.4		32.1	182 06.6		12.9			
3	32	49.4	219 06.2		13.0	276 57.7		07.9	354 35.0		32.1	197 08.8		13.0			
4	47	51.9	234 05.8		11.8	291 58.5		07.7	9 37.5		32.1	212 11.0		13.2			
5	62	54.4	249 05.4	+4	10.5	306 59.3	+22	07.4	24 40.0	+13	32.0	227 13.2	-4	13.3			
6	77	56.8	264 05.0	+4	09.3	322 00.1	+22	07.2	39 42.6	+13	32.0	242 15.4	-4	13.4			
7	92	59.3	279 04.6		08.0	337 00.8		07.0	54 45.1		32.0	257 17.6		13.5			
8	108	01.8	294 04.3		06.8	352 01.6		06.7	69 47.7		31.9	272 19.8		13.6			
9	123	04.2	309 03.9		05.5	7 02.4		06.5	84 50.2		31.9	287 22.0		13.7			
10	138	06.7	324 03.5		04.3	22 03.2		06.2	99 52.7		31.9	302 24.2		13.8			
11	153	09.2	339 03.1	+4	03.0	37 04.0	+22	06.0	114 55.3	+13	31.8	317 26.4	-4	13.9			
12	168	11.6	354 02.7	+4	01.8	52 04.8	+22	05.8	129 57.8	+13	31.8	332 28.7	-4	14.0			
13	183	14.1	9 02.3	+4	00.6	67 05.6		05.5	145 00.4		31.8	347 30.9		14.1			
14	198	16.6	24 02.0	+3	59.3	82 06.4		05.3	160 02.9		31.7	2 33.1		14.3			
15	213	19.0	39 01.6		58.1	97 07.2		05.0	175 05.5		31.7	17 35.3		14.4			
16	228	21.5	54 01.2		56.8	112 08.0		04.8	190 08.0		31.7	32 37.5		14.5			
17	243	23.9	69 00.8	+3	55.6	127 08.8	+22	04.6	205 10.6	+13	31.6	47 39.7	-4	14.6			
18	258	26.4	84 00.4	+3	54.3	142 09.6	+22	04.3	220 13.1	+13	31.6	62 41.9	-4	14.7			
19	273	28.9	99 00.0		53.1	157 10.4		04.1	235 15.6		31.6	77 44.1		14.8			
20	288	31.3	113 59.7		51.8	172 11.2		03.8	250 18.2		31.5	92 46.3		14.9			
21	303	33.8	128 59.3		50.5	187 12.0		03.6	265 20.7		31.5	107 48.5		15.0			
22	318	36.3	143 58.9		49.3	202 12.8		03.4	280 23.3		31.4	122 50.7		15.1			
23	333	38.7	158 58.5		48.0	217 13.6		03.1	295 25.8		31.4	137 52.9		15.3			
24	348	41.2	173 58.1	+3	46.8	232 14.4	+22	02.9	310 28.4	+13	31.4	152 55.1	-4	15.4			
Dif	—		-4		-12	+8		-2	+25		0	+22			-1		

UT	SOL			LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15 ^h 9			Edad: 11 ^d 9 PHE { 4 ^h : 55 ^m /2 12 ^h : 55 ^m /0 20 ^h : 54 ^m /9 R°: 42 ^m													
	PMG: 11 ^h 57 ^m 1			SD: 15 ^h 0 PMG: 22 ^h 50 ^m													
	hG ☉		Dec	hG ☾		Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	°	'	°	°	'	°	h	m	h	m	h	m	h	m
0	180	41.1	+5 09.0	27	40.4	-10 40.1	29.2	109	60 N	3 38	4 32	5 15	17 33	9	3 02	79	
1	195	41.3	08.0	42	13.4 ¹⁴⁰		29.2	109	58	47	38	18	29	11	08	76	
2	210	41.5	07.1	56	46.4 ¹⁴⁰		18.3	109	56	3 56	43	21	26	13	13	74	
3	225	41.7	06.1	71	19.5 ¹⁴¹	-10 07.4 ¹⁰⁹			54	4 03	47	23	22	16	18	71	
4	240	41.9	05.2	85	52.7 ¹⁴²	-9 56.4 ¹¹⁰			52	09	51	26	19	18	22	70	
5	255	42.1	+5 04.2	100	25.9 ¹⁴²	-9 45.4 ¹¹⁰			50	4 15	4 55	5 28	17 17	19	3 26	68	
6	270	42.4	+5 03.3	114	59.1 ¹⁴²	-9 34.3 ¹¹¹			45	4 27	5 02	5 32	17 11	22	3 34	64	
7	285	42.6	02.4	129	32.4 ¹⁴³	23.3 ¹¹⁰			40	36	08	36	06	26	41	60	
8	300	42.8	01.4	144	05.8 ¹⁴⁴	12.1 ¹¹²			35	43	13	39	17 01	29	47	58	
9	315	43.0	+5 00.5	158	39.2 ¹⁴⁴	-9 01.0 ¹¹¹			30	49	17	42	16 57	31	3 52	55	
10	330	43.2	+4 59.5	173	12.6 ¹⁴⁴	-8 49.8 ¹¹²			20	4 58	24	46	51	35	4 01	51	
11	345	43.5	+4 58.6	187	46.1 ¹⁴⁵	-8 38.6 ¹¹²			10 N	5 05	5 29	5 50	16 45	39	4 09	47	
12	0	43.7	+4 57.6	202	19.6 ¹⁴⁵	-8 27.4 ¹¹²			0	5 09	5 33	5 54	16 39	43	4 17	43	
13	15	43.9	56.7	216	53.2 ¹⁴⁶	16.1 ¹¹³			10 S	12	36	5 57	34	46	24	40	
14	30	44.1	55.7	231	26.8 ¹⁴⁶	-8 04.8 ¹¹³			20	13	39	6 01	28	50	31	37	
15	45	44.3	54.8	246	00.4 ¹⁴⁶	-7 53.5 ¹¹³			30	13	41	05	21	54	40	32	
16	60	44.6	53.8	260	34.1 ¹⁴⁷	42.1 ¹¹⁴			35	13	42	07	17	57	45	30	
17	75	44.8	+4 52.9	275	07.9 ¹⁴⁸	-7 30.8 ¹¹³			40	5 11	5 43	6 10	16 13	59	4 51	27	
18	90	45.0	+4 51.9	289	41.6 ¹⁴⁷	-7 19.4 ¹¹⁴			45	5 10	5 43	6 13	16 08	62	4 57	24	
19	105	45.2	51.0	304	15.4 ¹⁴⁸	-7 07.9 ¹¹⁵			50	07	44	16	16 01	67	5 05	20	
20	120	45.4	50.0	318	49.3 ¹⁴⁹	-6 56.5 ¹¹⁴			52	05	44	18	15 58	69	09	18	
21	135	45.6	49.1	333	23.2 ¹⁴⁹	45.0 ¹¹⁵			54	03	44	19	55	71	12	17	
22	150	45.9	48.2	347	57.1 ¹⁴⁹	33.5 ¹¹⁵			56	5 01	44	21	52	73	17	14	
23	165	46.1	47.2	2	31.1 ¹⁵⁰	22.0 ¹¹⁵			58	4 59	44	23	48	75	22	11	
24	180	46.3	+4 46.3	17	05.1 ¹⁵⁰	-6 10.5 ¹¹⁵			60 S	4 56	5 44	6 26	15 44	78	5 27	9	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG 0 ^h 45 ^m 1		Mag: -3.9 PMG: 12 ^h 24 ^m		Mag: +1.4 PMG: 8 ^h 31 ^m		Mag: -2.8 PMG: 3 ^h 18 ^m		Mag: +0.9 PMG: 13 ^h 46 ^m						
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄						
h	°	'	°	°	°	°	°	°	°	°					
0	348	41.2	173 58.1	+3 46.8	232 14.4	+22 02.9	310 28.4	+13 31.4	152 55.1	-4 15.4					
1	3	43.7	188 57.8	45.5	247 15.2	02.6	325 30.9	31.3	167 57.3	15.5					
2	18	46.1	203 57.4	44.3	262 16.0	02.4	340 33.5	31.3	182 59.6	15.6					
3	33	48.6	218 57.0	43.0	277 16.8	02.1	355 36.0	31.3	198 01.8	15.7					
4	48	51.0	233 56.6	41.8	292 17.6	01.9	10 38.6	31.2	213 04.0	15.8					
5	63	53.5	248 56.2	+3 40.5	307 18.4	+22 01.7	25 41.1	+13 31.2	228 06.2	-4 15.9					
6	78	56.0	263 55.9	+3 39.3	322 19.2	+22 01.4	40 43.7	+13 31.2	243 08.4	-4 16.0					
7	93	58.4	278 55.5	38.0	337 20.0	01.2	55 46.2	31.1	258 10.6	16.1					
8	109	00.9	293 55.1	36.8	352 20.8	00.9	70 48.8	31.1	273 12.8	16.3					
9	124	03.4	308 54.7	35.5	7 21.6	00.7	85 51.3	31.1	288 15.0	16.4					
10	139	05.8	323 54.3	34.3	22 22.4	00.4	100 53.9	31.0	303 17.2	16.5					
11	154	08.3	338 54.0	+3 33.0	37 23.2	+22 00.2	115 56.4	+13 31.0	318 19.4	-4 16.6					
12	169	10.8	353 53.6	+3 31.8	52 24.0	+21 59.9	130 59.0	+13 30.9	333 21.6	-4 16.7					
13	184	13.2	8 53.2	30.5	67 24.8	59.7	146 01.5	30.9	348 23.8	16.8					
14	199	15.7	23 52.8	29.2	82 25.6	59.4	161 04.1	30.9	3 26.0	16.9					
15	214	18.2	38 52.4	28.0	97 26.4	59.2	176 06.6	30.8	18 28.2	17.0					
16	229	20.6	53 52.1	26.7	112 27.2	59.0	191 09.2	30.8	33 30.4	17.1					
17	244	23.1	68 51.7	+3 25.5	127 28.0	+21 58.7	206 11.7	+13 30.8	48 32.6	-4 17.2					
18	259	25.5	83 51.3	+3 24.2	142 28.8	+21 58.5	221 14.3	+13 30.7	63 34.9	-4 17.4					
19	274	28.0	98 50.9	23.0	157 29.6	58.2	236 16.8	30.7	78 37.1	17.5					
20	289	30.5	113 50.5	21.7	172 30.4	58.0	251 19.4	30.7	93 39.3	17.6					
21	304	32.9	128 50.2	20.5	187 31.2	57.7	266 22.0	30.6	108 41.5	17.7					
22	319	35.4	143 49.8	19.2	202 32.0	57.5	281 24.5	30.6	123 43.7	17.8					
23	334	37.9	158 49.4	18.0	217 32.8	57.2	296 27.1	30.5	138 45.9	17.9					
24	349	40.3	173 49.0	+3 16.7	232 33.6	+21 57.0	311 29.6	+13 30.5	153 48.1	-4 18.0					
Dif	—		-4	-13	+8		-2	+26		0	+22		-		-1

UT	SOL		☉ LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15'9		Edad: 12 ^d 9 PHE { 4 ^h : 54'8 12 ^h : 54'7 20 ^h : 54'6 R°: 41 ^m											
	PMG: 11 ^h 56 ^m 7		SD: 14'9 PMG: 23 ^h 32 ^m											
	hG ☉	Dec	hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	h m	h m	h m	h m m		h m m	
0	180	46.3	+4	46.3	17	05.1	-6 10.5	60 N	18 35	19 17	20 11	17 42 8	4 21 78	
1	195	46.5		45.3	31	39.1 ¹⁵⁰	-5 58.9 ¹¹⁶	58	32	12	20 01	40 11	24 75	
2	210	46.7		44.4	46	13.2 ¹⁵¹	47.4 ¹¹⁵	56	29	07	19 54	39 13	27 72	
3	225	47.0		43.4	60	47.3 ¹⁵¹	35.8 ¹¹⁶	54	27	19 03	47	38 14	29 70	
4	240	47.2		42.5	75	21.4 ¹⁵¹	24.2 ¹¹⁶	52	25	18 59	41	37 16	32 68	
5	255	47.4	+4	41.5	89	55.6 ¹⁵²	-5 12.6 ¹¹⁶	50	18 23	18 56	19 35	17 36 18	4 34 66	
6	270	47.6	+4	40.6	104	29.8 ¹⁵²	-5 00.9 ¹¹⁷	45	18 19	18 49	19 24	17 33 22	4 38 62	
7	285	47.8		39.6	119	04.0 ¹⁵²	-4 49.3 ¹¹⁶	40	16	43	16	32 25	41 59	
8	300	48.1		38.7	133	38.3 ¹⁵³	37.6 ¹¹⁷	35	13	39	09	30 28	45 56	
9	315	48.3		37.7	148	12.6 ¹⁵³	25.9 ¹¹⁷	30	11	35	19 03	28 31	47 54	
10	330	48.5		36.8	162	46.9 ¹⁵³	14.3 ¹¹⁶	20	07	29	18 55	26 34	52 49	
11	345	48.7	+4	35.8	177	21.2 ¹⁵³	-4 02.6 ¹¹⁷	10 N	18 03	18 24	18 49	17 24 38	4 56 46	
12	0	48.9	+4	34.9	191	55.6 ¹⁵⁴	-3 50.9 ¹¹⁷	0	18 00	18 21	18 45	17 22 41	5 00 42	
13	15	49.2		33.9	206	30.0 ¹⁵⁴	39.1 ¹¹⁸	10 S	17 57	18	42	20 45	04 38	
14	30	49.4		33.0	221	04.4 ¹⁵⁴	27.4 ¹¹⁷	20	54	16	41	18 49	08 34	
15	45	49.6		32.0	235	38.8 ¹⁵⁴	15.7 ¹¹⁷	30	50	14	42	15 53	12 31	
16	60	49.8		31.1	250	13.3 ¹⁵⁵	-3 03.9 ¹¹⁸	35	48	13	43	14 55	15 28	
17	75	50.1	+4	30.1	264	47.8 ¹⁵⁵	-2 52.2 ¹¹⁷	40	17 46	18 13	18 44	17 12 59	5 18 25	
18	90	50.3	+4	29.2	279	22.3 ¹⁵⁵	-2 40.5 ¹¹⁷	45	17 43	18 13	18 47	17 10 62	5 21 22	
19	105	50.5		28.2	293	56.9 ¹⁵⁶	28.7 ¹¹⁸	50	40	13	50	08 66	25 19	
20	120	50.7		27.3	308	31.4 ¹⁵⁵	16.9 ¹¹⁸	52	39	13	52	07 68	27 17	
21	135	50.9		26.3	323	06.0 ¹⁵⁶	-2 05.2 ¹¹⁷	54	38	13	54	06 69	29 15	
22	150	51.2		25.4	337	40.6 ¹⁵⁶	-1 53.4 ¹¹⁸	56	36	13	56	05 71	31 13	
23	165	51.4		24.4	352	15.2 ¹⁵⁶	41.6 ¹¹⁸	58	34	13	18 59	03 74	33 11	
24	180	51.6	+4	23.5	6	49.8 ¹⁵⁶	-1 29.9 ¹¹⁷	60 S	17 32	18 14	19 02	17 02 77	5 36 8	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 0 ^h 41 ^m 2		Mag: -3.9 PMG: 12 ^h 25 ^m			Mag: +1.4 PMG: 8 ^h 29 ^m			Mag: -2.8 PMG: 3 ^h 13 ^m			Mag: +0.9 PMG: 13 ^h 43 ^m		
	hG ♈	hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	°	°	'	°	'	°	°	°	'	°	'	°	'
0	349	40.3	173	49.0	+3	16.7	232 33.6	+21	57.0	311 29.6	+13	30.5	153 48.1	-4 18.0
1	4	42.8	188	48.7		15.4	247 34.4		56.7	326 32.2		30.5	168 50.3	18.1
2	19	45.3	203	48.3		14.2	262 35.2		56.5	341 34.7		30.4	183 52.5	18.2
3	34	47.7	218	47.9		12.9	277 36.1		56.2	356 37.3		30.4	198 54.7	18.4
4	49	50.2	233	47.5		11.7	292 36.9		56.0	11 39.8		30.4	213 56.9	18.5
5	64	52.7	248	47.1	+3	10.4	307 37.7	+21	55.7	26 42.4	+13	30.3	228 59.1	-4 18.6
6	79	55.1	263	46.8	+3	09.2	322 38.5	+21	55.5	41 45.0	+13	30.3	244 01.3	-4 18.7
7	94	57.6	278	46.4		07.9	337 39.3		55.2	56 47.5		30.2	259 03.5	18.8
8	110	00.0	293	46.0		06.6	352 40.1		55.0	71 50.1		30.2	274 05.7	18.9
9	125	02.5	308	45.6		05.4	7 40.9		54.7	86 52.6		30.2	289 07.9	19.0
10	140	05.0	323	45.3		04.1	22 41.7		54.5	101 55.2		30.1	304 10.1	19.1
11	155	07.4	338	44.9	+3	02.9	37 42.5	+21	54.2	116 57.8	+13	30.1	319 12.3	-4 19.2
12	170	09.9	353	44.5	+3	01.6	52 43.3	+21	54.0	132 00.3	+13	30.0	334 14.6	-4 19.4
13	185	12.4	8	44.1	+3	00.3	67 44.1		53.7	147 02.9		30.0	349 16.8	19.5
14	200	14.8	23	43.8	+2	59.1	82 44.9		53.5	162 05.4		30.0	4 19.0	19.6
15	215	17.3	38	43.4		57.8	97 45.7		53.2	177 08.0		29.9	19 21.2	19.7
16	230	19.8	53	43.0		56.6	112 46.5		53.0	192 10.6		29.9	34 23.4	19.8
17	245	22.2	68	42.6	+2	55.3	127 47.4	+21	52.7	207 13.1	+13	29.9	49 25.6	-4 19.9
18	260	24.7	83	42.2	+2	54.1	142 48.2	+21	52.5	222 15.7	+13	29.8	64 27.8	-4 20.0
19	275	27.1	98	41.9		52.8	157 49.0		52.2	237 18.2		29.8	79 30.0	20.1
20	290	29.6	113	41.5		51.5	172 49.8		52.0	252 20.8		29.7	94 32.2	20.2
21	305	32.1	128	41.1		50.3	187 50.6		51.7	267 23.4		29.7	109 34.4	20.4
22	320	34.5	143	40.7		49.0	202 51.4		51.5	282 25.9		29.7	124 36.6	20.5
23	335	37.0	158	40.4		47.8	217 52.2		51.2	297 28.5		29.6	139 38.8	20.6
24	350	39.5	173	40.0	+2	46.5	232 53.0	+21	50.9	312 31.1	+13	29.6	154 41.0	-4 20.7
Dif	—	—	-4	-13		+8	-3		-3	+26		0	+22	-1

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15 ^h 9 PMG: 11 ^h 56 ^m 4			Edad: 13 ^d 9 PHE { 4 ^h : 54 ^m 5 12 ^h : 54 ^m 4 20 ^h : 54 ^m 3 R°: **m												
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Náutico	Civil		Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m
0	180	51.6	+4	23.5	6	49.8	-1	29.9	60 N	3	44	4	37	5	20	17 50 8
1	195	51.8		22.5	21	24.5 ¹⁵⁷		18.1 ¹¹⁸	58	3	53	42	22		51 10	39 74
2	210	52.0		21.6	35	59.1 ¹⁵⁶		-1 06.3 ¹¹⁸	56	4	00	47	25		52 13	39 72
3	225	52.3		20.6	50	33.8 ¹⁵⁷		-0 54.6 ¹¹⁷	54		07	51	27		52 15	39 70
4	240	52.5		19.7	65	08.5 ¹⁵⁷		42.8 ¹¹⁸	52		13	55	29		53 17	40 67
5	255	52.7	+4	18.7	79	43.2 ¹⁵⁷		-0 31.0 ¹¹⁸	50	4	19	4	58	5	31	17 54 18
6	270	52.9	+4	17.8	94	17.9 ¹⁵⁷		-0 19.3 ¹¹⁷	45	4	30	5	05	5	34	17 55 23
7	285	53.1		16.8	108	52.7 ¹⁵⁸		-0 07.5 ¹¹⁸	40		38	10	38		57 25	40 59
8	300	53.4		15.8	123	27.4 ¹⁵⁷		+0 04.2 ¹¹⁷	35		45	15	40		58 28	41 55
9	315	53.6		14.9	138	02.2 ¹⁵⁸		16.0 ¹¹⁸	30		50	19	43		17 59 30	41 53
10	330	53.8		13.9	152	36.9 ¹⁵⁷		27.7 ¹¹⁷	20	4	59	25	47		18 00 35	41 49
11	345	54.0	+4	13.0	167	11.7 ¹⁵⁸		+0 39.4 ¹¹⁷	10 N	5	04	5	29	5	50	18 02 38
12	0	54.3	+4	12.0	181	46.5 ¹⁵⁸		+0 51.2 ¹¹⁸	0	5	08	5	32	5	53	18 03 42
13	15	54.5		11.1	196	21.3 ¹⁵⁸		+1 02.9 ¹¹⁷	10 S		11	35	56		05 45	42 38
14	30	54.7		10.1	210	56.1 ¹⁵⁸		14.6 ¹¹⁷	20		12	37	5	59	07 48	42 35
15	45	54.9		09.2	225	30.9 ¹⁵⁸		26.3 ¹¹⁷	30		11	39	6	03	08 53	43 30
16	60	55.1		08.2	240	05.7 ¹⁵⁸		38.0 ¹¹⁷	35		10	39	04		09 56	43 28
17	75	55.4	+4	07.3	254	40.5 ¹⁵⁸		+1 49.7 ¹¹⁷	40	5	08	5	40	6	07	18 11 58
18	90	55.6	+4	06.3	269	15.3 ¹⁵⁸		+2 01.3 ¹¹⁶	45	5	06	5	40	6	09	18 12 61
19	105	55.8		05.4	283	50.1 ¹⁵⁸		13.0 ¹¹⁷	50		02	40	12		14 65	44 18
20	120	56.0		04.4	298	25.0 ¹⁵⁹		24.6 ¹¹⁶	52	5	00	40	13		15 67	44 16
21	135	56.3		03.5	312	59.8 ¹⁵⁸		36.2 ¹¹⁶	54	4	58	39	14		15 69	44 15
22	150	56.5		02.5	327	34.6 ¹⁵⁸		47.8 ¹¹⁶	56		56	39	16		16 72	44 13
23	165	56.7		01.5	342	09.5 ¹⁵⁹		+2 59.4 ¹¹⁶	58		53	39	18		17 74	44 11
24	180	56.9	+4	00.6	356	44.3 ¹⁵⁸		+3 11.0 ¹¹⁶	60 S	4	50	5	38	6	20	18 19 76
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO				
	PMG 0 ^h 37 ^m 3		Mag: -3.9 PMG: 12 ^h 26 ^m			Mag: +1.4 PMG: 8 ^h 28 ^m			Mag: -2.8 PMG: 3 ^h 09 ^m			Mag: +0.9 PMG: 13 ^h 39 ^m				
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec			
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'		
0	350	39.5	173	40.0	+2	232	53.0	+21	312	31.1	+13	154	41.0	-4		
1	5	41.9	188	39.6	45.2	247	53.8	50.7	327	33.6	29.5	169	43.2	20.8		
2	20	44.4	203	39.2	44.0	262	54.6	50.4	342	36.2	29.5	184	45.4	20.9		
3	35	46.9	218	38.9	42.7	277	55.4	50.2	357	38.7	29.5	199	47.6	21.0		
4	50	49.3	233	38.5	41.4	292	56.3	49.9	12	41.3	29.4	214	49.8	21.1		
5	65	51.8	248	38.1	+2	307	57.1	+21	27	43.9	+13	229	52.0	-4		
6	80	54.3	263	37.7	+2	322	57.9	+21	42	46.4	+13	244	54.2	-4		
7	95	56.7	278	37.4	37.7	337	58.7	49.2	57	49.0	29.3	259	56.4	21.5		
8	110	59.2	293	37.0	36.4	352	59.5	48.9	72	51.6	29.2	274	58.6	21.6		
9	126	01.6	308	36.6	35.1	8	00.3	48.6	87	54.1	29.2	290	00.8	21.7		
10	141	04.1	323	36.3	33.9	23	01.1	48.4	102	56.7	29.2	305	03.0	21.8		
11	156	06.6	338	35.9	+2	38	01.9	+21	117	59.3	+13	320	05.2	-4		
12	171	09.0	353	35.5	+2	53	02.8	+21	133	01.8	+13	335	07.4	-4		
13	186	11.5	8	35.1	30.1	68	03.6	47.6	148	04.4	29.0	350	09.7	22.1		
14	201	14.0	23	34.8	28.8	83	04.4	47.4	163	07.0	29.0	5	11.9	22.3		
15	216	16.4	38	34.4	27.6	98	05.2	47.1	178	09.5	29.0	20	14.1	22.4		
16	231	18.9	53	34.0	26.3	113	06.0	46.8	193	12.1	28.9	35	16.3	22.5		
17	246	21.4	68	33.6	+2	128	06.8	+21	208	14.7	+13	50	18.5	-4		
18	261	23.8	83	33.3	+2	143	07.6	+21	223	17.3	+13	65	20.7	-4		
19	276	26.3	98	32.9	22.5	158	08.5	46.1	238	19.8	28.8	80	22.9	22.8		
20	291	28.7	113	32.5	21.3	173	09.3	45.8	253	22.4	28.7	95	25.1	22.9		
21	306	31.2	128	32.1	20.0	188	10.1	45.6	268	25.0	28.7	110	27.3	23.0		
22	321	33.7	143	31.8	18.7	203	10.9	45.3	283	27.5	28.7	125	29.5	23.1		
23	336	36.1	158	31.4	17.5	218	11.7	45.0	298	30.1	28.6	140	31.7	23.3		
24	351	38.6	173	31.0	+2	233	12.5	+21	313	32.7	+13	155	33.9	-4		
Dif	—		-4		-13	+8		-3	+26		0	+22		-1		

UT	SOL			☉ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna					
	SD: 15'9			Edad: 14 ^d 9 PHE { 4 ^h : 54'2 12 ^h : 54'2 20 ^h : 54'1														
	PMG: 11 ^h 56 ^m 0			SD: 14'8 PMG: 0 ^h 13 ^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		
0	180	56.9	+4	00.6	356	44.3	+3	11.0	60 N	18 28	19 11	20 03	17 58	9	6 55	77		
1	195	57.1	+3	59.6	11	19.1 ¹⁵⁸		22.6 ¹¹⁶	58	26	06	19 55	18 01	12	53	73		
2	210	57.4		58.7	25	53.9 ¹⁵⁸		34.1 ¹¹⁵	56	24	19 02	48	05	14	51	71		
3	225	57.6		57.7	40	28.8 ¹⁵⁹		45.6 ¹¹⁵	54	22	18 58	41	07	17	49	69		
4	240	57.8		56.8	55	03.6 ¹⁵⁸	+3	57.2 ¹¹⁶	52	20	55	36	10	18	47	67		
5	255	58.0	+3	55.8	69	38.4 ¹⁵⁸	+4	08.6 ¹¹⁴	50	18 19	18 52	19 31	18 12	20	6 45	65		
6	270	58.2	+3	54.9	84	13.2 ¹⁵⁸	+4	20.1 ¹¹⁵	45	18 16	18 45	19 20	18 18	23	6 42	61		
7	285	58.5		53.9	98	48.0 ¹⁵⁸		31.6 ¹¹⁵	40	13	40	12	22	26	39	58		
8	300	58.7		53.0	113	22.8 ¹⁵⁸		43.0 ¹¹⁴	35	10	36	06	26	29	36	55		
9	315	58.9		52.0	127	57.6 ¹⁵⁸	+4	54.4 ¹¹⁴	30	08	32	19 00	29	31	34	53		
10	330	59.1		51.0	142	32.4 ¹⁵⁸	+5	05.8 ¹¹⁴	20	05	27	18 53	35	35	30	49		
11	345	59.4	+3	50.1	157	07.2 ¹⁵⁸	+5	17.1 ¹¹³	10 N	18 02	18 23	18 47	18 40	39	6 27	45		
12	0	59.6	+3	49.1	171	42.0 ¹⁵⁸	+5	28.4 ¹¹³	0	17 59	18 20	18 44	18 45	42	6 23	42		
13	15	59.8		48.2	186	16.7 ¹⁵⁷		39.7 ¹¹³	10 S	57	18	42	50	45	20	39		
14	31	00.0		47.2	200	51.5 ¹⁵⁸	+5	51.0 ¹¹³	20	54	16	42	18 55	49	17	35		
15	46	00.3		46.3	215	26.2 ¹⁵⁷	+6	02.3 ¹¹³	30	51	15	43	19 01	53	13	31		
16	61	00.5		45.3	230	01.0 ¹⁵⁸		13.5 ¹¹²	35	50	15	44	05	55	11	28		
17	76	00.7	+3	44.3	244	35.7 ¹⁵⁷	+6	24.7 ¹¹²	40	17 48	18 15	18 46	19 09	58	6 08	26		
18	91	00.9	+3	43.4	259	10.4 ¹⁵⁷	+6	35.9 ¹¹²	45	17 46	18 15	18 49	19 13	62	6 05	23		
19	106	01.1		42.4	273	45.1 ¹⁵⁷		47.0 ¹¹¹	50	43	16	53	19	65	02	19		
20	121	01.4		41.5	288	19.8 ¹⁵⁷	+6	58.1 ¹¹¹	52	42	16	55	22	66	6 00	18		
21	136	01.6		40.5	302	54.5 ¹⁵⁷	+7	09.2 ¹¹¹	54	41	16	18 57	24	69	5 59	15		
22	151	01.8		39.6	317	29.1 ¹⁵⁶		20.3 ¹¹¹	56	40	17	19 00	28	71	57	13		
23	166	02.0		38.6	332	03.7 ¹⁵⁶		31.3 ¹¹⁰	58	38	17	03	31	74	55	11		
24	181	02.3	+3	37.6	346	38.4 ¹⁵⁷	+7	42.3 ¹¹⁰	60 S	17 37	18 18	19 07	19 35	76	5 52	9		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 0 ^h 33 ^m 3		Mag: -3.9 PMG: 12 ^h 26 ^m			Mag: +1.4 PMG: 8 ^h 27 ^m			Mag: -2.8 PMG: 3 ^h 05 ^m			Mag: +0.9 PMG: 13 ^h 36 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	351	38.6	173	31.0	+2	16.2	233	12.5	+21	44.8	313	32.7	+13	28.6	155	33.9	-4	23.4
1	6	41.1	188	30.7		14.9	248	13.4		44.5	328	35.3		28.5	170	36.1		23.5
2	21	43.5	203	30.3		13.7	263	14.2		44.3	343	37.8		28.5	185	38.3		23.6
3	36	46.0	218	29.9		12.4	278	15.0		44.0	358	40.4		28.5	200	40.5		23.7
4	51	48.5	233	29.5		11.1	293	15.8		43.7	13	43.0		28.4	215	42.7		23.8
5	66	50.9	248	29.2	+2	09.9	308	16.6	+21	43.5	28	45.5	+13	28.4	230	44.9	-4	23.9
6	81	53.4	263	28.8	+2	08.6	323	17.4	+21	43.2	43	48.1	+13	28.3	245	47.1	-4	24.0
7	96	55.9	278	28.4		07.3	338	18.3		43.0	58	50.7		28.3	260	49.3		24.2
8	111	58.3	293	28.0		06.1	353	19.1		42.7	73	53.3		28.2	275	51.5		24.3
9	127	00.8	308	27.7		04.8	8	19.9		42.4	88	55.8		28.2	290	53.7		24.4
10	142	03.2	323	27.3		03.5	23	20.7		42.2	103	58.4		28.1	305	55.9		24.5
11	157	05.7	338	26.9	+2	02.3	38	21.5	+21	41.9	119	01.0	+13	28.1	320	58.1	-4	24.6
12	172	08.2	353	26.6	+2	01.0	53	22.3	+21	41.6	134	03.6	+13	28.1	336	00.3	-4	24.7
13	187	10.6	8	26.2	+1	59.8	68	23.2		41.4	149	06.1		28.0	351	02.5		24.8
14	202	13.1	23	25.8		58.5	83	24.0		41.1	164	08.7		28.0	6	04.7		24.9
15	217	15.6	38	25.4		57.2	98	24.8		40.9	179	11.3		27.9	21	06.9		25.0
16	232	18.0	53	25.1		56.0	113	25.6		40.6	194	13.9		27.9	36	09.1		25.2
17	247	20.5	68	24.7	+1	54.7	128	26.4	+21	40.3	209	16.4	+13	27.8	51	11.3	-4	25.3
18	262	23.0	83	24.3	+1	53.4	143	27.3	+21	40.1	224	19.0	+13	27.8	66	13.5	-4	25.4
19	277	25.4	98	24.0		52.2	158	28.1		39.8	239	21.6		27.8	81	15.7		25.5
20	292	27.9	113	23.6		50.9	173	28.9		39.5	254	24.2		27.7	96	17.9		25.6
21	307	30.3	128	23.2		49.6	188	29.7		39.3	269	26.8		27.7	111	20.1		25.7
22	322	32.8	143	22.8		48.4	203	30.6		39.0	284	29.3		27.6	126	22.3		25.8
23	337	35.3	158	22.5		47.1	218	31.4		38.7	299	31.9		27.6	141	24.5		25.9
24	352	37.7	173	22.1	+1	45.8	233	32.2	+21	38.5	314	34.5	+13	27.5	156	26.7	-4	26.1
Dif	—		-4		-13		+8		-3		+26		0		+22		-1	

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15 ^h 9 PMG: 11 ^h 55 ^m 7			Edad: 15 ^d 9 PHE { 4 ^h : 54 ^m 1 12 ^h : 54 ^m 0 20 ^h : 54 ^m 0 PMG: 0 ^h 55 ^m R°: 42 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora
h	°	'	°	°	'	°	°	h	m	h	m	h	m	m
0	181	02.3	+3 37.6	346	38.4	+7 42.3	60 N	3 49	4 42	5 24	18 07	11	8 12	76
1	196	02.5	36.7	1	13.0 ¹⁵⁶	+7 53.2 ¹⁰⁹	58	3 58	47	27	13 14		06	74
2	211	02.7	35.7	15	47.5 ¹⁵⁵	+8 04.1 ¹⁰⁹	56	4 05	51	29	19 16		8 02	71
3	226	02.9	34.8	30	22.1 ¹⁵⁶	15.0 ¹⁰⁹	54	11	55	31	24 18		7 58	68
4	241	03.1	33.8	44	56.7 ¹⁵⁶	25.9 ¹⁰⁹	52	17	4 58	32	28 21		54	66
5	256	03.4	+3 32.9	59	31.2 ¹⁵⁵	+8 36.7 ¹⁰⁸	50	4 22	5 01	5 34	18 32	22	7 50	65
6	271	03.6	+3 31.9	74	05.7 ¹⁵⁵	+8 47.5 ¹⁰⁸	45	4 32	5 07	5 37	18 41	26	7 43	61
7	286	03.8	30.9	88	40.2 ¹⁵⁵	+8 58.2 ¹⁰⁷	40	40	12	40	48 29		37	58
8	301	04.0	30.0	103	14.6 ¹⁵⁴	+9 08.9 ¹⁰⁷	35	46	16	42	18 55	31	31	56
9	316	04.3	29.0	117	49.1 ¹⁵⁵	19.6 ¹⁰⁷	30	52	20	44	19 00	34	27	53
10	331	04.5	28.1	132	23.5 ¹⁵⁴	30.2 ¹⁰⁶	20	4 59	25	47	10 37		19	49
11	346	04.7	+3 27.1	146	57.9 ¹⁵⁴	+9 40.8 ¹⁰⁶	10 N	5 04	5 29	5 50	19 19	40	7 12	45
12	1	04.9	+3 26.2	161	32.3 ¹⁵⁴	+9 51.3 ¹⁰⁵	0	5 08	5 32	5 52	19 27	43	7 05	43
13	16	05.2	25.2	176	06.6 ¹⁵³	+10 01.8 ¹⁰⁵	10 S	09	34	55	35 47		6 59	39
14	31	05.4	24.2	190	40.9 ¹⁵³	12.3 ¹⁰⁵	20	10	35	5 57	44 50		52	36
15	46	05.6	23.3	205	15.2 ¹⁵³	22.7 ¹⁰⁴	30	09	36	6 00	19 54	53	44	32
16	61	05.8	22.3	219	49.5 ¹⁵³	33.1 ¹⁰⁴	35	07	36	02	20 00	56	39	30
17	76	06.0	+3 21.4	234	23.7 ¹⁵²	+10 43.4 ¹⁰³	40	5 05	5 36	6 03	20 07	58	6 34	27
18	91	06.3	+3 20.4	248	57.9 ¹⁵²	+10 53.7 ¹⁰³	45	5 02	5 36	6 05	20 15	61	6 28	24
19	106	06.5	19.4	263	32.1 ¹⁵²	+11 03.9 ¹⁰²	50	4 58	35	07	24 65		21	21
20	121	06.7	18.5	278	06.3 ¹⁵²	14.1 ¹⁰²	52	56	35	08	28 67		18	19
21	136	06.9	17.5	292	40.4 ¹⁵¹	24.3 ¹⁰²	54	53	34	10	33 69		14	17
22	151	07.2	16.6	307	14.5 ¹⁵¹	34.4 ¹⁰¹	56	51	34	11	39 70		10	15
23	166	07.4	15.6	321	48.6 ¹⁵¹	44.4 ¹⁰⁰	58	47	33	12	45 73		06	12
24	181	07.6	+3 14.6	336	22.6 ¹⁵⁰	+11 54.5 ¹⁰¹	60 S	4 44	5 32	6 14	20 51	77	6 01	10
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 0 ^h 29 ^m 4		Mag: -3.9 PMG: 12 ^h 27 ^m			Mag: +1.4 PMG: 8 ^h 25 ^m			Mag: -2.8 PMG: 3 ^h 01 ^m			Mag: +0.9 PMG: 13 ^h 32 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'
0	352	37.7	173	22.1	+1 45.8	233	32.2	+21 38.5	314	34.5	+13 27.5	156	26.7	-4 26.1
1	7	40.2	188	21.7	44.6	248	33.0	38.2	329	37.1	27.5	171	28.9	26.2
2	22	42.7	203	21.4	43.3	263	33.8	37.9	344	39.7	27.4	186	31.1	26.3
3	37	45.1	218	21.0	42.0	278	34.7	37.7	359	42.2	27.4	201	33.3	26.4
4	52	47.6	233	20.6	40.8	293	35.5	37.4	14	44.8	27.3	216	35.5	26.5
5	67	50.1	248	20.2	+1 39.5	308	36.3	+21 37.1	29	47.4	+13 27.3	231	37.7	-4 26.6
6	82	52.5	263	19.9	+1 38.2	323	37.1	+21 36.9	44	50.0	+13 27.3	246	39.9	-4 26.7
7	97	55.0	278	19.5	36.9	338	38.0	36.6	59	52.6	27.2	261	42.1	26.8
8	112	57.5	293	19.1	35.7	353	38.8	36.3	74	55.1	27.2	276	44.3	27.0
9	127	59.9	308	18.8	34.4	8	39.6	36.1	89	57.7	27.1	291	46.5	27.1
10	143	02.4	323	18.4	33.1	23	40.4	35.8	105	00.3	27.1	306	48.7	27.2
11	158	04.8	338	18.0	+1 31.9	38	41.3	+21 35.5	120	02.9	+13 27.0	321	50.9	-4 27.3
12	173	07.3	353	17.7	+1 30.6	53	42.1	+21 35.3	135	05.5	+13 27.0	336	53.1	-4 27.4
13	188	09.8	8	17.3	29.3	68	42.9	35.0	150	08.1	26.9	351	55.3	27.5
14	203	12.2	23	16.9	28.1	83	43.7	34.7	165	10.6	26.9	6	57.5	27.6
15	218	14.7	38	16.5	26.8	98	44.6	34.5	180	13.2	26.8	21	59.7	27.7
16	233	17.2	53	16.2	25.5	113	45.4	34.2	195	15.8	26.8	37	01.9	27.9
17	248	19.6	68	15.8	+1 24.3	128	46.2	+21 33.9	210	18.4	+13 26.7	52	04.2	-4 28.0
18	263	22.1	83	15.4	+1 23.0	143	47.0	+21 33.7	225	21.0	+13 26.7	67	06.4	-4 28.1
19	278	24.6	98	15.1	21.7	158	47.9	33.4	240	23.6	26.7	82	08.6	28.2
20	293	27.0	113	14.7	20.5	173	48.7	33.1	255	26.1	26.6	97	10.8	28.3
21	308	29.5	128	14.3	19.2	188	49.5	32.9	270	28.7	26.6	112	13.0	28.4
22	323	31.9	143	14.0	17.9	203	50.3	32.6	285	31.3	26.5	127	15.2	28.5
23	338	34.4	158	13.6	16.6	218	51.2	32.3	300	33.9	26.5	142	17.4	28.6
24	353	36.9	173	13.2	+1 15.4	233	52.0	+21 32.0	315	36.5	+13 26.4	157	19.6	-4 28.8
Dif	—		-4	-13		+8	-3		+26		0	+22		-1

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna		
	SD: 15 ^h 9			Edad: 16 ^d 9	PHE { 4 ^h : 54 ^m 0 12 ^h : 54 ^m 0 20 ^h : 54 ^m 0	SD: 14 ^h 7			R°: 44 ^m							
	PMG: 11 ^h 55 ^m 3	PMG: 1 ^h 37 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°	
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m	m	h m	m	
0	181	07.6	+3 14.6	336	22.6	+11 54.5	99	60 N	18 22	19 05	19 56	18 18 15	9 28 76			
1	196	07.8	13.7	350	56.6 ¹⁵⁰	+12 04.4	99	58	20	19 00	49	27 18	20 73			
2	211	08.1	12.7	5	30.6 ¹⁵⁰	14.3	99	56	19	18 56	42	35 21	13 70			
3	226	08.3	11.8	20	04.5 ¹⁴⁹	24.2	99	54	17	53	36	42 23	06 68			
4	241	08.5	10.8	34	38.4 ¹⁴⁹	34.0	98	52	16	50	30	49 24	9 00 67			
5	256	08.7	+3 09.8	49	12.3 ¹⁴⁹	+12 43.7	97	50	18 15	18 47	19 26	18 54 26	8 55 65			
6	271	09.0	+3 08.9	63	46.1 ¹⁴⁸	+12 53.4	97	45	18 12	18 41	19 16	19 07 29	8 44 61			
7	286	09.2	07.9	78	19.9 ¹⁴⁸	+13 03.1	97	40	10	37	09	17 32	35 58			
8	301	09.4	07.0	92	53.7 ¹⁴⁸	12.7	96	35	08	33	19 03	26 34	27 55			
9	316	09.6	06.0	107	27.4 ¹⁴⁷	22.2	95	30	06	30	18 58	34 36	20 53			
10	331	09.8	05.0	122	01.1 ¹⁴⁷	31.7	95	20	03	25	51	47 40	8 08 50			
11	346	10.1	+3 04.1	136	34.8 ¹⁴⁷	+13 41.1	94	10 N	18 01	18 22	18 46	19 59 42	7 57 47			
12	1	10.3	+3 03.1	151	08.4 ¹⁴⁶	+13 50.5	94	0	17 59	18 19	18 43	20 10 45	7 48 44			
13	16	10.5	02.2	165	42.0 ¹⁴⁶	+13 59.8	93	10 S	57	18	42	22 47	38 41			
14	31	10.7	01.2	180	15.5 ¹⁴⁵	+14 09.1	93	20	54	16	42	34 50	28 38			
15	46	11.0	+3 00.2	194	49.0 ¹⁴⁵	18.3	92	30	52	16	44	47 54	16 34			
16	61	11.2	+2 59.3	209	22.5 ¹⁴⁵	27.4	91	35	51	16	46	20 56 55	09 33			
17	76	11.4	+2 58.3	223	55.9 ¹⁴⁴	+14 36.5	91	40	17 50	18 17	18 48	21 05 58	7 01 31			
18	91	11.6	+2 57.3	238	29.3 ¹⁴⁴	+14 45.5	90	45	17 48	18 17	18 51	21 16 60	6 52 28			
19	106	11.9	56.4	253	02.7 ¹⁴⁴	+14 54.5	90	50	46	18	56	29 64	42 23			
20	121	12.1	55.4	267	36.0 ¹⁴³	+15 03.4	89	52	45	19	58	35 66	37 22			
21	136	12.3	54.5	282	09.2 ¹⁴²	12.2	88	54	45	20	19 01	42 68	31 21			
22	151	12.5	53.5	296	42.5 ¹⁴³	21.0	88	56	44	21	04	49 70	25 18			
23	166	12.8	52.5	311	15.6 ¹⁴¹	29.7	87	58	43	22	08	21 58 73	18 16			
24	181	13.0	+2 51.6	325	48.8 ¹⁴²	+15 38.4	87	60 S	17 41	18 23	19 12	22 08 76	6 11 13			

UT	ARIES		VENUS		MARTE		JÚPITER			SATURNO				
	PMG: 0 ^h 25 ^m 5		Mag: -3.9		Mag: +1.4		Mag: -2.8		Mag: +0.8					
	PMG: 12 ^h 27 ^m	PMG: 8 ^h 24 ^m	PMG: 2 ^h 57 ^m	PMG: 13 ^h 29 ^m										
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'	°	'		
0	353	36.9	173	13.2	+1 15.4	233	52.0	+21 32.0	315	36.5	+13 26.4	157	19.6	-4 28.8
1	8	39.3	188	12.8	14.1	248	52.8	31.8	330	39.1	26.4	172	21.8	28.9
2	23	41.8	203	12.5	12.8	263	53.7	31.5	345	41.7	26.3	187	24.0	29.0
3	38	44.3	218	12.1	11.6	278	54.5	31.2	0	44.3	26.3	202	26.2	29.1
4	53	46.7	233	11.7	10.3	293	55.3	31.0	15	46.8	26.2	217	28.4	29.2
5	68	49.2	248	11.4	+1 09.0	308	56.1	+21 30.7	30	49.4	+13 26.2	232	30.6	-4 29.3
6	83	51.7	263	11.0	+1 07.8	323	57.0	+21 30.4	45	52.0	+13 26.1	247	32.8	-4 29.4
7	98	54.1	278	10.6	06.5	338	57.8	30.1	60	54.6	26.1	262	35.0	29.5
8	113	56.6	293	10.3	05.2	353	58.6	29.9	75	57.2	26.0	277	37.2	29.7
9	128	59.1	308	09.9	03.9	8	59.5	29.6	90	59.8	26.0	292	39.4	29.8
10	144	01.5	323	09.5	02.7	24	00.3	29.3	106	02.4	25.9	307	41.6	29.9
11	159	04.0	338	09.2	+1 01.4	39	01.1	+21 29.1	121	05.0	+13 25.9	322	43.7	-4 30.0
12	174	06.4	353	08.8	+1 00.1	54	02.0	+21 28.8	136	07.6	+13 25.8	337	45.9	-4 30.1
13	189	08.9	8	08.4	+0 58.9	69	02.8	28.5	151	10.2	25.8	352	48.1	30.2
14	204	11.4	23	08.0	57.6	84	03.6	28.2	166	12.7	25.7	7	50.3	30.3
15	219	13.8	38	07.7	56.3	99	04.4	28.0	181	15.3	25.7	22	52.5	30.4
16	234	16.3	53	07.3	55.1	114	05.3	27.7	196	17.9	25.6	37	54.7	30.6
17	249	18.8	68	06.9	+0 53.8	129	06.1	+21 27.4	211	20.5	+13 25.6	52	56.9	-4 30.7
18	264	21.2	83	06.6	+0 52.5	144	06.9	+21 27.1	226	23.1	+13 25.5	67	59.1	-4 30.8
19	279	23.7	98	06.2	51.2	159	07.8	26.9	241	25.7	25.5	83	01.3	30.9
20	294	26.2	113	05.8	50.0	174	08.6	26.6	256	28.3	25.5	98	03.5	31.0
21	309	28.6	128	05.5	48.7	189	09.4	26.3	271	30.9	25.4	113	05.7	31.1
22	324	31.1	143	05.1	47.4	204	10.3	26.0	286	33.5	25.4	128	07.9	31.2
23	339	33.6	158	04.7	46.2	219	11.1	25.8	301	36.1	25.3	143	10.1	31.3
24	354	36.0	173	04.4	+0 44.9	234	11.9	+21 25.5	316	38.7	+13 25.3	158	12.3	-4 31.5
Dif	—		-4	-13		+8	-3		+26		0	+22		-1

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15 ^h 9 PMG: 11 ^h 55 ^m 0			Edad: 17 ^d 9 PHE { 4 ^h : 54 ^m 0 12 ^h : 54 ^m 1 20 ^h : 54 ^m 1 PMG: 2 ^h 21 ^m R°: 45 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora
h	°	'	°	°	'	°	°	h	m	h	m	h	m	m
0	181	13.0	+2 51.6	325	48.8	+15 38.4	60 N	3 55	4 47	5 29	18 33	21	10 44	75
1	196	13.2	50.6	340	21.9 ¹⁴¹	47.0 ⁸⁶	58	4 03	51	31	45	24	33	71
2	211	13.4	49.6	354	54.9 ¹⁴⁰	+15 55.5 ⁸⁵	56	09	55	33	18 56	26	23	69
3	226	13.6	48.7	9	28.0 ¹⁴¹	+16 03.9 ⁸⁴	54	15	4 58	34	19 05	28	14	67
4	241	13.9	47.7	24	00.9 ¹³⁹	12.3 ⁸⁴	52	21	5 01	35	13	30	07	65
5	256	14.1	+2 46.8	38	33.8 ¹³⁹	+16 20.6 ⁸³	50	4 25	5 04	5 37	19 20	32	10 00	63
6	271	14.3	+2 45.8	53	06.7 ¹³⁹	+16 28.9 ⁸³	45	4 35	5 10	5 39	19 36	34	9 45	60
7	286	14.5	44.8	67	39.6 ¹³⁹	37.1 ⁸²	40	42	14	41	19 49	37	33	58
8	301	14.8	43.9	82	12.3 ¹³⁷	45.2 ⁸¹	35	48	18	43	20 00	39	22	56
9	316	15.0	42.9	96	45.1 ¹³⁸	+16 53.2 ⁸⁰	30	4 53	21	45	10 40		9 13	54
10	331	15.2	41.9	111	17.8 ¹³⁷	+17 01.2 ⁸⁰	20	5 00	25	47	27 42		8 58	51
11	346	15.4	+2 41.0	125	50.4 ¹³⁶	+17 09.1 ⁷⁹	10 N	5 04	5 29	5 50	20 41	45	8 44	49
12	1	15.7	+2 40.0	140	23.0 ¹³⁶	+17 16.9 ⁷⁸	0	5 07	5 31	5 52	20 55	47	8 32	46
13	16	15.9	39.1	154	55.6 ¹³⁶	24.6 ⁷⁷	10 S	08	33	54	21 09	49	19	44
14	31	16.1	38.1	169	28.1 ¹³⁵	32.3 ⁷⁷	20	08	34	56	24 51		8 06	41
15	46	16.3	37.1	184	00.6 ¹³⁵	39.9 ⁷⁶	30	06	34	58	41 54		7 50	38
16	61	16.6	36.2	198	33.0 ¹³⁴	47.4 ⁷⁵	35	04	34	5 59	21 51	56	42	36
17	76	16.8	+2 35.2	213	05.4 ¹³⁴	+17 54.9 ⁷⁵	40	5 02	5 33	6 00	22 03	57	7 32	34
18	91	17.0	+2 34.2	227	37.7 ¹³³	+18 02.3 ⁷⁴	45	4 58	5 32	6 01	22 16	60	7 20	31
19	106	17.2	33.3	242	10.0 ¹³³	09.6 ⁷³	50	53	31	03	33 62		7 05	29
20	121	17.5	32.3	256	42.2 ¹³²	16.8 ⁷²	52	51	30	04	41 64		6 59	27
21	136	17.7	31.3	271	14.4 ¹³²	23.9 ⁷¹	54	48	29	05	50 65		52	25
22	151	17.9	30.4	285	46.5 ¹³¹	31.0 ⁷¹	56	45	29	05	22 59	68	43	23
23	166	18.1	29.4	300	18.6 ¹³¹	38.0 ⁷⁰	58	42	27	06	23 11	70	34	21
24	181	18.3	+2 28.4	314	50.6 ¹³⁰	+18 44.9 ⁶⁹	60 S	4 37	5 26	6 08	23 24	73	6 24	17
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 0 ^h 21 ^m 5		Mag: -3.9 PMG: 12 ^h 28 ^m			Mag: +1.4 PMG: 8 ^h 23 ^m			Mag: -2.8 PMG: 2 ^h 53 ^m			Mag: +0.8 PMG: 13 ^h 25 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'
0	354	36.0	173	04.4	+0 44.9	234	11.9	+21 25.5	316	38.7	+13 25.3	158	12.3	-4 31.5
1	9	38.5	188	04.0	43.6	249	12.8	25.2	331	41.3	25.2	173	14.5	31.6
2	24	40.9	203	03.6	42.3	264	13.6	24.9	346	43.9	25.2	188	16.7	31.7
3	39	43.4	218	03.3	41.1	279	14.4	24.7	1	46.5	25.1	203	18.9	31.8
4	54	45.9	233	02.9	39.8	294	15.3	24.4	16	49.1	25.1	218	21.1	31.9
5	69	48.3	248	02.5	+0 38.5	309	16.1	+21 24.1	31	51.7	+13 25.0	233	23.3	-4 32.0
6	84	50.8	263	02.2	+0 37.2	324	17.0	+21 23.8	46	54.3	+13 25.0	248	25.5	-4 32.1
7	99	53.3	278	01.8	36.0	339	17.8	23.5	61	56.9	24.9	263	27.7	32.2
8	114	55.7	293	01.4	34.7	354	18.6	23.3	76	59.5	24.9	278	29.9	32.4
9	129	58.2	308	01.0	33.4	9	19.5	23.0	92	02.1	24.8	293	32.1	32.5
10	145	00.7	323	00.7	32.2	24	20.3	22.7	107	04.6	24.7	308	34.3	32.6
11	160	03.1	338	00.3	+0 30.9	39	21.1	+21 22.4	122	07.2	+13 24.7	323	36.5	-4 32.7
12	175	05.6	352	59.9	+0 29.6	54	22.0	+21 22.2	137	09.8	+13 24.6	338	38.7	-4 32.8
13	190	08.0	7	59.6	28.3	69	22.8	21.9	152	12.4	24.6	353	40.9	32.9
14	205	10.5	22	59.2	27.1	84	23.6	21.6	167	15.0	24.5	8	43.1	33.0
15	220	13.0	37	58.8	25.8	99	24.5	21.3	182	17.6	24.5	23	45.3	33.1
16	235	15.4	52	58.5	24.5	114	25.3	21.0	197	20.2	24.4	38	47.5	33.3
17	250	17.9	67	58.1	+0 23.2	129	26.2	+21 20.8	212	22.8	+13 24.4	53	49.7	-4 33.4
18	265	20.4	82	57.7	+0 22.0	144	27.0	+21 20.5	227	25.4	+13 24.3	68	51.9	-4 33.5
19	280	22.8	97	57.4	20.7	159	27.8	20.2	242	28.0	24.3	83	54.1	33.6
20	295	25.3	112	57.0	19.4	174	28.7	19.9	257	30.6	24.2	98	56.3	33.7
21	310	27.8	127	56.6	18.2	189	29.5	19.6	272	33.3	24.2	113	58.5	33.8
22	325	30.2	142	56.3	16.9	204	30.4	19.4	287	35.9	24.1	129	00.7	33.9
23	340	32.7	157	55.9	15.6	219	31.2	19.1	302	38.5	24.1	144	02.9	34.1
24	355	35.2	172	55.5	+0 14.3	234	32.0	+21 18.8	317	41.1	+13 24.0	159	05.1	-4 34.2
Dif	—		-4		-13	+8		-3	+26		-1	+22		-1

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna					
	SD: 15'9			Edad: 18 ^d 9 PHE { 4 ^h : 54'2 12 ^h : 54'3 20 ^h : 54'4														
	PMG: 11 ^h 54 ^m 6			SD: 14'8 PMG: 3 ^h 06 ^m R°: 48 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec			Dif									
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m m	h m m	h m m				
0	181	18.3	+2	28.4	314	50.6	+18	44.9	60 N	18 16	18 58	19 50	18 54 31	11 59 69				
1	196	18.6		27.5	329	22.6 ¹³⁰		51.7	58	15	54	42	19 09 33	44 67				
2	211	18.8		26.5	343	54.5 ¹²⁹	+18	58.5	56	13	51	36	22 35	32 65				
3	226	19.0		25.6	358	26.4 ¹²⁹	+19	05.1	68	12	48	30	33 36	21 66				
4	241	19.2		24.6	12	58.2 ¹²⁸		11.7	52	11	45	25	43 37	12 62				
5	256	19.5	+2	23.6	27	30.0 ¹²⁸	+19	18.2	50	18 10	18 43	19 21	19 52 38	11 03 61				
6	271	19.7	+2	22.7	42	01.8 ¹²⁸	+19	24.6	45	18 08	18 37	19 12	20 10 41	10 45 59				
7	286	19.9		21.7	56	33.5 ¹²⁷		31.0	40	06	33	05	26 42	31 56				
8	301	20.1		20.7	71	05.1 ¹²⁶		37.2	35	05	30	19 00	39 43	18 55				
9	316	20.4		19.8	85	36.7 ¹²⁶		43.4	30	03	27	18 55	20 50 45	10 07 54				
10	331	20.6		18.8	100	08.2 ¹²⁵		49.4	20	18 01	23	49	21 09 47	9 49 51				
11	346	20.8	+2	17.8	114	39.7 ¹²⁵	+19	55.4	10 N	17 59	18 20	18 45	21 26 48	9 33 49				
12	1	21.0	+2	16.9	129	11.1 ¹²⁴	+20	01.3	0	17 58	18 19	18 43	21 42 49	9 18 48				
13	16	21.3		15.9	143	42.5 ¹²⁴		07.1	10 S	56	17	42	21 58 51	9 03 46				
14	31	21.5		14.9	158	13.9 ¹²⁴		12.8	20	55	17	42	22 15 52	8 47 44				
15	46	21.7		14.0	172	45.1 ¹²²		18.5	30	53	17	45	35 54	28 43				
16	61	21.9		13.0	187	16.4 ¹²³		24.0	35	52	18	47	22 47 54	18 41				
17	76	22.2	+2	12.0	201	47.6 ¹²²	+20	29.4	40	17 52	18 19	18 50	23 00 56	8 06 39				
18	91	22.4	+2	11.1	216	18.7 ¹²¹	+20	34.8	45	17 50	18 20	18 54	23 16 57	7 51 38				
19	106	22.6		10.1	230	49.8 ¹²¹		40.1	50	49	21	18 59	35 59	34 35				
20	121	22.8		09.1	245	20.8 ¹²⁰		45.2	52	49	22	19 02	45 60	26 33				
21	136	23.0		08.2	259	51.8 ¹²⁰		50.3	54	48	23	05	23 55 61	17 31				
22	151	23.3		07.2	274	22.8 ¹²⁰	+20	55.3	56	47	25	08	** ** *	7 06 30				
23	166	23.5		06.2	288	53.7 ¹¹⁹	+21	00.2	58	47	26	12	** ** *	6 55 27				
24	181	23.7	+2	05.3	303	24.5 ¹¹⁸	+21	05.0	60 S	17 46	18 27	19 17	** ** *	6 41 25				
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 0 ^h 17 ^m 6		Mag: -3.9 PMG: 12 ^h 29 ^m			Mag: +1.4 PMG: 8 ^h 21 ^m			Mag: -2.8 PMG: 2 ^h 49 ^m			Mag: +0.8 PMG: 13 ^h 22 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	355	35.2	172	55.5	+0	14.3	234	32.0	+21	18.8	317	41.1	+13	24.0	159	05.1	-4	34.2
1	10	37.6	187	55.2		13.1	249	32.9		18.5	332	43.7		24.0	174	07.3		34.3
2	25	40.1	202	54.8		11.8	264	33.7		18.2	347	46.3		23.9	189	09.5		34.4
3	40	42.5	217	54.4		10.5	279	34.6		17.9	2	48.9		23.9	204	11.7		34.5
4	55	45.0	232	54.1		09.2	294	35.4		17.7	17	51.5		23.8	219	13.9		34.6
5	70	47.5	247	53.7	+0	08.0	309	36.2	+21	17.4	32	54.1	+13	23.8	234	16.1	-4	34.7
6	85	49.9	262	53.3	+0	06.7	324	37.1	+21	17.1	47	56.7	+13	23.7	249	18.3	-4	34.8
7	100	52.4	277	52.9		05.4	339	37.9		16.8	62	59.3		23.7	264	20.5		35.0
8	115	54.9	292	52.6		04.1	354	38.8		16.5	78	01.9		23.6	279	22.7		35.1
9	130	57.3	307	52.2		02.9	9	39.6		16.3	93	04.5		23.6	294	24.9		35.2
10	145	59.8	322	51.8		01.6	24	40.4		16.0	108	07.1		23.5	309	27.1		35.3
11	161	02.3	337	51.5	+0	00.3	39	41.3	+21	15.7	123	09.7	+13	23.4	324	29.3	-4	35.4
12	176	04.7	352	51.1	-0	00.9	54	42.1	+21	15.4	138	12.3	+13	23.4	339	31.5	-4	35.5
13	191	07.2	7	50.7		02.2	69	43.0		15.1	153	14.9		23.3	354	33.7		35.6
14	206	09.6	22	50.4		03.5	84	43.8		14.8	168	17.5		23.3	9	35.9		35.7
15	221	12.1	37	50.0		04.8	99	44.7		14.6	183	20.1		23.2	24	38.1		35.9
16	236	14.6	52	49.6		06.0	114	45.5		14.3	198	22.7		23.2	39	40.2		36.0
17	251	17.0	67	49.3	-0	07.3	129	46.3	+21	14.0	213	25.4	+13	23.1	54	42.4	-4	36.1
18	266	19.5	82	48.9	-0	08.6	144	47.2	+21	13.7	228	28.0	+13	23.1	69	44.6	-4	36.2
19	281	22.0	97	48.5		09.9	159	48.0		13.4	243	30.6		23.0	84	46.8		36.3
20	296	24.4	112	48.2		11.1	174	48.9		13.1	258	33.2		23.0	99	49.0		36.4
21	311	26.9	127	47.8		12.4	189	49.7		12.8	273	35.8		22.9	114	51.2		36.5
22	326	29.4	142	47.4		13.7	204	50.6		12.6	288	38.4		22.9	129	53.4		36.7
23	341	31.8	157	47.1		15.0	219	51.4		12.3	303	41.0		22.8	144	55.6		36.8
24	356	34.3	172	46.7	-0	16.2	234	52.3	+21	12.0	318	43.6	+13	22.7	159	57.8	-4	36.9
Dif	—		-4		-13		+8		-3		+26		-1		+22		-	

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15'9 PMG: 11 ^h 54 ^m 2			Edad: 19 ^d 9 PHE { 4 ^h : 54'5 12 ^h : 54'7 20 ^h : 54'8 PMG: 3 ^h 54 ^m R°: 50 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°	
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m
0	181	23.7	+2	05.3	303	24.5	+21	05.0	60 N	4 00	4 52	5 34	19 25	44	13 08	61
1	196	23.9		04.3	317	55.3 ¹¹⁸		09.7 ⁴⁷	58	08	56	35	42	45	12 51	60
2	211	24.2		03.3	332	26.0 ¹¹⁷		14.3 ⁴⁶	56	14	4 59	37	19 57	45	37	58
3	226	24.4		02.4	346	56.7 ¹¹⁷		18.8 ⁴⁵	54	19	5 02	38	20 09	47	25	55
4	241	24.6		01.4	1	27.4 ¹¹⁷		23.2 ⁴⁴	52	24	05	39	20	47	14	56
5	256	24.8	+2	00.4	15	58.0 ¹¹⁶	+21	27.5 ⁴³	50	4 29	5 07	5 40	20 30	48	12 04	56
6	271	25.1	+1	59.5	30	28.5 ¹¹⁵	+21	31.7 ⁴²	45	4 37	5 12	5 42	20 51	48	11 44	55
7	286	25.3		58.5	44	59.0 ¹¹⁵		35.8 ⁴¹	40	44	16	43	21 08	49	27	54
8	301	25.5		57.5	59	29.5 ¹¹⁵		39.9 ⁴¹	35	50	19	45	22	49	13	54
9	316	25.7		56.6	73	59.9 ¹¹⁴		43.8 ³⁹	30	4 54	22	46	35	49	11 01	53
10	331	26.0		55.6	88	30.2 ¹¹³		47.6 ³⁸	20	5 00	26	48	21 56	50	10 40	52
11	346	26.2	+1	54.6	103	00.5 ¹¹³	+21	51.3 ³⁷	10 N	5 04	5 29	5 50	22 14	51	10 22	51
12	1	26.4	+1	53.7	117	30.8 ¹¹³	+21	54.9 ³⁶	0	5 06	5 30	5 51	22 31	51	10 06	50
13	16	26.6		52.7	132	01.0 ¹¹²	+21	58.4 ³⁵	10 S	07	31	52	22 49	51	9 49	49
14	31	26.8		51.7	146	31.2 ¹¹²	+22	01.8 ³⁴	20	06	32	54	23 07	52	31	48
15	46	27.1		50.8	161	01.3 ¹¹¹		05.1 ³³	30	04	31	55	29	52	9 11	47
16	61	27.3		49.8	175	31.4 ¹¹¹		08.3 ³²	35	5 01	31	56	41	53	8 59	46
17	76	27.5	+1	48.8	190	01.4 ¹¹⁰	+22	11.4 ³¹	40	4 58	5 30	5 57	23 56	52	8 45	45
18	91	27.7	+1	47.9	204	31.4 ¹¹⁰	+22	14.4 ³⁰	45	4 54	5 28	5 58	** ** *	**	8 29	44
19	106	28.0		46.9	219	01.4 ¹¹⁰		17.2 ²⁸	50	49	27	59	** ** *	**	8 09	42
20	121	28.2		45.9	233	31.3 ¹⁰⁹		20.0 ²⁸	52	46	26	5 59	** ** *	**	7 59	42
21	136	28.4		45.0	248	01.1 ¹⁰⁸		22.7 ²⁷	54	43	24	6 00	** ** *	**	48	41
22	151	28.6		44.0	262	30.9 ¹⁰⁸		25.2 ²⁵	56	40	23	00	0 07	62	36	40
23	166	28.9		43.0	277	00.7 ¹⁰⁸		27.7 ²⁵	58	36	22	01	21	64	22	39
24	181	29.1	+1	42.1	291	30.4 ¹⁰⁷	+22	30.0 ²³	60 S	4 31	5 20	6 01	0 37	66	7 06	36

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 0 ^h 13 ^m 7		Mag: -3.9 PMG: 12 ^h 29 ^m		Mag: +1.3 PMG: 8 ^h 20 ^m		Mag: -2.8 PMG: 2 ^h 45 ^m		Mag: +0.8 PMG: 13 ^h 18 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	356	34.3	172	46.7	-0	16.2	234	52.3	+21	12.0
1	11	36.8	187	46.3		17.5	249	53.1		11.7
2	26	39.2	202	46.0		18.8	264	54.0		11.4
3	41	41.7	217	45.6		20.1	279	54.8		11.1
4	56	44.1	232	45.2		21.3	294	55.7		10.8
5	71	46.6	247	44.9	-0	22.6	309	56.5	+21	10.5
6	86	49.1	262	44.5	-0	23.9	324	57.3	+21	10.3
7	101	51.5	277	44.1		25.2	339	58.2		10.0
8	116	54.0	292	43.7		26.4	354	59.0		09.7
9	131	56.5	307	43.4		27.7	9	59.9		09.4
10	146	58.9	322	43.0		29.0	25	00.7		09.1
11	162	01.4	337	42.6	-0	30.3	40	01.6	+21	08.8
12	177	03.9	352	42.3	-0	31.5	55	02.4	+21	08.5
13	192	06.3	7	41.9		32.8	70	03.3		08.2
14	207	08.8	22	41.5		34.1	85	04.1		08.0
15	222	11.3	37	41.2		35.4	100	05.0		07.7
16	237	13.7	52	40.8		36.6	115	05.8		07.4
17	252	16.2	67	40.4	-0	37.9	130	06.7	+21	07.1
18	267	18.6	82	40.1	-0	39.2	145	07.5	+21	06.8
19	282	21.1	97	39.7		40.5	160	08.4		06.5
20	297	23.6	112	39.3		41.7	175	09.2		06.2
21	312	26.0	127	39.0		43.0	190	10.1		05.9
22	327	28.5	142	38.6		44.3	205	10.9		05.6
23	342	31.0	157	38.2		45.6	220	11.8		05.3
24	357	33.4	172	37.9	-0	46.8	235	12.6	+21	05.0
Dif	—		-4		-13		+8		-3	
								+26		-1
									+22	-

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15'9 PMG: 11 ^h 53 ^m 9			Edad: 20 ^d 9 PHE { 4 ^h : 55'0 12 ^h : 55'2 20 ^h : 55'4 SD: 15'0 PMG: 4 ^h 44 ^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	h m m
0	181	29.1	+1 42.1	291	30.4	+22 30.0	23	60 N	18 10	18 52	19 43	20 09 59	14 09 48		
1	196	29.3		306	00.1 ¹⁰⁷	32.3	23	58	09	48	36	27 59	13 51 48		
2	211	29.5		320	29.8 ¹⁰⁷	34.4	21	56	08	45	30	42 58	35 49		
3	226	29.8		334	59.4 ¹⁰⁶	36.4	20	54	07	43	25	20 56 57	22 49		
4	241	30.0		349	28.9 ¹⁰⁵	38.3	19	52	06	40	20	21 07 57	10 50		
5	256	30.2	+1 37.2	3	58.5 ¹⁰⁶	+22 40.1	18	50	18 06	18 38	19 16	21 18 56	13 00 50		
6	271	30.4	+1 36.2	18	27.9 ¹⁰⁴	+22 41.8	17	45	18 04	18 33	19 08	21 39 56	12 39 50		
7	286	30.6		32	57.4 ¹⁰⁵	43.4	16	40	03	30	19 02	21 57 55	21 51		
8	301	30.9		47	26.8 ¹⁰⁴	44.8	14	35	02	27	18 57	22 11 55	12 07 50		
9	316	31.1		61	56.1 ¹⁰³	46.2	14	30	18 01	25	53	24 54	11 54 51		
10	331	31.3		76	25.5 ¹⁰⁴	47.4	12	20	17 59	21	47	22 46 53	32 51		
11	346	31.5	+1 31.4	90	54.8 ¹⁰³	+22 48.5	11	10 N	17 58	18 19	18 44	23 05 52	11 13 52		
12	1	31.8	+1 30.4	105	24.0 ¹⁰²	+22 49.5	10	0	17 57	18 18	18 42	23 22 53	10 56 51		
13	16	32.0		119	53.2 ¹⁰²	50.4	9	10 S	56	17	42	40 52	38 52		
14	31	32.2		134	22.4 ¹⁰²	51.2	8	20	55	17	43	23 59 51	10 19 52		
15	46	32.4		148	51.6 ¹⁰²	51.9	7	30	54	18	46	*** ** *	9 58 51		
16	61	32.7		163	20.7 ¹⁰¹	52.4	5	35	54	19	49	*** ** *	45 52		
17	76	32.9	+1 25.6	177	49.7 ¹⁰⁰	+22 52.8	4	40	17 53	18 20	18 52	*** ** *	9 30 52		
18	91	33.1	+1 24.6	192	18.8 ¹⁰¹	+22 53.1	3	45	17 53	18 22	18 56	0 13 53	9 13 52		
19	106	33.3		206	47.8 ¹⁰⁰	53.3	2	50	52	24	19 02	34 54	8 51 52		
20	121	33.5		221	16.8 ¹⁰⁰	53.4	1	52	52	26	05	45 53	41 52		
21	136	33.8		235	45.7 ⁹⁹	53.4	0	54	52	27	09	0 56 54	29 52		
22	151	34.0		250	14.6 ⁹⁹	53.2	2	56	51	28	12	1 09 54	16 52		
23	166	34.2		264	43.5 ⁹⁹	53.0	2	58	51	30	17	25 54	8 01 51		
24	181	34.4	+1 18.8	279	12.4 ⁹⁹	+22 52.6	4	60 S	17 51	18 32	19 22	1 43 55	7 42 51		
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 0 ^h 09 ^m 7			Mag: -3.9 PMG: 12 ^h 30 ^m			Mag: +1.3 PMG: 8 ^h 19 ^m			Mag: -2.8 PMG: 2 ^h 40 ^m			Mag: +0.8 PMG: 13 ^h 15 ^m		
	hG ♈			hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'		°	'		°	'		°	'		°	'	
0	357	33.4		172	37.9	-0 46.8	235	12.6	+21 05.0	319	46.4	+13 21.4	160	50.5	-4 39.6
1	12	35.9		187	37.5	48.1	250	13.5	04.8	334	49.0	21.4	175	52.7	39.7
2	27	38.4		202	37.1	49.4	265	14.3	04.5	349	51.6	21.3	190	54.9	39.8
3	42	40.8		217	36.8	50.7	280	15.2	04.2	4	54.2	21.2	205	57.1	39.9
4	57	43.3		232	36.4	51.9	295	16.1	03.9	19	56.8	21.2	220	59.3	40.1
5	72	45.8		247	36.0	-0 53.2	310	16.9	+21 03.6	34	59.5	+13 21.1	236	01.5	-4 40.2
6	87	48.2		262	35.6	-0 54.5	325	17.8	+21 03.3	50	02.1	+13 21.1	251	03.7	-4 40.3
7	102	50.7		277	35.3	55.8	340	18.6	03.0	65	04.7	21.0	266	05.9	40.4
8	117	53.1		292	34.9	57.0	355	19.5	02.7	80	07.3	20.9	281	08.1	40.5
9	132	55.6		307	34.5	58.3	10	20.3	02.4	95	09.9	20.9	296	10.3	40.6
10	147	58.1		322	34.2	-0 59.6	25	21.2	02.1	110	12.6	20.8	311	12.5	40.7
11	163	00.5		337	33.8	-1 00.9	40	22.0	+21 01.8	125	15.2	+13 20.8	326	14.7	-4 40.9
12	178	03.0		352	33.4	-1 02.1	55	22.9	+21 01.5	140	17.8	+13 20.7	341	16.9	-4 41.0
13	193	05.5		7	33.1	03.4	70	23.7	01.2	155	20.4	20.7	356	19.1	41.1
14	208	07.9		22	32.7	04.7	85	24.6	00.9	170	23.0	20.6	11	21.2	41.2
15	223	10.4		37	32.3	06.0	100	25.5	00.7	185	25.7	20.5	26	23.4	41.3
16	238	12.9		52	32.0	07.2	115	26.3	00.4	200	28.3	20.5	41	25.6	41.4
17	253	15.3		67	31.6	-1 08.5	130	27.2	+21 00.1	215	30.9	+13 20.4	56	27.8	-4 41.5
18	268	17.8		82	31.2	-1 09.8	145	28.0	+20 59.8	230	33.5	+13 20.4	71	30.0	-4 41.7
19	283	20.2		97	30.9	11.1	160	28.9	59.5	245	36.2	20.3	86	32.2	41.8
20	298	22.7		112	30.5	12.3	175	29.7	59.2	260	38.8	20.3	101	34.4	41.9
21	313	25.2		127	30.1	13.6	190	30.6	58.9	275	41.4	20.2	116	36.6	42.0
22	328	27.6		142	29.7	14.9	205	31.5	58.6	290	44.0	20.1	131	38.8	42.1
23	343	30.1		157	29.4	16.2	220	32.3	58.3	305	46.7	20.1	146	41.0	42.2
24	358	32.6		172	29.0	-1 17.4	235	33.2	+20 58.0	320	49.3	+13 20.0	161	43.2	-4 42.3
Dif	—			-4	-13		+9	-3		+26	-1		+22	-1	

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15 ^h 9			Edad: 21 ^d 9	PHE { 4 ^h : 55 ^h 6 12 ^h : 55 ^h 9 20 ^h : 56 ^h 1											
	PMG: 11 ^h 53 ^m 5					SD: 15 ^h 1		PMG: 5 ^h 35 ^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	34.4	+1	18.8	279	12.4	+22	52.6	4	06	4	57	5	38	21	08
1	196	34.7		17.8	293	41.2	98	52.1	5	12	5	00	39	26	71	39
2	211	34.9		16.9	308	10.0	98	51.5	6	18	03	40	40	70	24	39
3	226	35.1		15.9	322	38.8	98	50.7	8	23	06	41	21	53	68	11
4	241	35.3		14.9	337	07.5	97	49.9	8	28	08	42	22	04	67	14
5	256	35.5	+1	13.9	351	36.2	97	+22	48.9	10	50	4	32	5	10	13
6	271	35.8	+1	13.0	6	04.9	97	+22	47.8	11	45	4	40	5	15	13
7	286	36.0		12.0	20	33.5	96	46.5	13	40	46	18	45	22	52	45
8	301	36.2		11.0	35	02.2	97	45.2	13	35	51	21	46	23	06	60
9	316	36.4		10.1	49	30.8	96	43.7	15	30	4	55	23	47	18	59
10	331	36.7		09.1	63	59.4	96	42.2	15	20	5	01	26	48	39	57
11	346	36.9	+1	08.1	78	27.9	95	+22	40.5	17	10 N	5	04	5	28	12
12	1	37.1	+1	07.1	92	56.5	96	+22	38.6	19	0	5	06	5	30	11
13	16	37.3		06.2	107	25.0	95	36.7	19	10 S	06	30	51	**	**	53
14	31	37.5		05.2	121	53.5	95	34.6	21	20	04	30	52	**	**	55
15	46	37.8		04.2	136	22.0	95	32.4	22	30	5	01	29	53	0	21
16	61	38.0		03.3	150	50.4	94	30.1	23	35	4	58	28	53	34	49
17	76	38.2	+1	02.3	165	18.9	95	+22	27.7	24	40	4	55	5	26	10
18	91	38.4	+1	01.3	179	47.3	94	+22	25.1	26	45	4	50	5	25	10
19	106	38.7	+1	00.4	194	15.7	94	22.5	26	50	44	22	54	1	06	05
20	121	38.9	+0	59.4	208	44.1	94	19.7	28	52	41	21	54	28	46	59
21	136	39.1		58.4	223	12.4	93	16.7	30	54	38	19	55	38	46	61
22	151	39.3		57.4	237	40.8	94	13.7	30	56	34	18	55	1	50	63
23	166	39.5		56.5	252	09.1	93	10.5	32	58	30	16	55	2	03	44
24	181	39.8	+0	55.5	266	37.4	93	+22	07.3	32	60 S	4	25	5	14	9
														55	19	43
														8	33	68

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 0 ^h 05 ^m 8		Mag: -3.9 PMG: 12 ^h 30 ^m		Mag: +1.3 PMG: 8 ^h 17 ^m		Mag: -2.8 PMG: 2 ^h 36 ^m		Mag: +0.8 PMG: 13 ^h 11 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	358	32.6	172	29.0	235	33.2	+20	58.0	320	49.3
1	13	35.0	187	28.6	250	34.0		57.7	335	51.9
2	28	37.5	202	28.3	265	34.9		57.4	350	54.5
3	43	40.0	217	27.9	280	35.7		57.1	5	57.2
4	58	42.4	232	27.5	295	36.6		56.8	20	59.8
5	73	44.9	247	27.2	310	37.5	+20	56.5	36	02.4
6	88	47.4	262	26.8	325	38.3	+20	56.2	51	05.0
7	103	49.8	277	26.4	340	39.2		55.9	66	07.7
8	118	52.3	292	26.1	355	40.0		55.6	81	10.3
9	133	54.7	307	25.7	10	40.9		55.3	96	12.9
10	148	57.2	322	25.3	25	41.8		55.0	111	15.6
11	163	59.7	337	24.9	40	42.6	+20	54.7	126	18.2
12	179	02.1	352	24.6	55	43.5	+20	54.4	141	20.8
13	194	04.6	7	24.2	70	44.3		54.1	156	23.4
14	209	07.1	22	23.8	85	45.2		53.8	171	26.1
15	224	09.5	37	23.5	100	46.1		53.5	186	28.7
16	239	12.0	52	23.1	115	46.9		53.2	201	31.3
17	254	14.5	67	22.7	130	47.8	+20	52.9	216	34.0
18	269	16.9	82	22.4	145	48.7	+20	52.6	231	36.6
19	284	19.4	97	22.0	160	49.5		52.3	246	39.2
20	299	21.9	112	21.6	175	50.4		52.0	261	41.9
21	314	24.3	127	21.2	190	51.3		51.7	276	44.5
22	329	26.8	142	20.9	205	52.1		51.4	291	47.1
23	344	29.2	157	20.5	220	53.0		51.1	306	49.8
24	359	31.7	172	20.1	235	53.8	+20	50.8	321	52.4
Dif	—		-4	-13	+9	-3		+26	-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 2			Edad: 22 ^d 9 PHE { 4 ^h : 56/4 12 ^h : 56/7 20 ^h : 57/0 SD: 15°3 PMG: 6 ^h 27 ^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	181	39.8	+0 55.5	266	37.4	+22 07.3	35	60 N	18 04	18 46	19 36	22 22 85	15 32 24		
1	196	40.0		281	05.7	03.8	35	58	03	43	30	37 81	17 27		
2	211	40.2		295	34.0	+22 00.3	35	56	03	40	24	22 50 78	15 03 31		
3	226	40.4		310	02.3	+21 56.7	36	54	02	38	20	23 01 76	14 52 33		
4	241	40.7		324	30.6	52.9	38	52	02	35	15	11 74	42 34		
5	256	40.9	+0 50.6	338	58.8	+21 49.0	39	50	18 01	18 34	19 12	23 19 73	14 33 36		
6	271	41.1	+0 49.7	353	27.1	+21 45.0	40	45	18 00	18 30	19 04	23 38 69	14 14 39		
7	286	41.3		7	55.3	40.8	42	40	18 00	27	18 58	23 53 66	13 58 42		
8	301	41.5		22	23.5	36.6	42	35	17 59	24	54	** ** *	45 44		
9	316	41.8		36	51.7	32.2	44	30	58	22	50	** ** *	33 46		
10	331	42.0		51	19.9	27.7	45	20	58	20	45	** ** *	13 13 49		
11	346	42.2	+0 44.8	65	48.1	+21 23.0	47	10 N	17 57	18 18	18 42	** ** *	12 56 51		
12	1	42.4	+0 43.8	80	16.3	+21 18.3	47	0	17 56	18 17	18 41	0 15 52	12 40 53		
13	16	42.6		94	44.5	13.4	49	10 S	56	17	41	32 51	23 55		
14	31	42.9		109	12.7	08.4	50	20	56	18	43	0 50 49	12 06 57		
15	46	43.1		123	40.9	+21 03.3	51	30	55	19	47	1 11 47	11 46 60		
16	61	43.3		138	09.0	+20 58.0	53	35	55	21	50	23 46	34 62		
17	76	43.5	+0 39.0	152	37.2	+20 52.7	53	40	17 55	18 22	18 54	1 37 44	11 20 64		
18	91	43.8	+0 38.0	167	05.3	+20 47.2	55	45	17 55	18 25	18 59	1 54 42	11 04 66		
19	106	44.0		181	33.5	41.6	56	50	55	27	19 05	2 14 40	10 44 69		
20	121	44.2		196	01.6	35.9	57	52	55	29	09	24 38	34 71		
21	136	44.4		210	29.8	30.0	59	54	55	31	12	35 36	24 72		
22	151	44.6		224	57.9	24.1	59	56	55	32	16	2 47 35	10 11 75		
23	166	44.9		239	26.0	18.0	61	58	55	35	21	3 02 32	9 57 77		
24	181	45.1	+0 32.2	253	54.2	+20 11.8	62	60 S	17 55	18 37	19 27	3 19 29	9 41 80		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 0 ^h 01 ^m 9		Mag: -3.9 PMG: 12 ^h 31 ^m		Mag: +1.3 PMG: 8 ^h 16 ^m		Mag: -2.8 PMG: 2 ^h 32 ^m		Mag: +0.8 PMG: 13 ^h 08 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	359	31.7	172	20.1	-1 48.0	235	53.8	+20 50.8	321	52.4	+13 18.6	162	35.8	-4 45.1
1	14	34.2	187	19.8	49.3	250	54.7	50.5	336	55.0	18.5	177	38.0	45.2
2	29	36.6	202	19.4	50.6	265	55.6	50.2	351	57.7	18.4	192	40.2	45.3
3	44	39.1	217	19.0	51.9	280	56.4	49.9	7	00.3	18.4	207	42.4	45.4
4	59	41.6	232	18.6	53.1	295	57.3	49.6	22	02.9	18.3	222	44.6	45.5
5	74	44.0	247	18.3	-1 54.4	310	58.2	+20 49.3	37	05.6	+13 18.3	237	46.8	-4 45.6
6	89	46.5	262	17.9	-1 55.7	325	59.0	+20 49.0	52	08.2	+13 18.2	252	49.0	-4 45.8
7	104	49.0	277	17.5	57.0	340	59.9	48.7	67	10.8	18.1	267	51.2	45.9
8	119	51.4	292	17.2	58.2	356	00.8	48.4	82	13.5	18.1	282	53.4	46.0
9	134	53.9	307	16.8	-1 59.5	11	01.6	48.1	97	16.1	18.0	297	55.6	46.1
10	149	56.3	322	16.4	-2 00.8	26	02.5	47.8	112	18.7	17.9	312	57.8	46.2
11	164	58.8	337	16.1	-2 02.1	41	03.4	+20 47.5	127	21.4	+13 17.9	328	00.0	-4 46.3
12	180	01.3	352	15.7	-2 03.3	56	04.2	+20 47.2	142	24.0	+13 17.8	343	02.1	-4 46.4
13	195	03.7	7	15.3	04.6	71	05.1	46.9	157	26.6	17.8	358	04.3	46.6
14	210	06.2	22	14.9	05.9	86	06.0	46.6	172	29.3	17.7	13	06.5	46.7
15	225	08.7	37	14.6	07.1	101	06.8	46.3	187	31.9	17.6	28	08.7	46.8
16	240	11.1	52	14.2	08.4	116	07.7	46.0	202	34.6	17.6	43	10.9	46.9
17	255	13.6	67	13.8	-2 09.7	131	08.6	+20 45.7	217	37.2	+13 17.5	58	13.1	-4 47.0
18	270	16.1	82	13.5	-2 11.0	146	09.4	+20 45.4	232	39.8	+13 17.4	73	15.3	-4 47.1
19	285	18.5	97	13.1	12.2	161	10.3	45.1	247	42.5	17.4	88	17.5	47.2
20	300	21.0	112	12.7	13.5	176	11.2	44.8	262	45.1	17.3	103	19.7	47.4
21	315	23.5	127	12.3	14.8	191	12.1	44.5	277	47.8	17.3	118	21.9	47.5
22	330	25.9	142	12.0	16.1	206	12.9	44.2	292	50.4	17.2	133	24.1	47.6
23	345	28.4	157	11.6	17.3	221	13.8	43.8	307	53.0	17.1	148	26.3	47.7
24	0	30.8	172	11.2	-2 18.6	236	14.7	+20 43.5	322	55.7	+13 17.1	163	28.5	-4 47.8
Dif	—		-4	-13		+9	-3		+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 8			Edad: 23 ^d 9 PHE { SD: 15'6 PMG: 7 ^h 20 ^m 4 ^h : 57'3 12 ^h : 57'6 20 ^h : 57'9 R°: 53 ^m							Hora R°		Hora R°										
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°								
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m							
0	181	45.1	+0	32.2	253	54.2	+20	11.8	60 N	4	11	5	01	5	43	23	47	91	15	56	18		
1	196	45.3		31.2	268	22.3	91	+20	05.5	58	17	04	44	44	23	58	87	44	22				
2	211	45.5		30.2	282	50.4	91	+19	59.0	56	23	07	44	44	**	**	**		34	24			
3	226	45.7		29.3	297	18.6	92		52.4	54	27	09	45	45	**	**	**		25	26			
4	241	46.0		28.3	311	46.7	91		45.8	52	31	11	45	45	**	**	**		16	29			
5	256	46.2	+0	27.3	326	14.8	91	+19	39.0	50	4	35	5	13	5	46	**	**	**	15	09	31	
6	271	46.4	+0	26.3	340	43.0	92	+19	32.0	70	4	43	5	17	5	46	**	**	**	14	53	35	
7	286	46.6		25.4	355	11.1	91		25.0	70	48	20	47	47	**	**	**		40	37			
8	301	46.8		24.4	9	39.3	92		17.9	71	53	22	48	48	0	06	63		29	40			
9	316	47.1		23.4	24	07.4	91		10.6	73	4	56	24	48	17	61		19	42				
10	331	47.3		22.4	38	35.5	91	+19	03.2	74	5	01	27	49	36	58		14	02	46			
11	346	47.5	+0	21.5	53	03.7	92	+18	55.7	75	5	04	5	28	5	49	0	52	55	13	47	49	
12	1	47.7	+0	20.5	67	31.8	91	+18	48.1	76	5	05	5	29	5	50	1	07	53	13	33	52	
13	16	47.9		19.5	82	00.0	92		40.3	78	04	29	50	50	23	50		18	56				
14	31	48.2		18.6	96	28.1	91		32.5	78	20	5	02	28	50	39	47		13	03	59		
15	46	48.4		17.6	110	56.3	92		24.5	80	4	58	26	50	1	58	44		12	46	63		
16	61	48.6		16.6	125	24.4	91		16.5	80	55	25	50	50	2	09	42		36	65			
17	76	48.8	+0	15.6	139	52.6	92	+18	08.3	82	4	52	5	23	5	50	2	21	40	12	24	67	
18	91	49.0	+0	14.7	154	20.8	92	+18	00.0	83	4	46	5	21	5	50	2	36	37	12	10	71	
19	106	49.3		13.7	168	49.0	92	+17	51.5	85	50	40	18	50	2	54	33		11	53	75		
20	121	49.5		12.7	183	17.1	91		43.0	85	52	36	16	50	3	02	32		45	77			
21	136	49.7		11.7	197	45.3	92		34.4	86	54	33	14	50	11	30		36	79				
22	151	49.9		10.8	212	13.5	92		25.6	88	56	29	13	50	22	27		26	81				
23	166	50.1		09.8	226	41.7	92		16.8	88	58	24	10	49	34	24		14	85				
24	181	50.4	+0	08.8	241	09.9	92	+17	07.8	90	60 S	4	18	5	08	5	49	3	48	21	11	01	88
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO										
	PMG: 23 ^h 54 ^m 0			Mag: -3.9 PMG: 12 ^h 32 ^m			Mag: +1.3 PMG: 8 ^h 15 ^m			Mag: -2.8 PMG: 2 ^h 28 ^m			Mag: +0.8 PMG: 13 ^h 04 ^m										
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec									
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'							
0	0	30.8	172	11.2	-2	18.6	236	14.7	+20	43.5	322	55.7	+13	17.1	163	28.5	-4	47.8					
1	15	33.3	187	10.8		19.9	251	15.5		43.2	337	58.3		17.0	178	30.6		47.9					
2	30	35.8	202	10.5		21.2	266	16.4		42.9	353	01.0		16.9	193	32.8		48.0					
3	45	38.2	217	10.1		22.4	281	17.3		42.6	8	03.6		16.9	208	35.0		48.2					
4	60	40.7	232	09.7		23.7	296	18.2		42.3	23	06.2		16.8	223	37.2		48.3					
5	75	43.2	247	09.4	-2	25.0	311	19.0	+20	42.0	38	08.9	+13	16.7	238	39.4	-4	48.4					
6	90	45.6	262	09.0	-2	26.3	326	19.9	+20	41.7	53	11.5	+13	16.7	253	41.6	-4	48.5					
7	105	48.1	277	08.6		27.5	341	20.8		41.4	68	14.2		16.6	268	43.8		48.6					
8	120	50.6	292	08.2		28.8	356	21.6		41.1	83	16.8		16.5	283	46.0		48.7					
9	135	53.0	307	07.9		30.1	11	22.5		40.8	98	19.4		16.5	298	48.2		48.8					
10	150	55.5	322	07.5		31.3	26	23.4		40.5	113	22.1		16.4	313	50.4		49.0					
11	165	58.0	337	07.1	-2	32.6	41	24.3	+20	40.2	128	24.7	+13	16.4	328	52.6	-4	49.1					
12	181	00.4	352	06.7	-2	33.9	56	25.1	+20	39.9	143	27.4	+13	16.3	343	54.8	-4	49.2					
13	196	02.9	7	06.4		35.2	71	26.0		39.5	158	30.0		16.2	358	56.9		49.3					
14	211	05.3	22	06.0		36.4	86	26.9		39.2	173	32.7		16.2	13	59.1		49.4					
15	226	07.8	37	05.6		37.7	101	27.8		38.9	188	35.3		16.1	29	01.3		49.5					
16	241	10.3	52	05.2		39.0	116	28.6		38.6	203	38.0		16.0	44	03.5		49.6					
17	256	12.7	67	04.9	-2	40.3	131	29.5	+20	38.3	218	40.6	+13	16.0	59	05.7	-4	49.8					
18	271	15.2	82	04.5	-2	41.5	146	30.4	+20	38.0	233	43.2	+13	15.9	74	07.9	-4	49.9					
19	286	17.7	97	04.1		42.8	161	31.3		37.7	248	45.9		15.8	89	10.1		50.0					
20	301	20.1	112	03.8		44.1	176	32.1		37.4	263	48.5		15.8	104	12.3		50.1					
21	316	22.6	127	03.4		45.3	191	33.0		37.1	278	51.2		15.7	119	14.5		50.2					
22	331	25.1	142	03.0		46.6	206	33.9		36.8	293	53.8		15.6	134	16.7		50.3					
23	346	27.5	157	02.6		47.9	221	34.8		36.5	308	56.5		15.6	149	18.9		50.4					
24	1	30.0	172	02.3	-2	49.2	236	35.6	+20	36.1	323	59.1	+13	15.5	164	21.1	-4	50.6					
Dif	—		-4	-13			+9	-3			+26	-1			+22	-1							

UT	SOL		☾ LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15'9		Edad: 24 ^d 9 PHE { 4 ^h : 58'2 12 ^h : 58'5 20 ^h : 58'9											
	PMG: 11 ^h 52 ^m 5		SD: 15'8 PMG: 8 ^h 13 ^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	
0	181	50.4	+0 08.8	241	09.9	+17 07.8	60 N	17 58	18 40	19 29	** ** *		16 14	14
1	196	50.6	07.9	255	38.1	+16 58.7	58	58	37	24	** ** *		16 06	17
2	211	50.8	06.9	270	06.3	49.5	56	57	35	19	0 08	84	15 58	20
3	226	51.0	05.9	284	34.5	40.2	54	57	32	14	17	81	51	22
4	241	51.2	04.9	299	02.8	30.8	52	57	31	10	25	79	45	25
5	256	51.5	+0 04.0	313	31.0	+16 21.3	50	17 57	18 29	19 07	0 32	77	15 40	26
6	271	51.7	+0 03.0	327	59.2	+16 11.7	45	17 57	18 26	19 00	0 47	72	15 28	31
7	286	51.9	02.0	342	27.5	+16 02.0	40	56	23	18 55	0 59	69	17	35
8	301	52.1	01.0	356	55.7	+15 52.2	35	56	21	51	1 09	67	09	38
9	316	52.3	+0 00.1	11	24.0	42.2	30	56	20	48	18	64	15 01	40
10	331	52.6	-0 00.9	25	52.2	32.2	20	56	18	43	34	60	14 48	45
11	346	52.8	-0 01.9	40	20.5	+15 22.1	10 N	17 56	18 17	18 41	1 47	57	14 36	49
12	1	53.0	-0 02.9	54	48.8	+15 11.9	0	17 56	18 16	18 40	2 00	53	14 25	53
13	16	53.2	03.8	69	17.1	+15 01.5	10 S	56	17	41	13	49	14	56
14	31	53.4	04.8	83	45.3	+14 51.1	20	56	18	44	26	46	14 02	60
15	46	53.7	05.8	98	13.6	40.6	30	57	20	48	42	41	13 49	64
16	61	53.9	06.7	112	41.9	29.9	35	57	22	52	2 51	39	41	67
17	76	54.1	-0 07.7	127	10.2	+14 19.2	40	17 57	18 24	18 56	3 01	36	13 31	71
18	91	54.3	-0 08.7	141	38.5	+14 08.4	45	17 58	18 27	19 01	3 13	32	13 21	74
19	106	54.5	09.7	156	06.8	+13 57.4	50	58	31	09	27	28	08	78
20	121	54.7	10.6	170	35.2	46.4	52	59	32	12	34	26	13 02	80
21	136	55.0	11.6	185	03.5	35.3	54	59	34	16	41	24	12 55	83
22	151	55.2	12.6	199	31.8	24.1	56	17 59	36	21	49	22	47	86
23	166	55.4	13.6	214	00.2	12.8	58	18 00	39	26	3 58	19	39	89
24	181	55.6	-0 14.5	228	28.5	+13 01.4	60 S	18 00	18 42	19 32	4 09	15	12 29	93

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 23 ^h 50 ^m 1		Mag: -3.9 PMG: 12 ^h 32 ^m		Mag: +1.3 PMG: 8 ^h 13 ^m		Mag: -2.8 PMG: 2 ^h 24 ^m		Mag: +0.8 PMG: 13 ^h 01 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	1	30.0	172	02.3	236	35.6	+20 36.1	323	59.1	+13 15.5	164	21.1	-4 50.6	
1	16	32.5	187	01.9	251	36.5	35.8	339	01.8	15.4	179	23.2	50.7	
2	31	34.9	202	01.5	266	37.4	35.5	354	04.4	15.4	194	25.4	50.8	
3	46	37.4	217	01.1	281	38.3	35.2	9	07.1	15.3	209	27.6	50.9	
4	61	39.8	232	00.8	296	39.2	34.9	24	09.7	15.2	224	29.8	51.0	
5	76	42.3	247	00.4	-2 55.5	311	40.0	+20 34.6	39	12.4	+13 15.2	239	32.0	-4 51.1
6	91	44.8	262	00.0	-2 56.8	326	40.9	+20 34.3	54	15.0	+13 15.1	254	34.2	-4 51.2
7	106	47.2	276	59.6	58.1	341	41.8	34.0	69	17.7	15.0	269	36.4	51.4
8	121	49.7	291	59.3	-2 59.3	356	42.7	33.7	84	20.3	15.0	284	38.6	51.5
9	136	52.2	306	58.9	-3 00.6	11	43.6	33.3	99	23.0	14.9	299	40.8	51.6
10	151	54.6	321	58.5	01.9	26	44.4	33.0	114	25.6	14.8	314	43.0	51.7
11	166	57.1	336	58.1	-3 03.2	41	45.3	+20 32.7	129	28.3	+13 14.8	329	45.1	-4 51.8
12	181	59.6	351	57.8	-3 04.4	56	46.2	+20 32.4	144	30.9	+13 14.7	344	47.3	-4 51.9
13	197	02.0	6	57.4	05.7	71	47.1	32.1	159	33.6	14.6	359	49.5	52.0
14	212	04.5	21	57.0	07.0	86	48.0	31.8	174	36.2	14.6	14	51.7	52.2
15	227	06.9	36	56.6	08.2	101	48.8	31.5	189	38.9	14.5	29	53.9	52.3
16	242	09.4	51	56.3	09.5	116	49.7	31.2	204	41.5	14.4	44	56.1	52.4
17	257	11.9	66	55.9	-3 10.8	131	50.6	+20 30.8	219	44.2	+13 14.4	59	58.3	-4 52.5
18	272	14.3	81	55.5	-3 12.1	146	51.5	+20 30.5	234	46.8	+13 14.3	75	00.5	-4 52.6
19	287	16.8	96	55.1	13.3	161	52.4	30.2	249	49.5	14.2	90	02.7	52.7
20	302	19.3	111	54.7	14.6	176	53.2	29.9	264	52.1	14.2	105	04.9	52.8
21	317	21.7	126	54.4	15.9	191	54.1	29.6	279	54.8	14.1	120	07.1	53.0
22	332	24.2	141	54.0	17.1	206	55.0	29.3	294	57.5	14.0	135	09.2	53.1
23	347	26.7	156	53.6	18.4	221	55.9	29.0	310	00.1	14.0	150	11.4	53.2
24	2	29.1	171	53.2	-3 19.7	236	56.8	+20 28.6	325	02.8	+13 13.9	165	13.6	-4 53.3
Dif	—		-4	-13		+9	-3		+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 52 ^m 1			Edad: 25 ^d 9 PHE { 4 ^h : 59 ^m 2 12 ^h : 59 ^m 5 20 ^h : 59 ^m 8 SD: 16 ^h 1 PMG: 9 ^h 05 ^m R°: 53 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°			
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m		
0	181	55.6	-0 14.5	228	28.5	+13	01.4	60 N	4 16	5 06	5 48	1 18	94	16 28	12			
1	196	55.8		242	56.8	+12	50.0	58	22	09	48	25	91	23	15			
2	211	56.1		257	25.2		38.4	56	27	11	48	32	88	18	18			
3	226	56.3		271	53.5		26.7	54	31	13	48	38	85	14	22			
4	241	56.5		286	21.9		15.0	52	35	15	49	44	82	10	23			
5	256	56.7	-0 19.4	300	50.2	+12	03.2	50	4 38	5 16	5 49	1 49	80	16 06	25			
6	271	56.9	-0 20.4	315	18.6	+11	51.3	45	4 45	5 20	5 49	1 59	76	15 59	29			
7	286	57.1		329	47.0		39.3	40	50	22	49	2 08	72	52	33			
8	301	57.4		344	15.3		27.2	35	54	24	49	16	68	47	36			
9	316	57.6		358	43.7		15.0	30	4 57	25	49	22	66	41	39			
10	331	57.8		13	12.1	+11	02.8	20	5 02	27	49	34	60	33	44			
11	346	58.0	-0 25.2	27	40.4	+10	50.5	10 N	5 04	5 28	5 49	2 44	56	15 25	48			
12	1	58.2	-0 26.2	42	08.8	+10	38.1	0	5 04	5 28	5 49	2 53	52	15 18	52			
13	16	58.4		56	37.2		25.6	10 S		03	28	49	3 02	49	10	57		
14	31	58.7		71	05.6		13.0	20	5 01	26	48	12	44	15 02	62			
15	46	58.9		85	33.9	+10	00.4	30	4 56	24	48	23	40	14 53	67			
16	61	59.1		100	02.3	+9	47.7	35	52	22	47	30	36	48	69			
17	76	59.3	-0 31.1	114	30.7	+9	34.9	40	4 48	5 20	5 47	3 37	33	14 42	73			
18	91	59.5	-0 32.1	128	59.0	+9	22.1	45	4 42	5 17	5 46	3 45	30	14 35	77			
19	106	59.8		143	27.4	+9	09.2	50	35	13	45	3 55	26	26	82			
20	122	00.0		157	55.8	+8	56.2	52	32	11	45	4 00	24	22	84			
21	137	00.2		172	24.1		43.1	54	28	09	45	05	22	18	86			
22	152	00.4		186	52.5		30.0	56	23	07	44	11	19	13	89			
23	167	00.6		201	20.9		16.8	58	18	05	44	17	16	08	92			
24	182	00.8	-0 37.9	215	49.2	+8	03.5	60 S	4 12	5 02	5 43	4 24	13	14 02	95			
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG 23 ^h 46 ^m 2		Mag: -3.9 PMG: 12 ^h 33 ^m			Mag: +1.3 PMG: 8 ^h 12 ^m			Mag: -2.8 PMG: 2 ^h 19 ^m			Mag: +0.8 PMG: 12 ^h 57 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	°	'	°	'	°	°	'	°	°	'	°	'			
0	2	29.1	171	53.2	-3	19.7	236	56.8	+20	28.6	325	02.8	+13	13.9	165	13.6	-4	53.3
1	17	31.6	186	52.9		20.9	251	57.7		28.3	340	05.4		13.8	180	15.8		53.4
2	32	34.1	201	52.5		22.2	266	58.5		28.0	355	08.1		13.8	195	18.0		53.5
3	47	36.5	216	52.1		23.5	281	59.4		27.7	10	10.7		13.7	210	20.2		53.7
4	62	39.0	231	51.7		24.8	297	00.3		27.4	25	13.4		13.6	225	22.4		53.8
5	77	41.4	246	51.4	-3	26.0	312	01.2	+20	27.1	40	16.0	+13	13.6	240	24.6	-4	53.9
6	92	43.9	261	51.0	-3	27.3	327	02.1	+20	26.8	55	18.7	+13	13.5	255	26.8	-4	54.0
7	107	46.4	276	50.6		28.6	342	03.0		26.4	70	21.4		13.4	270	28.9		54.1
8	122	48.8	291	50.2		29.8	357	03.9		26.1	85	24.0		13.3	285	31.1		54.2
9	137	51.3	306	49.8		31.1	12	04.7		25.8	100	26.7		13.3	300	33.3		54.3
10	152	53.8	321	49.5		32.4	27	05.6		25.5	115	29.3		13.2	315	35.5		54.5
11	167	56.2	336	49.1	-3	33.6	42	06.5	+20	25.2	130	32.0	+13	13.1	330	37.7	-4	54.6
12	182	58.7	351	48.7	-3	34.9	57	07.4	+20	24.9	145	34.6	+13	13.1	345	39.9	-4	54.7
13	198	01.2	6	48.3		36.2	72	08.3		24.5	160	37.3		13.0	0	42.1		54.8
14	213	03.6	21	47.9		37.4	87	09.2		24.2	175	40.0		12.9	15	44.3		54.9
15	228	06.1	36	47.6		38.7	102	10.1		23.9	190	42.6		12.9	30	46.5		55.0
16	243	08.6	51	47.2		40.0	117	10.9		23.6	205	45.3		12.8	45	48.7		55.1
17	258	11.0	66	46.8	-3	41.3	132	11.8	+20	23.3	220	47.9	+13	12.7	60	50.8	-4	55.3
18	273	13.5	81	46.4	-3	42.5	147	12.7	+20	22.9	235	50.6	+13	12.7	75	53.0	-4	55.4
19	288	15.9	96	46.0		43.8	162	13.6		22.6	250	53.3		12.6	90	55.2		55.5
20	303	18.4	111	45.7		45.1	177	14.5		22.3	265	55.9		12.5	105	57.4		55.6
21	318	20.9	126	45.3		46.3	192	15.4		22.0	280	58.6		12.4	120	59.6		55.7
22	333	23.3	141	44.9		47.6	207	16.3		21.7	296	01.2		12.4	136	01.8		55.8
23	348	25.8	156	44.5		48.9	222	17.2		21.4	311	03.9		12.3	151	04.0		55.9
24	3	28.3	171	44.1	-3	50.1	237	18.1	+20	21.0	326	06.6	+13	12.2	166	06.2	-4	56.1
Dif	—		-4		-13	+9		-3		+27		-1		+22		-1		

UT	SOL		☾ LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna					
	SD: 15'9		Edad: 26 ^d 9 PHE { 4 ^h : 60'1 12 ^h : 60'3 20 ^h : 60'5															
	PMG: 11 ^h 51 ^m 8		SD: 16'3 PMG: 9 ^h 58 ^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				
0	182	00.8	-0	37.9	215	49.2	+8 03.5	60 N	17 52	18 33	19 23	2 52	97	16 40 11				
1	197	01.1		38.9	230	17.6	+7 50.2 ¹³³	58	52	31	18	2 56	93	38 14				
2	212	01.3		39.9	244	45.9	36.8 ¹³⁴	56	52	29	13	3 00	90	36 17				
3	227	01.5		40.8	259	14.2	23.4 ¹³⁴	54	52	27	09	03 88		34 20				
4	242	01.7		41.8	273	42.6	+7 09.9 ¹³⁵	52	52	26	06	06 85		33 21				
5	257	01.9	-0	42.8	288	10.9	+6 56.4 ¹³⁵	50	17 52	18 25	19 02	3 09	83	16 31 24				
6	272	02.1	-0	43.7	302	39.2	+6 42.7 ¹³⁷	45	17 53	18 22	18 56	3 15	78	16 28 28				
7	287	02.3		44.7	317	07.5	29.1 ¹³⁶	40	53	20	51	20 73		25 33				
8	302	02.6		45.7	331	35.8	15.4 ¹³⁷	35	53	18	48	24 70		23 35				
9	317	02.8		46.7	346	04.1	+6 01.6 ¹³⁸	30	53	17	45	28 67		20 39				
10	332	03.0		47.6	0	32.4	+5 47.8 ¹³⁸	20	54	16	41	34 62		17 44				
11	347	03.2	-0	48.6	15	00.7	+5 33.9 ¹³⁹	10 N	17 54	18 15	18 40	3 40	57	16 13 49				
12	2	03.4	-0	49.6	29	28.9	+5 20.0 ¹³⁹	0	17 55	18 16	18 40	3 45	53	16 10 53				
13	17	03.6		50.6	43	57.2	+5 06.0 ¹⁴⁰	10 S	56	17	41	51 48		07 58				
14	32	03.9		51.5	58	25.4	+4 52.0 ¹⁴⁰	20	57	19	44	3 56	44	04 62				
15	47	04.1		52.5	72	53.6	38.0 ¹⁴⁰	30	58	22	49	4 03	38	16 00 67				
16	62	04.3		53.5	87	21.8	23.9 ¹⁴¹	35	58	24	53	06 36		15 57 71				
17	77	04.5	-0	54.5	101	50.0	+4 09.7 ¹⁴²	40	17 59	18 26	18 58	4 10	33	15 55 74				
18	92	04.7	-0	55.4	116	18.2	+3 55.6 ¹⁴¹	45	18 00	18 29	19 04	4 15	29	15 52 78				
19	107	04.9		56.4	130	46.4	41.3 ¹⁴³	50	01	34	12	21 24		48 83				
20	122	05.1		57.4	145	14.6	27.1 ¹⁴²	52	02	36	16	24 22		46 86				
21	137	05.4		58.4	159	42.7	+3 12.8 ¹⁴³	54	02	38	20	27 19		44 88				
22	152	05.6	-0	59.3	174	10.8	+2 58.5 ¹⁴³	56	03	40	25	30 17		42 91				
23	167	05.8	-1	00.3	188	38.9	44.2 ¹⁴³	58	04	43	31	33 15		40 94				
24	182	06.0	-1	01.3	203	07.0	+2 29.8 ¹⁴⁴	60 S	18 05	18 47	19 37	4 37	11	15 37 98				
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 23 ^h 42 ^m 2		Mag: -3.9 PMG: 12 ^h 33 ^m			Mag: +1.3 PMG: 8 ^h 10 ^m			Mag: -2.8 PMG: 2 ^h 15 ^m			Mag: +0.8 PMG: 12 ^h 54 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	3	28.3	171	44.1	-3	50.1	237	18.1	+20	21.0	326	06.6	+13	12.2	166	06.2	-4	56.1
1	18	30.7	186	43.8		51.4	252	18.9		20.7	341	09.2		12.2	181	08.4		56.2
2	33	33.2	201	43.4		52.7	267	19.8		20.4	356	11.9		12.1	196	10.5		56.3
3	48	35.7	216	43.0		53.9	282	20.7		20.1	11	14.6		12.0	211	12.7		56.4
4	63	38.1	231	42.6		55.2	297	21.6		19.8	26	17.2		11.9	226	14.9		56.5
5	78	40.6	246	42.2	-3	56.5	312	22.5	+20	19.4	41	19.9	+13	11.9	241	17.1	-4	56.6
6	93	43.0	261	41.9	-3	57.7	327	23.4	+20	19.1	56	22.5	+13	11.8	256	19.3	-4	56.7
7	108	45.5	276	41.5	-3	59.0	342	24.3		18.8	71	25.2		11.7	271	21.5		56.9
8	123	48.0	291	41.1	-4	00.3	357	25.2		18.5	86	27.9		11.7	286	23.7		57.0
9	138	50.4	306	40.7		01.5	12	26.1		18.2	101	30.5		11.6	301	25.9		57.1
10	153	52.9	321	40.3		02.8	27	27.0		17.8	116	33.2		11.5	316	28.1		57.2
11	168	55.4	336	40.0	-4	04.1	42	27.9	+20	17.5	131	35.9	+13	11.4	331	30.2	-4	57.3
12	183	57.8	351	39.6	-4	05.3	57	28.8	+20	17.2	146	38.5	+13	11.4	346	32.4	-4	57.4
13	199	00.3	6	39.2		06.6	72	29.7		16.9	161	41.2		11.3	1	34.6		57.6
14	214	02.8	21	38.8		07.9	87	30.5		16.5	176	43.9		11.2	16	36.8		57.7
15	229	05.2	36	38.4		09.1	102	31.4		16.2	191	46.5		11.2	31	39.0		57.8
16	244	07.7	51	38.0		10.4	117	32.3		15.9	206	49.2		11.1	46	41.2		57.9
17	259	10.2	66	37.7	-4	11.7	132	33.2	+20	15.6	221	51.9	+13	11.0	61	43.4	-4	58.0
18	274	12.6	81	37.3	-4	12.9	147	34.1	+20	15.3	236	54.5	+13	10.9	76	45.6	-4	58.1
19	289	15.1	96	36.9		14.2	162	35.0		14.9	251	57.2		10.9	91	47.8		58.2
20	304	17.5	111	36.5		15.5	177	35.9		14.6	266	59.9		10.8	106	49.9		58.4
21	319	20.0	126	36.1		16.7	192	36.8		14.3	282	02.5		10.7	121	52.1		58.5
22	334	22.5	141	35.7		18.0	207	37.7		14.0	297	05.2		10.7	136	54.3		58.6
23	349	24.9	156	35.4		19.3	222	38.6		13.6	312	07.9		10.6	151	56.5		58.7
24	4	27.4	171	35.0	-4	20.5	237	39.5	+20	13.3	327	10.5	+13	10.5	166	58.7	-4	58.8
Dif	—		-4		-13		+9		-3		+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 51 ^m 4			Edad: 27 ^d 9 PHE { 4 ^h : 60'8 12 ^h : 60'9 20 ^h : 61'1 R°: 54 ^m													
	hG ☉		Dec	hG ☾		Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	182	06.0	-1	01.3	203	07.0	+2	29.8	60 N	4	21	5	11	5	53	4	29
1	197	06.2		02.3	217	35.1		15.4 ¹⁴⁴	58		27		13		52	29	96
2	212	06.4		03.2	232	03.1	+2	01.0 ¹⁴⁴	56		31		15		52	30	92
3	227	06.7		04.2	246	31.1	+1	46.5 ¹⁴⁵	54		35		17		52	31	89
4	242	06.9		05.2	260	59.1		32.0 ¹⁴⁵	52		39		18		52	31	87
5	257	07.1	-1	06.2	275	27.1	+1	17.5 ¹⁴⁵	50	4	42	5	19	5	52	4	32
6	272	07.3	-1	07.1	289	55.1	+1	03.0 ¹⁴⁵	45	4	48	5	22	5	51	4	33
7	287	07.5		08.1	304	23.0	+0	48.5 ¹⁴⁵	40		52		24		51	33	76
8	302	07.7		09.1	318	50.9		33.9 ¹⁴⁶	35		56		25		51	34	72
9	317	07.9		10.0	333	18.8		19.4 ¹⁴⁵	30	4	59		26	50	35	35	68
10	332	08.2		11.0	347	46.7	+0	04.8 ¹⁴⁶	20	5	02		28	50	36	63	17
11	347	08.4	-1	12.0	2	14.5	-0	09.8 ¹⁴⁶	10 N	5	04		5	28	5	49	4
12	2	08.6	-1	13.0	16	42.4	-0	24.4 ¹⁴⁶	0	5	04		5	28	5	48	4
13	17	08.8		13.9	31	10.2		39.0 ¹⁴⁶	10 S	5	02		26	47	39	49	05
14	32	09.0		14.9	45	37.9	-0	53.6 ¹⁴⁶	20	4	59		24	46	40	45	06
15	47	09.2		15.9	60	05.6	-1	08.2 ¹⁴⁶	30		53		21	45	41	40	07
16	62	09.4		16.9	74	33.3		22.8 ¹⁴⁶	35		50		19	44	42	37	08
17	77	09.6	-1	17.8	89	01.0	-1	37.4 ¹⁴⁶	40	4	45	5	16	5	43	4	43
18	92	09.9	-1	18.8	103	28.7	-1	52.0 ¹⁴⁶	45	4	39	5	13	5	42	4	44
19	107	10.1		19.8	117	56.3	-2	06.7 ¹⁴⁷	50		30		09	41	45	25	11
20	122	10.3		20.8	132	23.9		21.3 ¹⁴⁶	52		27		07	40	46	22	12
21	137	10.5		21.7	146	51.4		35.9 ¹⁴⁶	54		22		04	40	46	20	12
22	152	10.7		22.7	161	18.9	-2	50.4 ¹⁴⁵	56		17	5	02	39	47	17	13
23	167	10.9		23.7	175	46.4	-3	05.0 ¹⁴⁶	58		11	4	59	38	48	14	14
24	182	11.1	-1	24.7	190	13.9	-3	19.6 ¹⁴⁶	60 S	4	05	4	55	5	37	4	48

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 23 ^h 38 ^m 3		Mag: -3.9 PMG: 12 ^h 34 ^m		Mag: +1.3 PMG: 8 ^h 09 ^m		Mag: -2.8 PMG: 2 ^h 11 ^m		Mag: +0.8 PMG: 12 ^h 50 ^m	
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄	
h	°	'	°	'	°	'	°	'	°	'
0	4	27.4	171	35.0	-4	20.5	237	39.5	+20	13.3
1	19	29.9	186	34.6		21.8	252	40.4		13.0
2	34	32.3	201	34.2		23.0	267	41.3		12.7
3	49	34.8	216	33.8		24.3	282	42.2		12.3
4	64	37.3	231	33.4		25.6	297	43.1		12.0
5	79	39.7	246	33.1	-4	26.8	312	44.0	+20	11.7
6	94	42.2	261	32.7	-4	28.1	327	44.9	+20	11.4
7	109	44.6	276	32.3		29.4	342	45.8		11.1
8	124	47.1	291	31.9		30.6	357	46.7		10.7
9	139	49.6	306	31.5		31.9	12	47.6		10.4
10	154	52.0	321	31.1		33.2	27	48.5		10.1
11	169	54.5	336	30.8	-4	34.4	42	49.4	+20	09.8
12	184	57.0	351	30.4	-4	35.7	57	50.3	+20	09.4
13	199	59.4	6	30.0		36.9	72	51.2		09.1
14	215	01.9	21	29.6		38.2	87	52.1		08.8
15	230	04.4	36	29.2		39.5	102	53.0		08.4
16	245	06.8	51	28.8		40.7	117	53.9		08.1
17	260	09.3	66	28.4	-4	42.0	132	54.8	+20	07.8
18	275	11.8	81	28.0	-4	43.3	147	55.7	+20	07.5
19	290	14.2	96	27.7		44.5	162	56.6		07.1
20	305	16.7	111	27.3		45.8	177	57.5		06.8
21	320	19.1	126	26.9		47.0	192	58.4		06.5
22	335	21.6	141	26.5		48.3	207	59.3		06.2
23	350	24.1	156	26.1		49.6	223	00.2		05.8
24	5	26.5	171	25.7	-4	50.8	238	01.1	+20	05.5
Dif	—		-4		-13		+9		-3	
							+27		-1	
									+22	
									-1	

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna		
	SD: 16'0 PMG: 11 ^h 51 ^m 1			Edad: 28 ^d 9 PHE { 4 ^h : 61'2 12 ^h : 61'3 20 ^h : 61'3 Rº: 56 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec			Dif		Civil	Náutico	Hora	Rº	Hora	Rº
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m
0	182	11.1	-1	24.7	190	13.9	-3	19.6	60 N	17 46	18 27	19 16	6 07	101	17 03	14
1	197	11.3		25.6	204	41.3	84	34.1	58	46	25	12	05	96	07	18
2	212	11.6		26.6	219	08.7	84	-3	48.7	56	47	24	02	93	11	20
3	227	11.8		27.6	233	36.0	83	-4	03.2	54	47	22	04	6	00	90
4	242	12.0		28.5	248	03.3	83	17.7	52	48	21	19 01	5	58	88	17 26
5	257	12.2	-1	29.5	262	30.6	83	-4	32.2	50	17 48	18 20	18 58	5	56	85
6	272	12.4	-1	30.5	276	57.8	82	-4	46.6	45	17 49	18 18	18 52	5	52	80
7	287	12.6		31.5	291	25.0	82	-5	01.1	40	50	17	48	49	76	31 36
8	302	12.8		32.4	305	52.2	82	15.5	35	50	16	45	46	73	36	39
9	317	13.0		33.4	320	19.3	81	29.8	30	51	15	43	43	70	39	43
10	332	13.3		34.4	334	46.4	81	44.2	20	52	14	40	39	64	46	48
11	347	13.5	-1	35.4	349	13.5	81	-5	58.5	10 N	17 53	18 14	18 39	5	35	60
12	2	13.7	-1	36.3	3	40.5	80	-6	12.8	0	17 54	18 15	18 39	5	32	55
13	17	13.9		37.3	18	07.4	79	27.0	10 S	56	17	17	41	28	51	18 03
14	32	14.1		38.3	32	34.3	79	41.2	20	57	19	45	25	46	09	65
15	47	14.3		39.3	47	01.2	79	-6	55.4	30	17 59	23	51	21	41	16 70
16	62	14.5		40.2	61	28.1	79	-7	09.5	35	18 00	25	18 55	19	38	20 73
17	77	14.7	-1	41.2	75	54.9	78	-7	23.6	40	18 01	18 28	19 00	5	16	35
18	92	15.0	-1	42.2	90	21.6	77	-7	37.6	45	18 03	18 32	19 07	5	13	31
19	107	15.2		43.2	104	48.3	77	-7	51.6	50	04	37	15	10	26	36 86
20	122	15.4		44.1	119	15.0	77	-8	05.5	52	05	39	19	08	24	39 88
21	137	15.6		45.1	133	41.6	76	19.4	54	06	42	24	06	22	42	91
22	152	15.8		46.1	148	08.2	76	33.2	56	07	45	29	04	19	46	93
23	167	16.0		47.0	162	34.7	75	-8	47.0	58	08	48	36	02	16	50 97
24	182	16.2	-1	48.0	177	01.2	75	-9	00.7	60 S	18 10	18 52	19 43	5	00	13
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO				
	PMG: 23 ^h 34 ^m 4		Mag: -3.9 PMG: 12 ^h 35 ^m			Mag: +1.3 PMG: 8 ^h 07 ^m			Mag: -2.9 PMG: 2 ^h 07 ^m			Mag: +0.8 PMG: 12 ^h 47 ^m				
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	5	26.5	171	25.7	-4	50.8	238	01.1	+20	05.5	328	14.7	+13	08.7	167	51.2
1	20	29.0	186	25.3		52.1	253	02.0		05.2	343	17.3		08.7	182	53.4
2	35	31.5	201	25.0		53.4	268	02.9		04.9	358	20.0		08.6	197	55.6
3	50	33.9	216	24.6		54.6	283	03.8		04.5	13	22.7		08.5	212	57.8
4	65	36.4	231	24.2		55.9	298	04.7		04.2	28	25.4		08.4	227	59.9
5	80	38.9	246	23.8	-4	57.1	313	05.6	+20	03.9	43	28.1	+13	08.4	243	02.1
6	95	41.3	261	23.4	-4	58.4	328	06.5	+20	03.5	58	30.7	+13	08.3	258	04.3
7	110	43.8	276	23.0	-4	59.7	343	07.4		03.2	73	33.4		08.2	273	06.5
8	125	46.2	291	22.6	-5	00.9	358	08.3		02.9	88	36.1		08.1	288	08.7
9	140	48.7	306	22.2		02.2	13	09.2		02.5	103	38.8		08.1	303	10.9
10	155	51.2	321	21.8		03.4	28	10.1		02.2	118	41.4		08.0	318	13.1
11	170	53.6	336	21.5	-5	04.7	43	11.0	+20	01.9	133	44.1	+13	07.9	333	15.3
12	185	56.1	351	21.1	-5	05.9	58	12.0	+20	01.6	148	46.8	+13	07.8	348	17.4
13	200	58.6	6	20.7		07.2	73	12.9		01.2	163	49.5		07.8	3	19.6
14	216	01.0	21	20.3		08.5	88	13.8		00.9	178	52.2		07.7	18	21.8
15	231	03.5	36	19.9		09.7	103	14.7		00.6	193	54.8		07.6	33	24.0
16	246	06.0	51	19.5		11.0	118	15.6	+20	00.2	208	57.5		07.5	48	26.2
17	261	08.4	66	19.1	-5	12.2	133	16.5	+19	59.9	224	00.2	+13	07.5	63	28.4
18	276	10.9	81	18.7	-5	13.5	148	17.4	+19	59.6	239	02.9	+13	07.4	78	30.6
19	291	13.4	96	18.3		14.8	163	18.3		59.2	254	05.6		07.3	93	32.8
20	306	15.8	111	17.9		16.0	178	19.2		58.9	269	08.2		07.2	108	34.9
21	321	18.3	126	17.5		17.3	193	20.1		58.6	284	10.9		07.2	123	37.1
22	336	20.7	141	17.2		18.5	208	21.0		58.3	299	13.6		07.1	138	39.3
23	351	23.2	156	16.8		19.8	223	21.9		57.9	314	16.3		07.0	153	41.5
24	6	25.7	171	16.4	-5	21.0	238	22.9	+19	57.6	329	19.0	+13	06.9	168	43.7
Dif	—		-4		-13		+9		-3		+27		-1		+22	

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'0 PMG: 11 ^h 50 ^m 8			Edad: 0 ^d 5 PHE { SD: 16'7 PMG: 12 ^h 41 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	182	16.2	-1	48.0	177	01.2	-9 00.7	60 N	4 27	5 16	5 57	7 48	101	17 17	18
1	197	16.4		49.0	191	27.6	14.4 ¹³⁷	58	31	18	57	41	97	25	22
2	212	16.6		50.0	205	54.0	28.0 ¹³⁶	56	35	19	56	35	94	31	26
3	227	16.8		50.9	220	20.4	41.5 ¹³⁵	54	39	20	56	30	91	37	28
4	242	17.1		51.9	234	46.6	55.0 ¹³⁵	52	42	21	55	26	87	43	30
5	257	17.3	-1	52.9	249	12.9	08.4 ¹³⁴	50	4 45	5 22	5 55	7 21	86	17 48	32
6	272	17.5	-1	53.9	263	39.1	21.7 ¹³³	45	4 50	5 24	5 54	7 12	81	17 58	38
7	287	17.7		54.8	278	05.3	35.0 ¹³³	40	54	26	53	7 05	77	18 07	41
8	302	17.9		55.8	292	31.4	48.2 ¹³²	35	4 57	27	52	6 59	73	15	44
9	317	18.1		56.8	306	57.4	01.3 ¹³¹	30	5 00	27	51	53	70	22	46
10	332	18.3		57.8	321	23.5	14.4 ¹³¹	20	02	28	50	43	66	34	51
11	347	18.5	-1	58.7	335	49.4	27.3 ¹²⁹	10 N	5 03	5 28	5 49	6 35	61	18 44	55
12	2	18.7	-1	59.7	350	15.3	40.2 ¹²⁹	0	5 03	5 27	5 48	6 27	57	18 54	58
13	17	18.9	-2	00.7	4	41.2	53.0 ¹²⁸	10 S	5 01	25	46	19	54	19 04	62
14	32	19.2		01.6	19	07.0	05.8 ¹²⁸	20	4 57	23	45	11	49	14	66
15	47	19.4		02.6	33	32.8	18.4 ¹²⁶	30	51	19	43	6 02	44	26	71
16	62	19.6		03.6	47	58.5	31.0 ¹²⁶	35	47	16	41	5 57	41	33	73
17	77	19.8	-2	04.6	62	24.2	43.4 ¹²⁴	40	4 41	5 13	5 40	5 51	38	19 41	76
18	92	20.0	-2	05.5	76	49.9	55.8 ¹²⁴	45	4 35	5 09	5 39	5 44	35	19 51	79
19	107	20.2		06.5	91	15.4	08.1 ¹²³	50	26	04	37	36	30	20 02	84
20	122	20.4		07.5	105	41.0	20.3 ¹²²	52	22	5 02	36	32	28	07	87
21	137	20.6		08.5	120	06.5	32.4 ¹²¹	54	17	4 59	35	28	25	13	89
22	152	20.8		09.4	134	31.9	44.4 ¹²⁰	56	11	56	34	23	23	19	92
23	167	21.0		10.4	148	57.3	56.3 ¹¹⁹	58	4 05	53	32	18	20	27	95
24	182	21.2	-2	11.4	163	22.6	08.2 ¹¹⁹	60 S	3 58	4 49	5 31	5 13	16	20 35	99

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG: 23 ^h 30 ^m 4		Mag: -3.9 PMG: 12 ^h 35 ^m		Mag: +1.3 PMG: 8 ^h 06 ^m		Mag: -2.9 PMG: 2 ^h 02 ^m		Mag: +0.8 PMG: 12 ^h 43 ^m						
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'					
0	6	25.7	171	16.4	-5	21.0	238	22.9	+13	06.9	168	43.7	-5	04.3	
1	21	28.1	186	16.0		22.3	253	23.8		06.9	183	45.9		04.5	
2	36	30.6	201	15.6		23.6	268	24.7		06.8	198	48.1		04.6	
3	51	33.1	216	15.2		24.8	283	25.6		06.7	213	50.2		04.7	
4	66	35.5	231	14.8		26.1	298	26.5		06.6	228	52.4		04.8	
5	81	38.0	246	14.4	-5	27.3	313	27.4	+19	55.9	243	54.6	-5	04.9	
6	96	40.5	261	14.0	-5	28.6	328	28.3	+19	55.6	258	56.8	-5	05.0	
7	111	42.9	276	13.6		29.8	343	29.2		55.3	273	59.0		05.1	
8	126	45.4	291	13.2		31.1	358	30.1		54.9	289	01.2		05.3	
9	141	47.8	306	12.8		32.4	13	31.1		54.6	304	03.4		05.4	
10	156	50.3	321	12.4		33.6	28	32.0		54.3	319	05.5		05.5	
11	171	52.8	336	12.0	-5	34.9	43	32.9	+19	53.9	334	07.7	-5	05.6	
12	186	55.2	351	11.7	-5	36.1	58	33.8	+19	53.6	349	09.9	-5	05.7	
13	201	57.7	6	11.3		37.4	73	34.7		53.3	4	12.1		05.8	
14	217	00.2	21	10.9		38.6	88	35.6		52.9	19	14.3		05.9	
15	232	02.6	36	10.5		39.9	103	36.5		52.6	34	16.5		06.1	
16	247	05.1	51	10.1		41.1	118	37.5		52.3	49	18.7		06.2	
17	262	07.6	66	09.7	-5	42.4	133	38.4	+19	51.9	64	20.9	-5	06.3	
18	277	10.0	81	09.3	-5	43.6	148	39.3	+19	51.6	79	23.0	-5	06.4	
19	292	12.5	96	08.9		44.9	163	40.2		51.3	94	25.2		06.5	
20	307	15.0	111	08.5		46.1	178	41.1		50.9	109	27.4		06.6	
21	322	17.4	126	08.1		47.4	193	42.0		50.6	124	29.6		06.8	
22	337	19.9	141	07.7		48.7	208	42.9		50.3	139	31.8		06.9	
23	352	22.3	156	07.3		49.9	223	43.9		49.9	154	34.0		07.0	
24	7	24.8	171	06.9	-5	51.2	238	44.8	+19	49.6	169	36.2	-5	07.1	
Dif	—		-4		-13		+9		-3		+27		-1		-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 4			Edad: 1 ^d 5 SD: 16'7 PMG: 13 ^h 38 ^m	PHE { 4 ^h : 61'1 12 ^h : 61'0 20 ^h : 60'8 Rº: 60 ^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	182	21.2	-2	11.4	163	22.6	-14	08.2	60 N	17 40	18 21	19 10	9 29	96		17 35	27	
1	197	21.4		12.3	177	47.9	63	19.9 ¹¹⁷	58	41	20	06	18	93		47	30	
2	212	21.7		13.3	192	13.2	63	31.5 ¹¹⁶	56	42	19	19 02	09	89		17 57	33	
3	227	21.9		14.3	206	38.4	62	43.0 ¹¹⁵	54	42	17	18 59	9 01	86		18 05	36	
4	242	22.1		15.3	221	03.6	62	-14 54.4 ¹¹⁴	52	43	17	56	8 53	85		13	38	
5	257	22.3	-2	16.2	235	28.7	61	-15 05.7 ¹¹³	50	17 44	18 16	18 53	8 47	82		18 20	40	
6	272	22.5	-2	17.2	249	53.8	61	-15 16.8 ¹¹¹	45	17 45	18 14	18 48	8 33	78		18 36	43	
7	287	22.7		18.2	264	18.8	60	27.9 ¹¹¹	40	46	13	45	22	74		48	47	
8	302	22.9		19.2	278	43.8	60	38.9 ¹¹⁰	35	47	13	42	12	72		18 59	49	
9	317	23.1		20.1	293	08.7	59	-15 49.7 ¹⁰⁸	30	48	12	40	8 03	70		19 08	51	
10	332	23.3		21.1	307	33.6	59	-16 00.5 ¹⁰⁸	20	50	12	38	7 49	65		25	54	
11	347	23.5	-2	22.1	321	58.4	58	-16 11.1 ¹⁰⁶	10 N	17 52	18 13	18 37	7 36	62		19 39	57	
12	2	23.7	-2	23.0	336	23.3	59	-16 21.6 ¹⁰⁵	0	17 54	18 14	18 38	7 24	60		19 52	60	
13	17	23.9		24.0	350	48.0	57	32.0 ¹⁰⁴	10 S	55	16	41	13	56		20 06	62	
14	32	24.1		25.0	5	12.8	58	42.2 ¹⁰²	20	17 58	20	45	7 00	53		20	65	
15	47	24.4		26.0	19	37.4	56	-16 52.3 ¹⁰¹	30	18 00	24	52	6 46	49		37	68	
16	62	24.6		26.9	34	02.1	57	-17 02.4 ¹⁰¹	35	01	27	18 56	38	46		46	71	
17	77	24.8	-2	27.9	48	26.7	56	-17 12.3 ⁹⁹	40	18 03	18 30	19 02	6 29	44		20 57	73	
18	92	25.0	-2	28.9	62	51.3	56	-17 22.0 ⁹⁷	45	18 05	18 34	19 09	6 19	40		21 10	76	
19	107	25.2		29.8	77	15.8	55	31.7 ⁹⁷	50	07	40	19	06	36		26	79	
20	122	25.4		30.8	91	40.3	55	41.2 ⁹⁵	52	08	42	23	6 00	34		34	81	
21	137	25.6		31.8	106	04.7	54	50.5 ⁹³	54	10	45	28	5 53	32		42	83	
22	152	25.8		32.8	120	29.2	55	-17 59.8 ⁹³	56	11	49	34	46	29		21 51	86	
23	167	26.0		33.7	134	53.5	53	-18 08.9 ⁹¹	58	13	52	41	38	26		22 02	88	
24	182	26.2	-2	34.7	149	17.9	54	-18 17.9 ⁹⁰	60 S	18 14	18 57	19 48	5 29	22		22 14	92	
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG 23 ^h 26 ^m 5		Mag: -3.9 PMG: 12 ^h 36 ^m		Mag: +1.3 PMG: 8 ^h 05 ^m		Mag: -2.9 PMG: 1 ^h 58 ^m		Mag: +0.8 PMG: 12 ^h 40 ^m									
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	7	24.8	171	06.9	-5	51.2	238	44.8	+19	49.6	330	23.4	+13	05.1	169	36.2	-5	07.1
1	22	27.3	186	06.5		52.4	253	45.7		49.2	345	26.1		05.0	184	38.3		07.2
2	37	29.7	201	06.1		53.7	268	46.6		48.9	0	28.8		04.9	199	40.5		07.3
3	52	32.2	216	05.7		54.9	283	47.5		48.6	15	31.5		04.8	214	42.7		07.4
4	67	34.7	231	05.3		56.2	298	48.4		48.2	30	34.2		04.7	229	44.9		07.6
5	82	37.1	246	04.9	-5	57.4	313	49.4	+19	47.9	45	36.9	+13	04.7	244	47.1	-5	07.7
6	97	39.6	261	04.5	-5	58.7	328	50.3	+19	47.6	60	39.6	+13	04.6	259	49.3	-5	07.8
7	112	42.1	276	04.1	-5	59.9	343	51.2		47.2	75	42.2		04.5	274	51.5		07.9
8	127	44.5	291	03.7	-6	01.2	358	52.1		46.9	90	44.9		04.4	289	53.6		08.0
9	142	47.0	306	03.3		02.4	13	53.0		46.6	105	47.6		04.4	304	55.8		08.1
10	157	49.5	321	02.9		03.7	28	54.0		46.2	120	50.3		04.3	319	58.0		08.3
11	172	51.9	336	02.5	-6	04.9	43	54.9	+19	45.9	135	53.0	+13	04.2	335	00.2	-5	08.4
12	187	54.4	351	02.1	-6	06.2	58	55.8	+19	45.5	150	55.7	+13	04.1	350	02.4	-5	08.5
13	202	56.8	6	01.7		07.4	73	56.7		45.2	165	58.4		04.0	5	04.6		08.6
14	217	59.3	21	01.3		08.7	88	57.6		44.9	181	01.1		04.0	20	06.8		08.7
15	233	01.8	36	00.9		09.9	103	58.6		44.5	196	03.8		03.9	35	08.9		08.8
16	248	04.2	51	00.5		11.2	118	59.5		44.2	211	06.5		03.8	50	11.1		08.9
17	263	06.7	66	00.1	-6	12.4	134	00.4	+19	43.9	226	09.2	+13	03.7	65	13.3	-5	09.1
18	278	09.2	80	59.7	-6	13.7	149	01.3	+19	43.5	241	11.9	+13	03.6	80	15.5	-5	09.2
19	293	11.6	95	59.3		14.9	164	02.2		43.2	256	14.6		03.6	95	17.7		09.3
20	308	14.1	110	58.9		16.2	179	03.2		42.8	271	17.2		03.5	110	19.9		09.4
21	323	16.6	125	58.5		17.4	194	04.1		42.5	286	19.9		03.4	125	22.0		09.5
22	338	19.0	140	58.1		18.7	209	05.0		42.2	301	22.6		03.3	140	24.2		09.6
23	353	21.5	155	57.7		19.9	224	05.9		41.8	316	25.3		03.2	155	26.4		09.8
24	8	23.9	170	57.3	-6	21.2	239	06.9	+19	41.5	331	28.0	+13	03.2	170	28.6	-5	09.9
Dif	—		-4		-12		+9		-3		+27		-1		+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 1			Edad: 2 ^d 5 PHE { SD: 16'5 PMG: 14 ^h 38 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	
0	182	26.2	-2	34.7	149	17.9	-18	17.9	60 N	4	32	5	21	6	02	11	05
1	197	26.4		35.7	163	42.2	53	26.7	88	58	36	22	01	10	51	83	17
2	212	26.6		36.6	178	06.5	53	35.5	88	56	40	23	6	00	38	81	30
3	227	26.8		37.6	192	30.8	53	44.0	85	54	43	24	5	59	27	79	41
4	242	27.0		38.6	206	55.0	52	-18	52.5	85	52	45	25	58	18	76	18
5	257	27.2	-2	39.6	221	19.2	52	-19	00.8	83	50	4	48	5	58	10	09
6	272	27.4	-2	40.5	235	43.4	52	-19	08.9	81	45	4	53	5	56	9	51
7	287	27.6		41.5	250	07.5	51	17.0	81	40	56	28	55	36	71		35
8	302	27.9		42.5	264	31.6	51	24.8	78	35	4	59	28	54	24	68	48
9	317	28.1		43.4	278	55.7	51	32.6	78	30	5	01	29	52	9	13	67
10	332	28.3		44.4	293	19.8	51	40.2	76	20	03	29	51	8	54	65	20
11	347	28.5	-2	45.4	307	43.9	51	-19	47.6	74	10 N	5	03	5	49	8	38
12	2	28.7	-2	46.4	322	07.9	50	-19	55.0	74	0	5	02	5	47	8	24
13	17	28.9		47.3	336	31.9	50	-20	02.1	71	10 S	4	59	24	45	8	09
14	32	29.1		48.3	350	55.9	50	09.1	70	20	55	21	43	7	53	56	25
15	47	29.3		49.3	5	19.9	50	16.0	69	30	48	16	40	35	53	45	65
16	62	29.5		50.2	19	43.8	49	22.7	67	35	44	13	39	24	52	21	57
17	77	29.7	-2	51.2	34	07.8	50	-20	29.3	66	40	4	38	5	10	7	13
18	92	29.9	-2	52.2	48	31.7	49	-20	35.7	64	45	4	31	5	05	6	59
19	107	30.1		53.2	62	55.6	49	42.0	63	50	21	5	00	32	42	44	45
20	122	30.3		54.1	77	19.5	49	48.1	61	52	17	4	57	31	34	42	22
21	137	30.5		55.1	91	43.4	49	54.1	60	54	11	54	30	25	40	23	05
22	152	30.7		56.1	106	07.3	49	-20	59.9	58	56	4	06	51	28	15	38
23	167	30.9		57.0	120	31.2	49	-21	05.6	57	58	3	59	47	27	6	04
24	182	31.1	-2	58.0	134	55.1	49	-21	11.1	55	60 S	3	51	4	43	5	51
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO								
	PMG: 23 ^h 22 ^m 6		Mag: -3.9 PMG: 12 ^h 37 ^m		Mag: +1.3 PMG: 8 ^h 03 ^m		Mag: -2.9 PMG: 1 ^h 54 ^m		Mag: +0.8 PMG: 12 ^h 36 ^m								
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec							
h	°	'	°	'	°	'	°	'	°	'							
0	8	23.9	170	57.3	239	06.9	331	28.0	170	28.6							
1	23	26.4	185	56.9	254	07.8	346	30.7	185	30.8							
2	38	28.9	200	56.5	269	08.7	1	33.4	200	33.0							
3	53	31.3	215	56.1	284	09.6	16	36.1	215	35.2							
4	68	33.8	230	55.7	299	10.6	31	38.8	230	37.3							
5	83	36.3	245	55.3	314	11.5	46	41.5	245	39.5							
6	98	38.7	260	54.9	329	12.4	61	44.2	260	41.7							
7	113	41.2	275	54.5	344	13.3	76	46.9	275	43.9							
8	128	43.7	290	54.1	359	14.3	91	49.6	290	46.1							
9	143	46.1	305	53.7	14	15.2	106	52.3	305	48.3							
10	158	48.6	320	53.3	29	16.1	121	55.0	320	50.5							
11	173	51.1	335	52.9	44	17.0	136	57.7	335	52.6							
12	188	53.5	350	52.5	59	18.0	152	00.4	350	54.8							
13	203	56.0	5	52.1	74	18.9	167	03.1	5	57.0							
14	218	58.4	20	51.7	89	19.8	182	05.8	20	59.2							
15	234	00.9	35	51.3	104	20.7	197	08.5	35	01.4							
16	249	03.4	50	50.9	119	21.7	212	11.2	50	03.6							
17	264	05.8	65	50.5	134	22.6	227	13.9	65	05.7							
18	279	08.3	80	50.1	149	23.5	242	16.6	80	07.9							
19	294	10.8	95	49.7	164	24.5	257	19.3	95	10.1							
20	309	13.2	110	49.2	179	25.4	272	22.0	110	12.3							
21	324	15.7	125	48.8	194	26.3	287	24.7	125	14.5							
22	339	18.2	140	48.4	209	27.2	302	27.4	140	16.7							
23	354	20.6	155	48.0	224	28.2	317	30.1	155	18.9							
24	9	23.1	170	47.6	239	29.1	332	32.8	170	21.0							
Dif	—		-4	-12	+9	-3	+27	-1	+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 8			Edad: 3 ^d 5 SD: 16:4 PMG: 15 ^h 38 ^m	PHE { 4 ^h : 59'9 12 ^h : 59'6 20 ^h : 59'4 R°: 59 ^m												
	hG ☉	Dec				hG ☾			Dif	Dec	Dif	Civil	Náutico	Hora	R°	Hora	R°
h	°	'	''	°	'	''	°	h	m	h	m	h	m	h	m	m	
0	182	31.1	-2 58.0	134	55.1	-21 11.1	54	60 N	17 34	18 15	19 04	12 31	68	18 41	56		
1	197	31.3	-2 59.0	149	19.0	16.5	54	58	35	14	19 00	12 14	66	18 59	56		
2	212	31.5	-3 00.0	163	42.9	21.7	52	56	36	13	18 57	11 59	65	19 14	57		
3	227	31.7	-3 00.9	178	06.7	26.8	51	54	37	13	54	46	65	27	57		
4	242	31.9	01.9	192	30.6	31.7	49	52	38	12	51	34	65	38	58		
5	257	32.1	-3 02.9	206	54.5	-21 36.4	47	50	17 39	18 11	18 49	11 24	65	19 49	57		
6	272	32.3	-3 03.8	221	18.4	-21 41.0	46	45	17 41	18 11	18 45	11 03	64	20 10	58		
7	287	32.5	04.8	235	42.3	45.5	45	40	43	10	41	10 47	62	27	58		
8	302	32.7	05.8	250	06.2	49.8	43	35	45	10	39	32	63	42	58		
9	317	32.9	06.7	264	30.1	53.9	41	30	46	10	38	10 20	62	20 54	59		
10	332	33.1	07.7	278	54.0	-21 57.9	40	20	48	10	36	9 59	61	21 16	59		
11	347	33.3	-3 08.7	293	17.9	-22 01.7	38	10 N	17 51	18 12	18 36	9 41	60	21 35	59		
12	2	33.5	-3 09.7	307	41.8	-22 05.4	37	0	17 53	18 14	18 38	9 24	59	21 52	59		
13	17	33.7	10.6	322	05.8	08.9	35	10 S	55	16	41	9 07	59	22 10	59		
14	32	33.9	11.6	336	29.8	12.3	34	20	17 58	20	46	8 49	58	28	59		
15	47	34.2	12.6	350	53.7	15.5	32	30	18 01	25	53	28	57	22 50	59		
16	62	34.4	13.5	5	17.8	18.6	31	35	03	28	18 58	16	56	23 03	58		
17	77	34.6	-3 14.5	19	41.8	-22 21.5	29	40	18 05	18 32	19 04	8 02	56	23 17	59		
18	92	34.8	-3 15.5	34	05.8	-22 24.2	27	45	18 07	18 37	19 12	7 46	54	23 34	59		
19	107	35.0	16.4	48	29.9	26.8	26	50	10	43	22	26	53	23 56	58		
20	122	35.2	17.4	62	54.0	29.2	24	52	12	46	27	16	53	** ** *			
21	137	35.4	18.4	77	18.1	31.5	23	54	13	49	32	7 05	52	** ** *			
22	152	35.6	19.3	91	42.3	33.6	21	56	15	53	39	6 53	51	** ** *			
23	167	35.8	20.3	106	06.5	35.6	20	58	17	18 57	46	39	50	** ** *			
24	182	36.0	-3 21.3	120	30.7	-22 37.4	18	60 S	18 19	19 02	19 54	6 23	47	** ** *			
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO				
	PMG: 23 ^h 18 ^m 6			Mag: -3.9 PMG: 12 ^h 37 ^m			Mag: +1.3 PMG: 8 ^h 02 ^m			Mag: -2.9 PMG: 1 ^h 49 ^m			Mag: +0.8 PMG: 12 ^h 33 ^m				
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec			
h	°	'	''	°	'	''	°	'	''	°	'	''	°	'	''		
0	9	23.1	170	47.6	-6 51.0	239	29.1	+19 33.3	332	32.8	+13 01.2	171	21.0	-5 12.6			
1	24	25.6	185	47.2	52.3	254	30.0	32.9	347	35.5	01.1	186	23.2	12.7			
2	39	28.0	200	46.8	53.5	269	31.0	32.6	2	38.2	01.0	201	25.4	12.9			
3	54	30.5	215	46.4	54.7	284	31.9	32.3	17	40.9	00.9	216	27.6	13.0			
4	69	32.9	230	46.0	56.0	299	32.8	31.9	32	43.6	00.9	231	29.8	13.1			
5	84	35.4	245	45.6	-6 57.2	314	33.8	+19 31.6	47	46.3	+13 00.8	246	32.0	-5 13.2			
6	99	37.9	260	45.2	-6 58.5	329	34.7	+19 31.2	62	49.0	+13 00.7	261	34.1	-5 13.3			
7	114	40.3	275	44.8	-6 59.7	344	35.6	30.9	77	51.7	00.6	276	36.3	13.4			
8	129	42.8	290	44.4	-7 00.9	359	36.5	30.5	92	54.4	00.5	291	38.5	13.6			
9	144	45.3	305	43.9	02.2	14	37.5	30.2	107	57.1	00.4	306	40.7	13.7			
10	159	47.7	320	43.5	03.4	29	38.4	29.8	122	59.8	00.4	321	42.9	13.8			
11	174	50.2	335	43.1	-7 04.7	44	39.3	+19 29.5	138	02.5	+13 00.3	336	45.1	-5 13.9			
12	189	52.7	350	42.7	-7 05.9	59	40.3	+19 29.2	153	05.2	+13 00.2	351	47.2	-5 14.0			
13	204	55.1	5	42.3	07.1	74	41.2	28.8	168	07.9	+13 00.1	6	49.4	14.1			
14	219	57.6	20	41.9	08.4	89	42.1	28.5	183	10.6	+13 00.0	21	51.6	14.2			
15	235	00.0	35	41.5	09.6	104	43.1	28.1	198	13.3	+12 59.9	36	53.8	14.4			
16	250	02.5	50	41.1	10.8	119	44.0	27.8	213	16.0	59.9	51	56.0	14.5			
17	265	05.0	65	40.7	-7 12.1	134	45.0	+19 27.4	228	18.7	+12 59.8	66	58.2	-5 14.6			
18	280	07.4	80	40.2	-7 13.3	149	45.9	+19 27.1	243	21.4	+12 59.7	82	00.4	-5 14.7			
19	295	09.9	95	39.8	14.6	164	46.8	26.7	258	24.2	59.6	97	02.5	14.8			
20	310	12.4	110	39.4	15.8	179	47.8	26.4	273	26.9	59.5	112	04.7	14.9			
21	325	14.8	125	39.0	17.0	194	48.7	26.0	288	29.6	59.4	127	06.9	15.1			
22	340	17.3	140	38.6	18.3	209	49.6	25.7	303	32.3	59.4	142	09.1	15.2			
23	355	19.8	155	38.2	19.5	224	50.6	25.4	318	35.0	59.3	157	11.3	15.3			
24	10	22.2	170	37.8	-7 20.7	239	51.5	+19 25.0	333	37.7	+12 59.2	172	13.5	-5 15.4			
Dif	—			-4	-12	+9			-3	+27			-1	+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 4			Edad: 4 ^d 5 PHE { 4 ^h : 59:1 12 ^h : 58:8 20 ^h : 58:5 PMG: 16 ^h 37 ^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	
0	182	36.0	-3	21.3	120	30.7	-22	37.4	60 N	4	37	5	25	6	07	13	39
1	197	36.2		22.3	134	54.9		39.1	58		40		26		05	20	49
2	212	36.4		23.2	149	19.2		40.6	56		44		27		04	13	04
3	227	36.6		24.2	163	43.5		42.0	54		46		28		03	12	51
4	242	36.8		25.2	178	07.9		43.2	52		49		28		02	39	52
5	257	37.0	-3	26.1	192	32.3	-22	44.2	50	4	51	5	29	6	01	12	29
6	272	37.2	-3	27.1	206	56.7	-22	45.1	45	4	55	5	29	5	59	12	07
7	287	37.4		28.1	221	21.2		45.9	40	4	58		30		57	11	49
8	302	37.6		29.0	235	45.7		46.5	35	5	01		30		55	35	54
9	317	37.8		30.0	250	10.3		46.9	30		02		30		54	22	55
10	332	38.0		31.0	264	34.9		47.2	20		03		29		51	11	00
11	347	38.2	-3	31.9	278	59.5	-22	47.4	10 N	5	03	5	28	5	49	10	41
12	2	38.4	-3	32.9	293	24.3	-22	47.4	0	5	01	5	25	5	46	10	23
13	17	38.6		33.9	307	49.0		47.2	10 S	4	58		23		44	10	06
14	32	38.8		34.8	322	13.8		46.9	20		53		19		41	9	47
15	47	39.0		35.8	336	38.7		46.5	30		46		14		38	25	59
16	62	39.1		36.8	351	03.6		45.9	35		41		10		36	9	12
17	77	39.3	-3	37.7	5	28.6	-22	45.2	40	4	34	5	06	5	34	8	58
18	92	39.5	-3	38.7	19	53.6	-22	44.3	45	4	27	5	01	5	31	8	40
19	107	39.7		39.7	34	18.7		43.3	50		16	4	55		28	19	61
20	122	39.9		40.6	48	43.8		42.1	52		12		52		26	8	09
21	137	40.1		41.6	63	09.0		40.8	54		06		49		25	7	57
22	152	40.3		42.6	77	34.3		39.4	56	4	00		45		23	44	62
23	167	40.5		43.6	91	59.6		37.8	58	3	53		41		21	29	63
24	182	40.7	-3	44.5	106	25.0	-22	36.1	60 S	3	44	4	37	5	19	7	10

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 23 ^h 14 ^m 7		Mag: -3.9 PMG: 12 ^h 38 ^m		Mag: +1.3 PMG: 8 ^h 00 ^m		Mag: -2.9 PMG: 1 ^h 45 ^m		Mag: +0.8 PMG: 12 ^h 29 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	10	22.2	170	37.8	-7	20.7	239	51.5	+19	25.0	333	37.7	+12	59.2	172	13.5	-5	15.4
1	25	24.7	185	37.4		22.0	254	52.4		24.7	348	40.4		59.1	187	15.6		15.5
2	40	27.2	200	36.9		23.2	269	53.4		24.3	3	43.1		59.0	202	17.8		15.6
3	55	29.6	215	36.5		24.4	284	54.3		24.0	18	45.8		58.9	217	20.0		15.7
4	70	32.1	230	36.1		25.7	299	55.3		23.6	33	48.5		58.9	232	22.2		15.9
5	85	34.5	245	35.7	-7	26.9	314	56.2	+19	23.3	48	51.2	+12	58.8	247	24.4	-5	16.0
6	100	37.0	260	35.3	-7	28.1	329	57.1	+19	22.9	63	53.9	+12	58.7	262	26.6	-5	16.1
7	115	39.5	275	34.9		29.4	344	58.1		22.6	78	56.6		58.6	277	28.7		16.2
8	130	41.9	290	34.5		30.6	359	59.0		22.2	93	59.4		58.5	292	30.9		16.3
9	145	44.4	305	34.0		31.8	15	00.0		21.9	109	02.1		58.4	307	33.1		16.4
10	160	46.9	320	33.6		33.1	30	00.9		21.5	124	04.8		58.3	322	35.3		16.6
11	175	49.3	335	33.2	-7	34.3	45	01.8	+19	21.2	139	07.5	+12	58.3	337	37.5	-5	16.7
12	190	51.8	350	32.8	-7	35.5	60	02.8	+19	20.8	154	10.2	+12	58.2	352	39.7	-5	16.8
13	205	54.3	5	32.4		36.8	75	03.7		20.5	169	12.9		58.1	7	41.8		16.9
14	220	56.7	20	32.0		38.0	90	04.7		20.1	184	15.6		58.0	22	44.0		17.0
15	235	59.2	35	31.5		39.2	105	05.6		19.8	199	18.3		57.9	37	46.2		17.1
16	251	01.7	50	31.1		40.5	120	06.5		19.4	214	21.0		57.8	52	48.4		17.2
17	266	04.1	65	30.7	-7	41.7	135	07.5	+19	19.1	229	23.7	+12	57.7	67	50.6	-5	17.4
18	281	06.6	80	30.3	-7	42.9	150	08.4	+19	18.7	244	26.5	+12	57.7	82	52.8	-5	17.5
19	296	09.0	95	29.9		44.2	165	09.4		18.4	259	29.2		57.6	97	54.9		17.6
20	311	11.5	110	29.5		45.4	180	10.3		18.0	274	31.9		57.5	112	57.1		17.7
21	326	14.0	125	29.0		46.6	195	11.2		17.7	289	34.6		57.4	127	59.3		17.8
22	341	16.4	140	28.6		47.8	210	12.2		17.3	304	37.3		57.3	143	01.5		17.9
23	356	18.9	155	28.2		49.1	225	13.1		17.0	319	40.0		57.2	158	03.7		18.1
24	11	21.4	170	27.8	-7	50.3	240	14.1	+19	16.6	334	42.7	+12	57.1	173	05.9	-5	18.2
Dif	—		-4		-12		+9		-3		+27		-1		+22		-1	

UT	SOL		 LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 16'0		Edad: 5 ^d 5	PHE { 4 ^h : 58'2 12 ^h : 57'9 20 ^h : 57'6	SD: 15'9				Rº: 54 ^m						
	PMG: 11 ^h 49 ^m 1				PMG: 17 ^h 34 ^m										
	hG ☉	Dec	hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	Rº	Hora	Rº	
h	°	'	°	'	°	'	°	h m	h m	h m	h m	m	m	m	m
0	182	40.7	-3	44.5	106	25.0	-22 36.1	60 N	17 28	18 09	18 58	14 26	30	20 48	79
1	197	40.9		45.5	120	50.5	34.2	58	30	09	54	14 09	33	21 04	77
2	212	41.1		46.5	135	16.0	32.2	56	31	08	51	13 54	36	19	74
3	227	41.3		47.4	149	41.6	30.1	54	33	08	49	42 38		31	72
4	242	41.5		48.4	164	07.2	27.8	52	34	07	46	31 39		42	70
5	257	41.7	-3	49.4	178	33.0	-22 25.4	50	17 35	18 07	18 45	13 21	41	21 51	69
6	272	41.9	-3	50.3	192	58.8	-22 22.8	45	17 38	18 07	18 41	13 00	44	22 11	66
7	287	42.1		51.3	207	24.6	20.1	40	40	07	38	12 44	45	27	64
8	302	42.3		52.3	221	50.6	17.3	35	42	07	36	29 48		41	62
9	317	42.5		53.2	236	16.6	14.4	30	44	07	35	12 17	49	22 53	60
10	332	42.7		54.2	250	42.6	11.3	20	47	09	34	11 56	51	23 13	58
11	347	42.9	-3	55.2	265	08.8	-22 08.1	10 N	17 50	18 11	18 35	11 38	53	23 31	55
12	2	43.1	-3	56.1	279	35.0	-22 04.7	0	17 52	18 13	18 37	11 21	54	23 47	53
13	17	43.3		57.1	294	01.3	-22 01.3	10 S	55	16	41	11 04	56	** ** *	**
14	32	43.5		58.1	308	27.7	-21 57.7	20	17 58	21	46	10 45	58	** ** *	**
15	47	43.7	-3	59.0	322	54.2	53.9	30	18 02	26	18 54	24 60		** ** *	**
16	62	43.9	-4	00.0	337	20.7	50.1	35	04	30	19 00	10 12	61	0 01	51
17	77	44.1	-4	00.9	351	47.3	-21 46.1	40	18 07	18 34	19 06	9 58	63	0 16	50
18	92	44.3	-4	01.9	6	14.0	-21 42.0	45	18 10	18 40	19 15	9 41	65	0 33	48
19	107	44.5		02.9	20	40.8	37.8	50	14	46	26	20 67		0 54	47
20	122	44.7		03.8	35	07.6	33.5	52	15	49	31	9 10	68	1 04	46
21	137	44.8		04.8	49	34.6	29.0	54	17	53	37	8 59	70	15	45
22	152	45.0		05.8	64	01.6	24.4	56	19	18 57	43	46 72		28	43
23	167	45.2		06.7	78	28.7	19.7	58	21	19 02	19 51	32 73		1 43	41
24	182	45.4	-4	07.7	92	55.9	-21 14.9	60 S	18 24	19 07	20 00	8 14	76	2 01	39

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 23 ^h 10 ^m 8		Mag: -3.9 PMG: 12 ^h 39 ^m		Mag: +1.3 PMG: 7 ^h 59 ^m		Mag: -2.9 PMG: 1 ^h 41 ^m		Mag: +0.8 PMG: 12 ^h 26 ^m	
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'
0	11	21.4	170	27.8	-7	50.3	240	14.1	+19	16.6
1	26	23.8	185	27.4		51.5	255	15.0		16.3
2	41	26.3	200	26.9		52.8	270	16.0		15.9
3	56	28.8	215	26.5		54.0	285	16.9		15.6
4	71	31.2	230	26.1		55.2	300	17.9		15.2
5	86	33.7	245	25.7	-7	56.4	315	18.8	+19	14.9
6	101	36.2	260	25.3	-7	57.7	330	19.7	+19	14.5
7	116	38.6	275	24.8	-7	58.9	345	20.7		14.2
8	131	41.1	290	24.4	-8	00.1	0	21.6		13.8
9	146	43.5	305	24.0		01.3	15	22.6		13.5
10	161	46.0	320	23.6		02.6	30	23.5		13.1
11	176	48.5	335	23.1	-8	03.8	45	24.5	+19	12.8
12	191	50.9	350	22.7	-8	05.0	60	25.4	+19	12.4
13	206	53.4	5	22.3		06.2	75	26.4		12.1
14	221	55.9	20	21.9		07.5	90	27.3		11.7
15	236	58.3	35	21.5		08.7	105	28.3		11.4
16	252	00.8	50	21.0		09.9	120	29.2		11.0
17	267	03.3	65	20.6	-8	11.1	135	30.2	+19	10.7
18	282	05.7	80	20.2	-8	12.4	150	31.1	+19	10.3
19	297	08.2	95	19.8		13.6	165	32.1		10.0
20	312	10.7	110	19.3		14.8	180	33.0		09.6
21	327	13.1	125	18.9		16.0	195	34.0		09.2
22	342	15.6	140	18.5		17.3	210	34.9		08.9
23	357	18.0	155	18.1		18.5	225	35.9		08.5
24	12	20.5	170	17.6	-8	19.7	240	36.8	+19	08.2
Dif	—	—	-4	-12		+9	-4	+27		-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 8			Edad: 6 ^d 5 SD: 15'6 PMG: 18 ^h 28 ^m	PHE { 4 ^h : 57'3 12 ^h : 57'0 20 ^h : 56'8 R°: 50 ^m											
	hG ☉	Dec				hG ☾		Dif	Dec		Dif	Náutico	Civil	Hora	R°	Hora
h	°	'	°	°	'	°	'	h	m	h	m	h	m	h	m	m
0	182	45.4	-4	92	55.9	-21	14.9	60 N	4 42	5 30	6 12	14 56	21	22	07	83
1	197	45.6		107	23.1		10.0	58	45	31	10	42	24	21	79	
2	212	45.8		121	50.5	-21	04.9	56	48	31	08	30	26	33	75	
3	227	46.0		136	17.9	-20	59.8	54	50	31	07	20	28	43	73	
4	242	46.2		150	45.4		54.5	52	52	31	05	10	31	22	52	71
5	257	46.4	-4	165	13.0	-20	49.1	50	4 54	5 32	6 04	14 02	32	23	00	69
6	272	46.6	-4	179	40.7	-20	43.6	45	4 58	5 32	6 01	13 44	35	23	17	66
7	287	46.8		194	08.4		38.0	40	5 00	32	5 59	29	38	31	63	
8	302	47.0		208	36.3		32.3	35	02	31	57	17	40	43	60	
9	317	47.2		223	04.2		26.5	30	03	31	55	13 06	42	23	53	58
10	332	47.4		237	32.2		20.5	20	04	29	51	12 47	45	**	**	**
11	347	47.6	-4	252	00.3	-20	14.5	10 N	5 03	5 27	5 48	12 31	48	**	**	**
12	2	47.7	-4	266	28.5	-20	08.4	0	5 01	5 25	5 46	12 15	51	**	**	**
13	17	47.9		280	56.8	-20	02.1	10 S	4 57	21	43	12 00	53	0	04	50
14	32	48.1		295	25.1	-19	55.8	20	51	17	39	11 43	56	21	48	
15	47	48.3		309	53.6		49.4	30	43	11	35	24	60	41	45	
16	62	48.5		324	22.1		42.8	35	38	08	33	13	61	0	52	44
17	77	48.7	-4	338	50.7	-19	36.2	40	4 31	5 03	5 30	11 01	63	1	06	42
18	92	48.9	-4	353	19.4	-19	29.4	45	4 22	4 58	5 27	10 46	65	1	21	40
19	107	49.1		7	48.2		22.6	50	12	51	24	27	69	41	36	
20	122	49.3		22	17.1		15.7	52	06	48	22	18	71	1	50	34
21	137	49.5		36	46.0		08.7	54	4 01	44	20	10 09	72	2	00	33
22	152	49.7		51	15.1	-19	01.5	56	3 54	40	18	9 58	75	11	31	
23	167	49.9		65	44.2	-18	54.3	58	46	35	15	44	78	24	29	
24	182	50.0	-4	80	13.4	-18	47.0	60 S	3 37	4 30	5 13	9 30	81	2	40	25

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 23 ^h 06 ^m 8		Mag: -3.9 PMG: 12 ^h 39 ^m		Mag: +1.3 PMG: 7 ^h 57 ^m		Mag: -2.9 PMG: 1 ^h 37 ^m		Mag: +0.8 PMG: 12 ^h 22 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	12	20.5	170	17.6	240	36.8	335	47.9	173	58.3
1	27	23.0	185	17.2	255	37.8	350	50.6	189	00.4
2	42	25.4	200	16.8	270	38.7	5	53.4	204	02.6
3	57	27.9	215	16.3	285	39.7	20	56.1	219	04.8
4	72	30.4	230	15.9	300	40.6	35	58.8	234	07.0
5	87	32.8	245	15.5	315	41.6	51	01.5	249	09.2
6	102	35.3	260	15.1	330	42.5	66	04.2	264	11.3
7	117	37.8	275	14.6	345	43.5	81	07.0	279	13.5
8	132	40.2	290	14.2	0	44.4	96	09.7	294	15.7
9	147	42.7	305	13.8	15	45.4	111	12.4	309	17.9
10	162	45.1	320	13.4	30	46.3	126	15.1	324	20.1
11	177	47.6	335	12.9	45	47.3	141	17.8	339	22.3
12	192	50.1	350	12.5	60	48.2	156	20.6	354	24.4
13	207	52.5	5	12.1	75	49.2	171	23.3	9	26.6
14	222	55.0	20	11.6	90	50.1	186	26.0	24	28.8
15	237	57.5	35	11.2	105	51.1	201	28.7	39	31.0
16	252	59.9	50	10.8	120	52.1	216	31.4	54	33.2
17	268	02.4	65	10.3	135	53.0	231	34.2	69	35.4
18	283	04.9	80	09.9	150	54.0	246	36.9	84	37.5
19	298	07.3	95	09.5	165	54.9	261	39.6	99	39.7
20	313	09.8	110	09.0	180	55.9	276	42.3	114	41.9
21	328	12.3	125	08.6	195	56.8	291	45.1	129	44.1
22	343	14.7	140	08.2	210	57.8	306	47.8	144	46.3
23	358	17.2	155	07.7	225	58.8	321	50.5	159	48.4
24	13	19.6	170	07.3	240	59.7	336	53.2	174	50.6
Dif	—		-4	-12	+10	-4	+27	-1	+22	-1

UT	SOL			 LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16:0			Edad: 7 ^d 5	PHE {	4 ^h : 56:5 12 ^h : 56:3 20 ^h : 56:1			Final del crepúsculo			Salida de Luna		Puesta de Luna	
	PMG: 11 ^h 48 ^m 5								SD: 15:4			PMG: 19 ^h 18 ^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	50.0	-4 30.8	80	13.4	-18 47.0	74	60 N	17 22	18 03	18 51	15 17	14	23 30	81
1	197	50.2	31.8	94	42.7 ¹⁰³	39.6	74	58	24	03	48	15 06	17	40	78
2	212	50.4	32.8	109	12.0 ¹⁰³	32.2	74	56	26	03	46	14 56	20	48	76
3	227	50.6	33.7	123	41.5 ¹⁰⁵	24.6	76	54	28	03	44	48	22	23 56	73
4	242	50.8	34.7	138	11.1 ¹⁰⁶	16.9	77	52	29	03	42	41	24	** ** *	**
5	257	51.0	-4 35.7	152	40.7 ¹⁰⁶	-18 09.2	77	50	17 31	18 03	18 40	14 34	26	** * *	**
6	272	51.2	-4 36.6	167	10.4 ¹⁰⁷	-18 01.4	78	45	17 34	18 03	18 37	14 19	30	** * *	**
7	287	51.4	37.6	181	40.2 ¹⁰⁸	-17 53.5	79	40	37	04	35	14 07	33	** * *	**
8	302	51.6	38.5	196	10.1 ¹⁰⁹	45.5	80	35	39	04	34	13 57	35	** * *	**
9	317	51.8	39.5	210	40.0 ¹⁰⁹	37.4	81	30	41	05	33	48	37	** * *	**
10	332	51.9	40.5	225	10.1 ¹¹¹	29.3	81	20	45	07	33	32	42	0 11	54
11	347	52.1	-4 41.4	239	40.2 ¹¹¹	-17 21.1	82	10 N	17 48	18 09	18 34	13 19	44	0 26	52
12	2	52.3	-4 42.4	254	10.4 ¹¹²	-17 12.8	83	0	17 52	18 13	18 37	13 06	47	0 40	49
13	17	52.5	43.4	268	40.7 ¹¹³	-17 04.4	84	10 S	55	16	41	12 53	51	0 54	46
14	32	52.7	44.3	283	11.0 ¹¹³	-16 55.9	85	20	17 59	21	47	39	54	1 09	43
15	47	52.9	45.3	297	41.5 ¹¹⁵	47.4	85	30	18 03	28	18 56	24	57	26	40
16	62	53.1	46.2	312	12.0 ¹¹⁵	38.8	86	35	06	32	19 02	14	60	36	38
17	77	53.3	-4 47.2	326	42.6 ¹¹⁶	-16 30.1	87	40	18 09	18 36	19 09	12 04	62	1 48	35
18	92	53.5	-4 48.2	341	13.3 ¹¹⁷	-16 21.3	88	45	18 12	18 42	19 18	11 51	66	2 01	32
19	107	53.6	49.1	355	44.1 ¹¹⁸	12.5	88	50	17	50	29	36	69	17	29
20	122	53.8	50.1	10	14.9 ¹¹⁸	-16 03.6	89	52	19	53	35	29	71	24	28
21	137	54.0	51.0	24	45.8 ¹¹⁹	-15 54.7	89	54	21	18 57	41	21	73	33	25
22	152	54.2	52.0	39	16.8 ¹²⁰	45.7	90	56	23	19 01	48	13	75	42	23
23	167	54.4	53.0	53	47.9 ¹²¹	36.6	91	58	26	06	19 56	11 03	78	2 53	20
24	182	54.6	-4 53.9	68	19.0 ¹²¹	-15 27.4	92	60 S	18 29	19 12	20 06	10 51	81	3 05	17

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO			
	PMG 23 ^h 02 ^m 9		Mag: -3.9 PMG: 12 ^h 40 ^m		Mag: +1.3 PMG: 7 ^h 56 ^m		Mag: -2.9 PMG: 1 ^h 32 ^m		Mag: +0.8 PMG: 12 ^h 19 ^m			
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec		
h	°	'	°	'	°	'	°	'	°	'		
0	13	19.6	170	07.3	-8 48.9	240 59.7	+18 59.7	336 53.2	+12 52.9	174 50.6	-5 23.7	
1	28	22.1	185	06.9	50.1	256 00.7	59.3	351 56.0	52.8	189 52.8	23.8	
2	43	24.6	200	06.4	51.3	271 01.6	58.9	6 58.7	52.7	204 55.0	23.9	
3	58	27.0	215	06.0	52.6	286 02.6	58.6	22 01.4	52.7	219 57.2	24.1	
4	73	29.5	230	05.6	53.8	301 03.5	58.2	37 04.1	52.6	234 59.4	24.2	
5	88	32.0	245	05.1	-8 55.0	316 04.5	+18 57.9	52 06.9	+12 52.5	250 01.5	-5 24.3	
6	103	34.4	260	04.7	-8 56.2	331 05.5	+18 57.5	67 09.6	+12 52.4	265 03.7	-5 24.4	
7	118	36.9	275	04.3	57.4	346 06.4	57.2	82 12.3	52.3	280 05.9	24.5	
8	133	39.4	290	03.8	58.6	1 07.4	56.8	97 15.0	52.2	295 08.1	24.6	
9	148	41.8	305	03.4	-8 59.8	16 08.3	56.4	112 17.8	52.1	310 10.3	24.7	
10	163	44.3	320	03.0	-9 01.0	31 09.3	56.1	127 20.5	52.0	325 12.5	24.9	
11	178	46.8	335	02.5	-9 02.2	46 10.3	+18 55.7	142 23.2	+12 51.9	340 14.6	-5 25.0	
12	193	49.2	350	02.1	-9 03.5	61 11.2	+18 55.4	157 25.9	+12 51.8	355 16.8	-5 25.1	
13	208	51.7	5	01.7	04.7	76 12.2	55.0	172 28.7	51.8	10 19.0	25.2	
14	223	54.1	20	01.2	05.9	91 13.1	54.6	187 31.4	51.7	25 21.2	25.3	
15	238	56.6	35	00.8	07.1	106 14.1	54.3	202 34.1	51.6	40 23.4	25.4	
16	253	59.1	50	00.3	08.3	121 15.1	53.9	217 36.9	51.5	55 25.5	25.5	
17	269	01.5	64	59.9	-9 09.5	136 16.0	+18 53.6	232 39.6	+12 51.4	70 27.7	-5 25.7	
18	284	04.0	79	59.5	-9 10.7	151 17.0	+18 53.2	247 42.3	+12 51.3	85 29.9	-5 25.8	
19	299	06.5	94	59.0	11.9	166 18.0	52.8	262 45.0	51.2	100 32.1	25.9	
20	314	08.9	109	58.6	13.1	181 18.9	52.5	277 47.8	51.1	115 34.3	26.0	
21	329	11.4	124	58.1	14.3	196 19.9	52.1	292 50.5	51.0	130 36.5	26.1	
22	344	13.9	139	57.7	15.5	211 20.8	51.8	307 53.2	50.9	145 38.6	26.2	
23	359	16.3	154	57.3	16.7	226 21.8	51.4	322 56.0	50.8	160 40.8	26.4	
24	14	18.8	169	56.8	-9 17.9	241 22.8	+18 51.0	337 58.7	+12 50.8	175 43.0	-5 26.5	
Dif	—		-4	-12		+10	-4	+27	-1		+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 2			Edad: 8 ^d 5 PHE { SD: 15'2 PMG: 20 ^h 04 ^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	m
0	182	54.6	-4	53.9	68	19.0	-15	27.4	92	60 N	4 46	5 35	6 16	15 31 11	*** ** *
1	197	54.8		54.9	82	50.2 ¹²²		18.2	92	58	49	35	14	23 14	*** ** *
2	212	55.0		55.9	97	21.5 ¹²³	-15	08.9	93	56	52	35	12	16 17	*** ** *
3	227	55.1		56.8	111	52.9 ¹²⁴	-14	59.5	94	54	54	35	10	10 19	*** ** *
4	242	55.3		57.8	126	24.3 ¹²⁴		50.1	94	52	56	35	09	05 20	0 03 71
5	257	55.5	-4	58.7	140	55.8 ¹²⁵	-14	40.7	94	50	4 57	5 35	6 07	15 00 22	0 09 69
6	272	55.7	-4	59.7	155	27.4 ¹²⁶	-14	31.1	96	45	5 00	5 34	6 04	14 49 26	0 23 65
7	287	55.9	-5	00.7	169	59.1 ¹²⁷		21.5	96	40	02	34	6 01	40 29	34 61
8	302	56.1		01.6	184	30.8 ¹²⁷		11.9	96	35	04	33	5 58	32 32	43 59
9	317	56.3		02.6	199	02.6 ¹²⁸	-14	02.2	97	30	04	32	56	25 34	0 51 57
10	332	56.4		03.5	213	34.5 ¹²⁹	-13	52.4	98	20	04	30	52	14 37	1 05 53
11	347	56.6	-5	04.5	228	06.4 ¹²⁹	-13	42.6	98	10 N	5 03	5 27	5 48	14 03 42	1 18 49
12	2	56.8	-5	05.4	242	38.4 ¹³⁰	-13	32.8	98	0	5 00	5 24	5 45	13 53 45	1 29 46
13	17	57.0		06.4	257	10.5 ¹³¹		22.8	100	10 S	4 56	20	41	44 48	40 43
14	32	57.2		07.4	271	42.6 ¹³¹		12.9	99	20	49	15	37	33 52	1 52 40
15	47	57.4		08.3	286	14.8 ¹³²	-13	02.8	101	30	41	09	33	21 56	2 06 36
16	62	57.6		09.3	300	47.1 ¹³³	-12	52.8	100	35	35	05	30	14 58	14 33
17	77	57.7	-5	10.2	315	19.4 ¹³³	-12	42.6	102	40	4 27	5 00	5 27	13 06 61	2 23 31
18	92	57.9	-5	11.2	329	51.8 ¹³⁴	-12	32.5	101	45	4 18	4 54	5 24	12 57 64	2 33 28
19	107	58.1		12.2	344	24.2 ¹³⁴		22.2	103	50	07	46	19	45 68	46 24
20	122	58.3		13.1	358	56.8 ¹³⁶		12.0	102	52	4 01	43	17	40 70	52 22
21	137	58.5		14.1	13	29.3 ¹³⁵	-12	01.7	103	54	3 55	39	15	34 72	2 58 20
22	152	58.7		15.0	28	02.0 ¹³⁷	-11	51.3	104	56	48	34	13	28 74	3 05 18
23	167	58.8		16.0	42	34.7 ¹³⁷		40.9	104	58	40	29	10	21 76	13 16
24	182	59.0	-5	17.0	57	07.5 ¹³⁸	-11	30.5	104	60 S	3 30	4 24	5 07	12 12 80	3 22 13

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO										
	PMG: 22 ^h 59 ^m 0		Mag: -3.9 PMG: 12 ^h 41 ^m		Mag: +1.3 PMG: 7 ^h 54 ^m		Mag: -2.9 PMG: 1 ^h 28 ^m		Mag: +0.8 PMG: 12 ^h 15 ^m										
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec									
h	°	'	°	'	°	'	°	'	°	'									
0	14	18.8	169	56.8	-9	17.9	241	22.8	+18	51.0	337	58.7	+12	50.8	175	43.0	-5	26.5	
1	29	21.2	184	56.4		19.1	256	23.7		50.7	353	01.4		50.7	190	45.2		26.6	
2	44	23.7	199	55.9		20.3	271	24.7		50.3	8	04.1		50.6	205	47.4		26.7	
3	59	26.2	214	55.5		21.6	286	25.7		50.0	23	06.9		50.5	220	49.5		26.8	
4	74	28.6	229	55.1		22.8	301	26.6		49.6	38	09.6		50.4	235	51.7		26.9	
5	89	31.1	244	54.6	-9	24.0	316	27.6	+18	49.2	53	12.3	+12	50.3	250	53.9	-5	27.0	
6	104	33.6	259	54.2	-9	25.2	331	28.6	+18	48.9	68	15.1	+12	50.2	265	56.1	-5	27.2	
7	119	36.0	274	53.7		26.4	346	29.5		48.5	83	17.8		50.1	280	58.3		27.3	
8	134	38.5	289	53.3		27.6	1	30.5		48.2	98	20.5		50.0	296	00.5		27.4	
9	149	41.0	304	52.8		28.8	16	31.5		47.8	113	23.3		49.9	311	02.6		27.5	
10	164	43.4	319	52.4		30.0	31	32.4		47.4	128	26.0		49.8	326	04.8		27.6	
11	179	45.9	334	52.0	-9	31.2	46	33.4	+18	47.1	143	28.7	+12	49.7	341	07.0	-5	27.7	
12	194	48.4	349	51.5	-9	32.4	61	34.4	+18	46.7	158	31.4	+12	49.7	356	09.2	-5	27.9	
13	209	50.8	4	51.1		33.6	76	35.3		46.4	173	34.2		49.6	11	11.4		28.0	
14	224	53.3	19	50.6		34.8	91	36.3		46.0	188	36.9		49.5	26	13.5		28.1	
15	239	55.7	34	50.2		36.0	106	37.3		45.6	203	39.6		49.4	41	15.7		28.2	
16	254	58.2	49	49.7		37.2	121	38.2		45.3	218	42.4		49.3	56	17.9		28.3	
17	270	00.7	64	49.3	-9	38.4	136	39.2	+18	44.9	233	45.1	+12	49.2	71	20.1	-5	28.4	
18	285	03.1	79	48.8	-9	39.6	151	40.2	+18	44.5	248	47.8	+12	49.1	86	22.3	-5	28.5	
19	300	05.6	94	48.4		40.8	166	41.1		44.2	263	50.6		49.0	101	24.4		28.7	
20	315	08.1	109	47.9		42.0	181	42.1		43.8	278	53.3		48.9	116	26.6		28.8	
21	330	10.5	124	47.5		43.2	196	43.1		43.5	293	56.0		48.8	131	28.8		28.9	
22	345	13.0	139	47.0		44.4	211	44.1		43.1	308	58.8		48.7	146	31.0		29.0	
23	0	15.5	154	46.6		45.6	226	45.0		42.7	324	01.5		48.6	161	33.2		29.1	
24	15	17.9	169	46.2	-9	46.8	241	46.0	+18	42.4	339	04.3	+12	48.5	176	35.4	-5	29.2	
Dif	—		-4		-12		+10		-4		+27		-1		+22			-1	

UT	SOL		LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 16'0		Edad: 9 ^d 5 PHE	SD: 15'1		R°: 43 ^m			Civil		Náutico	Hora	R°	Hora	R°	
	hG ☉	Dec		hG ☾	Dif				Dec	Dif						
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	
0	182	59.0	-5	17.0	57	07.5	-11 30.5	60 N	17 16	17 57	18 45	15 42	9	0 51	79	
1	197	59.2		17.9	71	40.3 ¹³⁸	20.0 ¹⁰⁵	58	18	58	43	37	12	0 58	76	
2	212	59.4		18.9	86	13.2 ¹³⁹	-11 09.4 ¹⁰⁶	56	21	58	41	33	14	1 04	73	
3	227	59.6		19.8	100	46.1 ¹³⁹	-10 58.9 ¹⁰⁵	54	23	58	39	29	16	09	71	
4	242	59.8		20.8	115	19.1 ¹⁴⁰	48.3 ¹⁰⁶	52	25	58	37	25	18	14	69	
5	257	59.9	-5	21.7	129	52.1 ¹⁴⁰	-10 37.6 ¹⁰⁷	50	17 26	17 59	18 36	15 22	20	1 18	67	
6	273	00.1	-5	22.7	144	25.2 ¹⁴¹	-10 26.9 ¹⁰⁷	45	17 30	18 00	18 33	15 15	23	1 28	63	
7	288	00.3		23.7	158	58.4 ¹⁴²	16.2 ¹⁰⁷	40	33	01	32	09	26	35	61	
8	303	00.5		24.6	173	31.6 ¹⁴²	-10 05.5 ¹⁰⁷	35	36	02	31	15	04	42	57	
9	318	00.7		25.6	188	04.8 ¹⁴²	-9 54.7 ¹⁰⁸	30	39	03	30	14	59	32	48	55
10	333	00.8		26.5	202	38.2 ¹⁴⁴	43.8 ¹⁰⁹	20	43	05	31	51	36	1 58	51	
11	348	01.0	-5	27.5	217	11.5 ¹⁴³	-9 33.0 ¹⁰⁸	10 N	17 47	18 08	18 33	14 45	39	2 07	47	
12	3	01.2	-5	28.4	231	44.9 ¹⁴⁴	-9 22.1 ¹⁰⁹	0	17 51	18 12	18 36	14 38	43	2 15	44	
13	18	01.4		29.4	246	18.4 ¹⁴⁵	11.2 ¹⁰⁹	10 S	17 55	16	41	32	46	23	41	
14	33	01.6		30.3	260	51.9 ¹⁴⁵	-9 00.2 ¹¹⁰	20	18 00	22	48	25	49	32	37	
15	48	01.8		31.3	275	25.4 ¹⁴⁵	-8 49.2 ¹¹⁰	30	05	29	18 57	17	54	42	32	
16	63	01.9		32.3	289	59.0 ¹⁴⁶	38.2 ¹¹⁰	35	08	33	19 03	12	57	47	31	
17	78	02.1	-5	33.2	304	32.7 ¹⁴⁷	-8 27.2 ¹¹⁰	40	18 11	18 38	19 11	14	07	59	2 54	27
18	93	02.3	-5	34.2	319	06.4 ¹⁴⁷	-8 16.1 ¹¹¹	45	18 15	18 45	19 20	14	01	62	3 01	25
19	108	02.5		35.1	333	40.1 ¹⁴⁷	-8 05.0 ¹¹¹	50	20	53	33	13	53	67	10	21
20	123	02.7		36.1	348	13.9 ¹⁴⁸	-7 53.8 ¹¹²	52	22	18 57	39	50	68	14	19	
21	138	02.8		37.0	2	47.7 ¹⁴⁸	42.7 ¹¹¹	54	24	19 01	45	46	71	18	18	
22	153	03.0		38.0	17	21.6 ¹⁴⁹	31.5 ¹¹²	56	27	06	19 53	42	73	23	15	
23	168	03.2		38.9	31	55.5 ¹⁴⁹	20.3 ¹¹²	58	30	11	20 02	37	75	29	12	
24	183	03.4	-5	39.9	46	29.4 ¹⁴⁹	-7 09.1 ¹¹²	60 S	18 34	19 17	20 12	13	32	78	3 35	10
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO							
	PMG 22 ^h 55 ^m 0		Mag: -3.9 PMG: 12 ^h 41 ^m		Mag: +1.3 PMG: 7 ^h 52 ^m		Mag: -2.9 PMG: 1 ^h 23 ^m		Mag: +0.7 PMG: 12 ^h 12 ^m							
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec						
h	°	'	°	'	°	'	°	'	°	'						
0	15	17.9	169	46.2	241	46.0	+18 42.4	339 04.3	+12 48.5	176 35.4	-5 29.2					
1	30	20.4	184	45.7	256	47.0	42.0	354 07.0	48.5	191 37.5	29.4					
2	45	22.9	199	45.3	271	47.9	41.6	9 09.7	48.4	206 39.7	29.5					
3	60	25.3	214	44.8	286	48.9	41.3	24 12.5	48.3	221 41.9	29.6					
4	75	27.8	229	44.4	301	49.9	40.9	39 15.2	48.2	236 44.1	29.7					
5	90	30.2	244	43.9	316	50.9	+18 40.5	54 17.9	+12 48.1	251 46.3	-5 29.8					
6	105	32.7	259	43.5	331	51.8	+18 40.2	69 20.7	+12 48.0	266 48.4	-5 29.9					
7	120	35.2	274	43.0	346	52.8	39.8	84 23.4	47.9	281 50.6	30.0					
8	135	37.6	289	42.5	1	53.8	39.4	99 26.1	47.8	296 52.8	30.2					
9	150	40.1	304	42.1	16	54.8	39.1	114 28.9	47.7	311 55.0	30.3					
10	165	42.6	319	41.6	31	55.7	38.7	129 31.6	47.6	326 57.2	30.4					
11	180	45.0	334	41.2	46	56.7	+18 38.4	144 34.3	+12 47.5	341 59.3	-5 30.5					
12	195	47.5	349	40.7	61	57.7	+18 38.0	159 37.1	+12 47.4	357 01.5	-5 30.6					
13	210	50.0	4	40.3	76	58.7	37.6	174 39.8	47.3	12 03.7	30.7					
14	225	52.4	19	39.8	91	59.6	37.3	189 42.6	47.2	27 05.9	30.8					
15	240	54.9	34	39.4	107	00.6	36.9	204 45.3	47.1	42 08.1	31.0					
16	255	57.3	49	38.9	122	01.6	36.5	219 48.0	47.0	57 10.3	31.1					
17	270	59.8	64	38.5	137	02.6	+18 36.2	234 50.8	+12 47.0	72 12.4	-5 31.2					
18	286	02.3	79	38.0	152	03.5	+18 35.8	249 53.5	+12 46.9	87 14.6	-5 31.3					
19	301	04.7	94	37.6	167	04.5	35.4	264 56.2	46.8	102 16.8	31.4					
20	316	07.2	109	37.1	182	05.5	35.1	279 59.0	46.7	117 19.0	31.5					
21	331	09.7	124	36.7	197	06.5	34.7	295 01.7	46.6	132 21.2	31.7					
22	346	12.1	139	36.2	212	07.4	34.3	310 04.5	46.5	147 23.3	31.8					
23	1	14.6	154	35.7	227	08.4	34.0	325 07.2	46.4	162 25.5	31.9					
24	16	17.1	169	35.3	242	09.4	+18 33.6	340 09.9	+12 46.3	177 27.7	-5 32.0					
Dif	—		-5	-12	+10	-4		+27	-1		+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 6			Edad: 10 ^d 5 PHE { 4 ^h : 54'8 12 ^h : 54'7 20 ^h : 54'5 Rº: 41 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	Rº	Hora
h	°	'	°	°	'	°	°	h	m	h	m	h	m	m
0	183	03.4	-5 39.9	46	29.4	-7 09.1	60 N	4 51	5 40	6 21	15 51	8	2 10	77
1	198	03.5	40.9	61	03.4 ¹⁵⁰	-6 57.8 ¹¹³	58	54	39	19	49	10	14	74
2	213	03.7	41.8	75	37.5 ¹⁵¹	46.6 ¹¹²	56	56	39	16	47	13	17	72
3	228	03.9	42.8	90	11.5 ¹⁵⁰	35.3 ¹¹³	54	58	39	14	45	15	20	70
4	243	04.1	43.7	104	45.6 ¹⁵¹	24.0 ¹¹³	52	4 59	38	12	43	17	23	68
5	258	04.3	-5 44.7	119	19.7 ¹⁵¹	-6 12.6 ¹¹⁴	50	5 00	5 38	6 10	15 42	18	2 25	66
6	273	04.4	-5 45.6	133	53.9 ¹⁵²	-6 01.3 ¹¹³	45	5 03	5 37	6 06	15 38	22	2 31	62
7	288	04.6	46.6	148	28.1 ¹⁵²	-5 49.9 ¹¹⁴	40	04	36	03	35	26	36	58
8	303	04.8	47.5	163	02.4 ¹⁵³	38.5 ¹¹⁴	35	05	34	6 00	33	28	39	56
9	318	05.0	48.5	177	36.6 ¹⁵²	27.1 ¹¹⁴	30	05	33	5 57	31	30	43	53
10	333	05.2	49.4	192	10.9 ¹⁵³	15.7 ¹¹⁴	20	05	30	53	27	35	49	49
11	348	05.3	-5 50.4	206	45.3 ¹⁵⁴	-5 04.3 ¹¹⁴	10 N	5 03	5 27	5 48	15 24	38	2 54	46
12	3	05.5	-5 51.4	221	19.6 ¹⁵³	-4 52.8 ¹¹⁵	0	4 59	5 24	5 44	15 21	41	2 59	42
13	18	05.7	52.3	235	54.0 ¹⁵⁴	41.4 ¹¹⁴	10 S	55	19	40	18	45	3 04	38
14	33	05.9	53.3	250	28.4 ¹⁵⁴	29.9 ¹¹⁵	20	48	14	36	14	49	09	35
15	48	06.0	54.2	265	02.9 ¹⁵⁵	18.4 ¹¹⁵	30	38	06	30	11	53	14	31
16	63	06.2	55.2	279	37.3 ¹⁵⁴	-4 06.9 ¹¹⁵	35	32	5 02	27	09	55	18	28
17	78	06.4	-5 56.1	294	11.8 ¹⁵⁵	-3 55.4 ¹¹⁵	40	4 24	4 57	5 24	15 06	58	3 21	26
18	93	06.6	-5 57.1	308	46.4 ¹⁵⁶	-3 43.9 ¹¹⁵	45	4 14	4 50	5 20	15 03	62	3 26	22
19	108	06.7	58.0	323	20.9 ¹⁵⁵	32.3 ¹¹⁶	50	4 02	42	15	15 00	65	31	19
20	123	06.9	59.0	337	55.5 ¹⁵⁶	20.8 ¹¹⁵	52	3 56	38	13	14 58	67	33	17
21	138	07.1	-5 59.9	352	30.1 ¹⁵⁶	-3 09.3 ¹¹⁵	54	49	34	10	57	69	36	15
22	153	07.3	-6 00.9	7	04.7 ¹⁵⁶	-2 57.7 ¹¹⁶	56	42	29	07	55	71	38	14
23	168	07.4	01.8	21	39.4 ¹⁵⁷	46.2 ¹¹⁵	58	33	24	04	52	74	41	12
24	183	07.6	-6 02.8	36	14.0 ¹⁵⁶	-2 34.6 ¹¹⁶	60 S	3 23	4 17	5 01	14 50	77	3 45	9

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 22 ^h 51 ^m 1		Mag: -3.9 PMG: 12 ^h 42 ^m		Mag: +1.3 PMG: 7 ^h 51 ^m		Mag: -2.9 PMG: 1 ^h 19 ^m		Mag: +0.7 PMG: 12 ^h 08 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	°	°	'	°	°	°	'
0	16	17.1	169 35.3	-10 15.3	242 09.4	+18 33.6	340 09.9	+12 46.3	177 27.7	-5 32.0
1	31	19.5	184 34.8	16.5	257 10.4	33.2	355 12.7	46.2	192 29.9	32.1
2	46	22.0	199 34.4	17.7	272 11.4	32.9	10 15.4	46.1	207 32.1	32.2
3	61	24.5	214 33.9	18.9	287 12.3	32.5	25 18.2	46.0	222 34.2	32.3
4	76	26.9	229 33.5	20.1	302 13.3	32.1	40 20.9	45.9	237 36.4	32.5
5	91	29.4	244 33.0	-10 21.3	317 14.3	+18 31.8	55 23.6	+12 45.8	252 38.6	-5 32.6
6	106	31.8	259 32.5	-10 22.5	332 15.3	+18 31.4	70 26.4	+12 45.7	267 40.8	-5 32.7
7	121	34.3	274 32.1	23.6	347 16.2	31.0	85 29.1	45.6	282 43.0	32.8
8	136	36.8	289 31.6	24.8	2 17.2	30.7	100 31.9	45.5	297 45.2	32.9
9	151	39.2	304 31.2	26.0	17 18.2	30.3	115 34.6	45.4	312 47.3	33.0
10	166	41.7	319 30.7	27.2	32 19.2	29.9	130 37.3	45.3	327 49.5	33.1
11	181	44.2	334 30.2	-10 28.4	47 20.2	+18 29.6	145 40.1	+12 45.3	342 51.7	-5 33.3
12	196	46.6	349 29.8	-10 29.6	62 21.2	+18 29.2	160 42.8	+12 45.2	357 53.9	-5 33.4
13	211	49.1	4 29.3	30.7	77 22.1	28.8	175 45.6	45.1	12 56.1	33.5
14	226	51.6	19 28.9	31.9	92 23.1	28.5	190 48.3	45.0	27 58.2	33.6
15	241	54.0	34 28.4	33.1	107 24.1	28.1	205 51.1	44.9	43 00.4	33.7
16	256	56.5	49 27.9	34.3	122 25.1	27.7	220 53.8	44.8	58 02.6	33.8
17	271	58.9	64 27.5	-10 35.5	137 26.1	+18 27.4	235 56.5	+12 44.7	73 04.8	-5 34.0
18	287	01.4	79 27.0	-10 36.6	152 27.0	+18 27.0	250 59.3	+12 44.6	88 07.0	-5 34.1
19	302	03.9	94 26.5	37.8	167 28.0	26.6	266 02.0	44.5	103 09.1	34.2
20	317	06.3	109 26.1	39.0	182 29.0	26.2	281 04.8	44.4	118 11.3	34.3
21	332	08.8	124 25.6	40.2	197 30.0	25.9	296 07.5	44.3	133 13.5	34.4
22	347	11.3	139 25.1	41.4	212 31.0	25.5	311 10.3	44.2	148 15.7	34.5
23	2	13.7	154 24.7	42.5	227 32.0	25.1	326 13.0	44.1	163 17.9	34.6
24	17	16.2	169 24.2	-10 43.7	242 33.0	+18 24.8	341 15.7	+12 44.0	178 20.0	-5 34.8
Dif	—		-5	-12	+10	-4	+27	-1	+22	-1

UT	SOL		☾ LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 16'0		Edad: 11 ^d 5	PHE { 4 ^h : 54'4 12 ^h : 54'3 20 ^h : 54'3	SD: 14'8	PMG: 22 ^h 12 ^m			Final del crepúsculo		Salida de Luna		Puesta de Luna		
	hG ☉	Dec							hG ☾	Dif	Dec	Dif	Civil	Náutico	Hora
h	°	'	°	'	°	'	°	h m	h m	h m	h m	m	m	m	m
0	183	07.6	-6	02.8	36	14.0	-2 34.6	60 N	17 10	17 51	18 39	15 59	8	3 27	76
1	198	07.8		03.7	50	48.7 ¹⁵⁷	23.0 ¹¹⁶	58	13	52	37	15 59	11	28	73
2	213	08.0		04.7	65	23.4 ¹⁵⁷	-2 11.4 ¹¹⁶	56	16	53	36	16 00	13	29	71
3	228	08.1		05.6	79	58.1 ¹⁵⁷	-1 59.9 ¹¹⁵	54	18	53	34	00 15		30	69
4	243	08.3		06.6	94	32.8 ¹⁵⁷	48.3 ¹¹⁶	52	20	54	33	00 17		31	67
5	258	08.5	-6	07.5	109	07.6 ¹⁵⁸	-1 36.7 ¹¹⁶	50	17 22	17 54	18 32	16 00	19	3 31	65
6	273	08.7	-6	08.5	123	42.4 ¹⁵⁸	-1 25.1 ¹¹⁶	45	17 27	17 56	18 30	16 00	23	3 33	61
7	288	08.8		09.4	138	17.1 ¹⁵⁷	13.5 ¹¹⁶	40	30	57	29	01 25		34	58
8	303	09.0		10.4	152	51.9 ¹⁵⁸	-1 01.9 ¹¹⁶	35	34	17 59	28	01 28		35	56
9	318	09.2		11.3	167	26.7 ¹⁵⁸	-0 50.4 ¹¹⁵	30	36	18 00	28	01 30		36	53
10	333	09.4		12.3	182	01.6 ¹⁵⁹	38.8 ¹¹⁶	20	42	04	29	02 34		38	49
11	348	09.5	-6	13.2	196	36.4 ¹⁵⁸	-0 27.2 ¹¹⁶	10 N	17 46	18 07	18 32	16 02	38	3 40	44
12	3	09.7	-6	14.2	211	11.2 ¹⁵⁸	-0 15.6 ¹¹⁶	0	17 51	18 11	18 36	16 02	42	3 41	41
13	18	09.9		15.1	225	46.1 ¹⁵⁹	-0 04.0 ¹¹⁶	10 S	17 55	16	41	03 45		42	38
14	33	10.0		16.1	240	20.9 ¹⁵⁸	+0 07.5 ¹¹⁵	20	18 00	22	48	03 49		44	34
15	48	10.2		17.0	254	55.8 ¹⁵⁹	19.1 ¹¹⁶	30	06	30	18 58	04 52		45	30
16	63	10.4		18.0	269	30.7 ¹⁵⁹	30.7 ¹¹⁶	35	09	35	19 05	04 55		46	28
17	78	10.6	-6	18.9	284	05.6 ¹⁵⁹	+0 42.2 ¹¹⁵	40	18 13	18 41	19 13	16 04	58	3 47	25
18	93	10.7	-6	19.9	298	40.5 ¹⁵⁹	+0 53.8 ¹¹⁶	45	18 18	18 48	19 23	16 05	61	3 48	22
19	108	10.9		20.8	313	15.4 ¹⁵⁹	+1 05.3 ¹¹⁵	50	23	18 56	36	05 65		50	18
20	123	11.1		21.8	327	50.3 ¹⁵⁹	16.8 ¹¹⁵	52	25	19 00	43	05 67		50	17
21	138	11.2		22.7	342	25.2 ¹⁵⁹	28.4 ¹¹⁶	54	28	05	50	06 68		51	15
22	153	11.4		23.7	357	00.1 ¹⁵⁹	39.9 ¹¹⁵	56	31	10	19 58	06 71		52	13
23	168	11.6		24.6	11	35.0 ¹⁵⁹	+1 51.4 ¹¹⁵	58	35	16	20 07	06 73		53	10
24	183	11.8	-6	25.6	26	09.9 ¹⁵⁹	+2 02.9 ¹¹⁵	60 S	18 39	19 22	20 18	16 07	75	3 54	8
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG: 22 ^h 47 ^m 2		Mag: -3.9 PMG: 12 ^h 43 ^m		Mag: +1.3 PMG: 7 ^h 49 ^m		Mag: -2.9 PMG: 1 ^h 15 ^m		Mag: +0.7 PMG: 12 ^h 05 ^m						
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'					
0	17	16.2	169	24.2	242	33.0	341	15.7	178	20.0					
1	32	18.7	184	23.7	257	33.9	356	18.5	193	22.2					
2	47	21.1	199	23.3	272	34.9	11	21.2	208	24.4					
3	62	23.6	214	22.8	287	35.9	26	24.0	223	26.6					
4	77	26.1	229	22.3	302	36.9	41	26.7	238	28.8					
5	92	28.5	244	21.9	317	37.9	56	29.5	253	30.9					
6	107	31.0	259	21.4	332	38.9	71	32.2	268	33.1					
7	122	33.4	274	20.9	347	39.9	86	35.0	283	35.3					
8	137	35.9	289	20.5	362	40.8	101	37.7	298	37.5					
9	152	38.4	304	20.0	377	41.8	116	40.5	313	39.7					
10	167	40.8	319	19.5	392	42.8	131	43.2	328	41.9					
11	182	43.3	334	19.1	407	43.8	146	45.9	343	44.0					
12	197	45.8	349	18.6	422	44.8	161	48.7	358	46.2					
13	212	48.2	4	18.1	437	45.8	176	51.4	13	48.4					
14	227	50.7	19	17.7	452	46.8	191	54.2	28	50.6					
15	242	53.2	34	17.2	467	47.8	206	56.9	43	52.8					
16	257	55.6	49	16.7	482	48.7	221	59.7	58	54.9					
17	272	58.1	64	16.2	497	49.7	237	02.4	73	57.1					
18	288	00.5	79	15.8	512	50.7	252	05.2	88	59.3					
19	303	03.0	94	15.3	527	51.7	267	07.9	104	01.5					
20	318	05.5	109	14.8	542	52.7	282	10.7	119	03.7					
21	333	07.9	124	14.4	557	53.7	297	13.4	134	05.8					
22	348	10.4	139	13.9	572	54.7	312	16.2	149	08.0					
23	3	12.9	154	13.4	587	55.7	327	18.9	164	10.2					
24	18	15.3	169	12.9	602	56.7	342	21.7	179	12.4					
Dif	—		-5	-12	+10	-4	+27	-1	+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 1			Edad: 12 ^d 5 PHE { 4 ^h : 54'2 12 ^h : 54'1 20 ^h : 54'1 Rº: 42 ^m																				
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	Rº	Hora	Rº									
h	°	'	°	°	'	°	°	'	h	m	h	m	h	m	m									
0	183	11.8	-6	25.6		26	09.9	+2	02.9	60 N	4	56	5	44	6	26	16	07	10	4	43	76		
1	198	11.9		26.5		40	44.8 ¹⁵⁹		14.4 ¹¹⁵	58	4	58		44	23		10	12		41	73			
2	213	12.1		27.5		55	19.7 ¹⁵⁹		25.8 ¹¹⁴	56	5	00		43	20		13	14		40	71			
3	228	12.3		28.4		69	54.6 ¹⁵⁹		37.3 ¹¹⁵	54		01		42	18		15	16		39	68			
4	243	12.4		29.4		84	29.5 ¹⁵⁹		48.8 ¹¹⁵	52		02		41	15		17	18		38	66			
5	258	12.6	-6	30.3		99	04.5 ¹⁶⁰		+3 00.2 ¹¹⁴	50	5	03	5	41	6	13	16	19	19	4	36	65		
6	273	12.8	-6	31.3		113	39.4 ¹⁵⁹		+3 11.6 ¹¹⁴	45	5	05	5	39	6	09	16	23	23	4	34	61		
7	288	12.9		32.2		128	14.3 ¹⁵⁹		23.0 ¹¹⁴	40		06		38	05		26	26		32	58			
8	303	13.1		33.2		142	49.2 ¹⁵⁹		34.4 ¹¹⁴	35		07		36	6	01	29	29		31	55			
9	318	13.3		34.1		157	24.1 ¹⁵⁹		45.8 ¹¹⁴	30		07		34	5	58	31	31		29	53			
10	333	13.4		35.1		171	58.9 ¹⁵⁸		+3 57.1 ¹¹³	20		05		31	53		36	35		27	48			
11	348	13.6	-6	36.0		186	33.8 ¹⁵⁹		+4 08.4 ¹¹³	10 N	5	03	5	27	5	48	16	40	38	4	24	45		
12	3	13.8	-6	36.9		201	08.7 ¹⁵⁹		+4 19.8 ¹¹⁴	0	4	59	5	23	5	44	16	44	41	4	22	42		
13	18	14.0		37.9		215	43.6 ¹⁵⁹		31.1 ¹¹³	10 S		53		18	39		48	45		20	38			
14	33	14.1		38.8		230	18.4 ¹⁵⁸		42.3 ¹¹²	20		46		12	34		52	48		18	35			
15	48	14.3		39.8		244	53.3 ¹⁵⁹		+4 53.6 ¹¹³	30		36	5	04	28		56	53		15	31			
16	63	14.5		40.7		259	28.1 ¹⁵⁸		+5 04.8 ¹¹²	35		29	4	59	25		16	59	55	14	28			
17	78	14.6	-6	41.7		274	02.9 ¹⁵⁸		+5 16.0 ¹¹²	40	4	21	4	53	5	21	17	02	58	4	12	26		
18	93	14.8	-6	42.6		288	37.7 ¹⁵⁸		+5 27.2 ¹¹²	45	4	10	4	46	5	16	17	06	61	4	10	23		
19	108	15.0		43.6		303	12.5 ¹⁵⁸		38.4 ¹¹²	50	3	57		37	11		10	65		08	19			
20	123	15.1		44.5		317	47.3 ¹⁵⁸		+5 49.5 ¹¹¹	52		51		33	08		12	67		07	17			
21	138	15.3		45.5		332	22.1 ¹⁵⁸		+6 00.6 ¹¹¹	54		44		29	05		14	69		06	15			
22	153	15.5		46.4		346	56.9 ¹⁵⁸		11.7 ¹¹¹	56		36		24	5	02	17	70		05	13			
23	168	15.6		47.3		1	31.6 ¹⁵⁷		22.8 ¹¹¹	58		26		18	4	59	19	73		03	11			
24	183	15.8	-6	48.3		16	06.4 ¹⁵⁸		+6 33.8 ¹¹⁰	60 S	3	15	4	11	4	55	17	22	76	4	02	8		
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO											
	PMG: 22 ^h 43 ^m 2			Mag: -3.9 PMG: 12 ^h 44 ^m			Mag: +1.2 PMG: 7 ^h 48 ^m			Mag: -2.9 PMG: 1 ^h 10 ^m			Mag: +0.7 PMG: 12 ^h 01 ^m											
	hG ♈			hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec										
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°									
0	18	15.3	169	12.9	-11	11.8	242	56.7	+18	15.9	342	21.7	+12	41.7	179	12.4	-5	37.5						
1	33	17.8	184	12.5		13.0	257	57.7		15.5	357	24.4		41.6	194	14.6		37.6						
2	48	20.3	199	12.0		14.2	272	58.7		15.1	12	27.2		41.5	209	16.7		37.7						
3	63	22.7	214	11.5		15.3	287	59.7		14.8	27	29.9		41.4	224	18.9		37.9						
4	78	25.2	229	11.0		16.5	303	00.6		14.4	42	32.7		41.3	239	21.1		38.0						
5	93	27.7	244	10.6	-11	17.7	318	01.6	+18	14.0	57	35.4	+12	41.2	254	23.3	-5	38.1						
6	108	30.1	259	10.1	-11	18.8	333	02.6	+18	13.6	72	38.2	+12	41.1	269	25.5	-5	38.2						
7	123	32.6	274	09.6		20.0	348	03.6		13.3	87	40.9		41.0	284	27.6		38.3						
8	138	35.0	289	09.1		21.1	3	04.6		12.9	102	43.7		40.9	299	29.8		38.4						
9	153	37.5	304	08.6		22.3	18	05.6		12.5	117	46.4		40.8	314	32.0		38.5						
10	168	40.0	319	08.2		23.5	33	06.6		12.1	132	49.2		40.7	329	34.2		38.7						
11	183	42.4	334	07.7	-11	24.6	48	07.6	+18	11.8	147	51.9	+12	40.6	344	36.4	-5	38.8						
12	198	44.9	349	07.2	-11	25.8	63	08.6	+18	11.4	162	54.7	+12	40.5	359	38.5	-5	38.9						
13	213	47.4	4	06.7		27.0	78	09.6		11.0	177	57.4		40.4	14	40.7		39.0						
14	228	49.8	19	06.2		28.1	93	10.6		10.6	193	00.2		40.3	29	42.9		39.1						
15	243	52.3	34	05.8		29.3	108	11.6		10.3	208	02.9		40.2	44	45.1		39.2						
16	258	54.8	49	05.3		30.4	123	12.6		09.9	223	05.7		40.1	59	47.3		39.3						
17	273	57.2	64	04.8	-11	31.6	138	13.6	+18	09.5	238	08.4	+12	40.0	74	49.4	-5	39.5						
18	288	59.7	79	04.3	-11	32.7	153	14.6	+18	09.1	253	11.2	+12	39.9	89	51.6	-5	39.6						
19	304	02.2	94	03.8		33.9	168	15.6		08.8	268	13.9		39.8	104	53.8		39.7						
20	319	04.6	109	03.4		35.1	183	16.6		08.4	283	16.7		39.7	119	56.0		39.8						
21	334	07.1	124	02.9		36.2	198	17.6		08.0	298	19.4		39.6	134	58.2		39.9						
22	349	09.5	139	02.4		37.4	213	18.6		07.7	313	22.2		39.5	150	00.3		40.0						
23	4	12.0	154	01.9		38.5	228	19.6		07.3	328	24.9		39.4	165	02.5		40.1						
24	19	14.5	169	01.4	-11	39.7	243	20.6	+18	06.9	343	27.7	+12	39.3	180	04.7	-5	40.3						
Dif	—			-5			+10			-4			+28			-1			+22			-		

UT	SOL		☉ LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16'0		Edad: 13 ^d 5 PHE { 4 ^h : 54'0 12 ^h : 54'0 20 ^h : 54'0						Civil		Náutico		Hora R°	
	PMG: 11 ^h 46 ^m 8		SD: 14'7		PMG: 23 ^h 36 ^m R°: 43 ^m									
	hG ☉	Dec	hG ☾	Dif	Dec	Dif								
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m
0	183	15.8	-6	48.3	16	06.4	+6 33.8	60 N	17 04	17 46	18 34	16 17 11	5 59 76	
1	198	15.9		49.2	30	41.1 ¹⁵⁷	44.8 ¹¹⁰	58	07	47	32	22 14	54 74	
2	213	16.1		50.2	45	15.8 ¹⁵⁷	+6 55.8 ¹¹⁰	56	10	48	31	27 16	51 70	
3	228	16.3		51.1	59	50.5 ¹⁵⁷	+7 06.8 ¹¹⁰	54	13	49	29	31 18	47 69	
4	243	16.4		52.1	74	25.1 ¹⁵⁶	17.7 ¹⁰⁹	52	16	50	28	35 20	44 67	
5	258	16.6	-6	53.0	88	59.8 ¹⁵⁷	+7 28.6 ¹⁰⁹	50	17 18	17 50	18 28	16 38 22	5 41 65	
6	273	16.8	-6	54.0	103	34.4 ¹⁵⁶	+7 39.4 ¹⁰⁸	45	17 23	17 52	18 26	16 46 25	5 35 61	
7	288	16.9		54.9	118	09.0 ¹⁵⁶	+7 50.3 ¹⁰⁹	40	27	54	26	52 28	30 58	
8	303	17.1		55.8	132	43.6 ¹⁵⁶	+8 01.1 ¹⁰⁸	35	31	56	26	16 58 30	26 55	
9	318	17.3		56.8	147	18.2 ¹⁵⁶	11.8 ¹⁰⁷	30	34	17 58	26	17 02 33	22 53	
10	333	17.4		57.7	161	52.7 ¹⁵⁵	22.6 ¹⁰⁸	20	40	18 02	28	11 36	15 49	
11	348	17.6	-6	58.7	176	27.2 ¹⁵⁵	+8 33.3 ¹⁰⁷	10 N	17 45	18 06	18 31	17 18 40	5 09 46	
12	3	17.8	-6	59.6	191	01.7 ¹⁵⁵	+8 43.9 ¹⁰⁶	0	17 50	18 11	18 35	17 25 43	5 04 42	
13	18	17.9	-7	00.6	205	36.2 ¹⁵⁵	+8 54.5 ¹⁰⁶	10 S	17 55	16	41	33 46	4 58 39	
14	33	18.1		01.5	220	10.6 ¹⁵⁴	+9 05.1 ¹⁰⁶	20	18 01	23	18 49	40 50	53 35	
15	48	18.2		02.4	234	45.1 ¹⁵⁵	15.7 ¹⁰⁶	30	07	31	19 00	49 53	46 32	
16	63	18.4		03.4	249	19.5 ¹⁵⁴	26.2 ¹⁰⁵	35	11	37	07	17 54 55	42 30	
17	78	18.6	-7	04.3	263	53.8 ¹⁵³	+9 36.7 ¹⁰⁵	40	18 15	18 43	19 16	18 00 58	4 38 27	
18	93	18.7	-7	05.3	278	28.2 ¹⁵⁴	+9 47.1 ¹⁰⁴	45	18 20	18 50	19 26	18 07 61	4 33 24	
19	108	18.9		06.2	293	02.5 ¹⁵³	+9 57.5 ¹⁰⁴	50	26	19 00	40	15 65	27 20	
20	123	19.0		07.2	307	36.8 ¹⁵³	+10 07.9 ¹⁰⁴	52	29	04	47	19 66	24 19	
21	138	19.2		08.1	322	11.1 ¹⁵³	18.2 ¹⁰³	54	32	09	19 54	23 68	21 17	
22	153	19.4		09.0	336	45.3 ¹⁵²	28.4 ¹⁰²	56	35	14	20 03	27 71	18 15	
23	168	19.5		10.0	351	19.5 ¹⁵²	38.7 ¹⁰³	58	39	21	13	32 74	14 13	
24	183	19.7	-7	10.9	5	53.7 ¹⁵²	+10 48.9 ¹⁰²	60 S	18 43	19 28	20 25	18 38 77	4 10 10	
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 22 ^h 39 ^m 3		Mag: -3.9 PMG: 12 ^h 44 ^m		Mag: +1.2 PMG: 7 ^h 46 ^m		Mag: -2.9 PMG: 1 ^h 06 ^m		Mag: +0.7 PMG: 11 ^h 58 ^m					
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	19	14.5	169	01.4	-11	39.7	243	20.6	343	27.7				
1	34	16.9	184	00.9		40.8	258	21.6	358	30.4				
2	49	19.4	199	00.5		42.0	273	22.6	13	33.2				
3	64	21.9	214	00.0		43.2	288	23.6	28	36.0				
4	79	24.3	228	59.5		44.3	303	24.6	43	38.7				
5	94	26.8	243	59.0	-11	45.5	318	25.6	58	41.5				
6	109	29.3	258	58.5	-11	46.6	333	26.6	73	44.2				
7	124	31.7	273	58.0		47.8	348	27.6	88	47.0				
8	139	34.2	288	57.5		48.9	3	28.6	103	49.7				
9	154	36.6	303	57.1		50.1	18	29.6	118	52.5				
10	169	39.1	318	56.6		51.2	33	30.6	133	55.2				
11	184	41.6	333	56.1	-11	52.4	48	31.6	148	58.0				
12	199	44.0	348	55.6	-11	53.5	63	32.6	164	00.7				
13	214	46.5	3	55.1		54.7	78	33.6	179	03.5				
14	229	49.0	18	54.6		55.8	93	34.6	194	06.3				
15	244	51.4	33	54.1		57.0	108	35.6	209	09.0				
16	259	53.9	48	53.6		58.1	123	36.6	224	11.8				
17	274	56.4	63	53.1	-11	59.3	138	37.6	239	14.5				
18	289	58.8	78	52.6	-12	00.4	153	38.6	254	17.3				
19	305	01.3	93	52.2		01.5	168	39.6	269	20.0				
20	320	03.8	108	51.7		02.7	183	40.6	284	22.8				
21	335	06.2	123	51.2		03.8	198	41.6	299	25.5				
22	350	08.7	138	50.7		05.0	213	42.6	314	28.3				
23	5	11.1	153	50.2		06.1	228	43.6	329	31.1				
24	20	13.6	168	49.7	-12	07.3	243	44.6	344	33.8				
Dif	—		-5	-11	+10	-4	+28	-1	+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 6			Edad: 14 ^d 5 PHE { SD: 14'7 PMG: *** **m											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	Rº	Hora	Rº
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	m
0	183	19.7	-7	5	53.7	+10	48.9	60 N	5 01	5 49	6 31	16 28	14	7 15	76
1	198	19.9		20	27.8 ¹⁵¹	+10	59.0 ¹⁰¹	58	02	48	27	36	17	08	73
2	213	20.0		35	01.9 ¹⁵¹	+11	09.1 ¹⁰¹	56	04	47	24	43	19	7 01	7
3	228	20.2		49	36.0 ¹⁵¹		19.2 ¹⁰¹	54	05	46	21	49	21	6 56	66
4	243	20.3		64	10.1 ¹⁵¹		29.2 ¹⁰⁰	52	06	45	19	16 55	23	51	66
5	258	20.5	-7	78	44.1 ¹⁵⁰	+11	39.1 ⁹⁹	50	5 07	5 44	6 16	17 00	25	6 46	65
6	273	20.7	-7	93	18.1 ¹⁵⁰	+11	49.0 ⁹⁹	45	5 08	5 42	6 11	17 11	28	6 36	61
7	288	20.8		107	52.0 ¹⁴⁹	+11	58.9 ⁹⁹	40	08	40	07	20	31	28	58
8	303	21.0		122	26.0 ¹⁵⁰	+12	08.7 ⁹⁸	35	08	38	03	28	34	21	55
9	318	21.1		136	59.8 ¹⁴⁸		18.5 ⁹⁸	30	08	36	6 00	35	36	15	53
10	333	21.3		151	33.7 ¹⁴⁹		28.2 ⁹⁷	20	06	32	5 54	47	39	6 04	50
11	348	21.4	-7	166	07.5 ¹⁴⁸	+12	37.9 ⁹⁷	10 N	5 03	5 27	5 48	17 58	42	5 55	46
12	3	21.6	-7	180	41.3 ¹⁴⁸	+12	47.5 ⁹⁶	0	4 58	5 22	5 43	18 08	45	5 46	44
13	18	21.8		195	15.0 ¹⁴⁷	+12	57.0 ⁹⁵	10 S	52	17	38	19	47	37	41
14	33	21.9		209	48.7 ¹⁴⁷	+13	06.5 ⁹⁵	20	44	10	32	30	50	28	38
15	48	22.1		224	22.4 ¹⁴⁷		16.0 ⁹⁵	30	33	5 02	26	42	54	18	34
16	63	22.2		238	56.0 ¹⁴⁶		25.4 ⁹⁴	35	26	4 56	22	49	56	12	31
17	78	22.4	-7	253	29.6 ¹⁴⁶	+13	34.7 ⁹³	40	4 17	4 50	5 18	18 58	58	5 05	29
18	93	22.5	-7	268	03.2 ¹⁴⁶	+13	44.0 ⁹³	45	4 06	4 42	5 13	19 08	61	4 57	26
19	108	22.7		282	36.7 ¹⁴⁵	+13	53.3 ⁹³	50	3 53	33	06	20	64	47	23
20	123	22.9		297	10.2 ¹⁴⁵	+14	02.4 ⁹¹	52	46	29	04	25	66	43	21
21	138	23.0		311	43.6 ¹⁴⁴		11.6 ⁹²	54	38	24	5 00	31	68	38	20
22	153	23.2		326	17.0 ¹⁴⁴		20.6 ⁹⁰	56	30	18	4 57	38	70	33	17
23	168	23.3		340	50.4 ¹⁴⁴		29.6 ⁹⁰	58	20	12	53	46	73	27	15
24	183	23.5	-7	355	23.7 ¹⁴³	+14	38.6 ⁹⁰	60 S	3 08	4 05	4 49	19 55	75	4 20	13

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO										
	PMG: 22 ^h 35 ^m 4		Mag: -3.9 PMG: 12 ^h 45 ^m		Mag: +1.2 PMG: 7 ^h 45 ^m		Mag: -2.9 PMG: 1 ^h 02 ^m		Mag: +0.7 PMG: 11 ^h 54 ^m										
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec									
h	°	'	°	'	°	'	°	'	°	'									
0	20	13.6	168	49.7	-12	07.3	243	44.6	+17	57.9	344	33.8	+12	37.0	180	57.0	-5	43.0	
1	35	16.1	183	49.2		08.4	258	45.6		57.5	359	36.6		36.9	195	59.2		43.1	
2	50	18.5	198	48.7		09.6	273	46.6		57.1	14	39.3		36.8	211	01.4		43.2	
3	65	21.0	213	48.2		10.7	288	47.6		56.7	29	42.1		36.7	226	03.6		43.4	
4	80	23.5	228	47.7		11.8	303	48.6		56.4	44	44.8		36.6	241	05.7		43.5	
5	95	25.9	243	47.2	-12	13.0	318	49.7	+17	56.0	59	47.6	+12	36.5	256	07.9	-5	43.6	
6	110	28.4	258	46.7	-12	14.1	333	50.7	+17	55.6	74	50.4	+12	36.4	271	10.1	-5	43.7	
7	125	30.9	273	46.2		15.3	348	51.7		55.2	89	53.1		36.3	286	12.3		43.8	
8	140	33.3	288	45.7		16.4	3	52.7		54.8	104	55.9		36.2	301	14.5		43.9	
9	155	35.8	303	45.2		17.5	18	53.7		54.5	119	58.6		36.1	316	16.6		44.0	
10	170	38.2	318	44.7		18.7	33	54.7		54.1	135	01.4		36.0	331	18.8		44.2	
11	185	40.7	333	44.2	-12	19.8	48	55.7	+17	53.7	150	04.2	+12	35.9	346	21.0	-5	44.3	
12	200	43.2	348	43.7	-12	21.0	63	56.7	+17	53.3	165	06.9	+12	35.8	1	23.2	-5	44.4	
13	215	45.6	3	43.2		22.1	78	57.7		53.0	180	09.7		35.7	16	25.4		44.5	
14	230	48.1	18	42.7		23.2	93	58.7		52.6	195	12.4		35.6	31	27.5		44.6	
15	245	50.6	33	42.2		24.4	108	59.7		52.2	210	15.2		35.5	46	29.7		44.7	
16	260	53.0	48	41.7		25.5	124	00.8		51.8	225	18.0		35.4	61	31.9		44.8	
17	275	55.5	63	41.2	-12	26.6	139	01.8	+17	51.4	240	20.7	+12	35.3	76	34.1	-5	45.0	
18	290	58.0	78	40.7	-12	27.8	154	02.8	+17	51.1	255	23.5	+12	35.2	91	36.3	-5	45.1	
19	306	00.4	93	40.2		28.9	169	03.8		50.7	270	26.2		35.1	106	38.4		45.2	
20	321	02.9	108	39.7		30.0	184	04.8		50.3	285	29.0		35.0	121	40.6		45.3	
21	336	05.4	123	39.2		31.2	199	05.8		49.9	300	31.8		34.9	136	42.8		45.4	
22	351	07.8	138	38.7		32.3	214	06.8		49.5	315	34.5		34.8	151	45.0		45.5	
23	6	10.3	153	38.2		33.4	229	07.8		49.2	330	37.3		34.7	166	47.2		45.6	
24	21	12.7	168	37.7	-12	34.6	244	08.8	+17	48.8	345	40.0	+12	34.6	181	49.3	-5	45.8	
Dif	—		-5	-11			+10	-4			+28	-1			+22	-			

UT	SOL			☉ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16'0			Edad: 15 ^d 5 PHE	4 ^h : 54'0 12 ^h : 54'0 20 ^h : 54'0										
	PMG: 11 ^h 46 ^m 3				SD: 14'7										
	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	23.5	-7 33.4	355	23.7	+14 38.6	89	60 N	16 58	17 40	18 28	16 42 19	8 31 75		
1	198	23.6	34.4	9	57.0 ¹⁴³	47.5	89	58	17 02	41	27	16 53 22	21 72		
2	213	23.8	35.3	24	30.2 ¹⁴²	+14 56.3	88	56	05	43	26	17 02 24	12 69		
3	228	23.9	36.3	39	03.4 ¹⁴²	+15 05.0	87	54	08	44	25	10 27	8 04 67		
4	243	24.1	37.2	53	36.6 ¹⁴²	13.7	87	52	11	45	24	18 28	7 57 65		
5	258	24.3	-7 38.1	68	09.7 ¹⁴¹	+15 22.4	87	50	17 14	17 46	18 24	17 25 29	7 51 63		
6	273	24.4	-7 39.1	82	42.8 ¹⁴¹	+15 30.9	85	45	17 19	17 49	18 23	17 39 33	7 37 60		
7	288	24.6	40.0	97	15.8 ¹⁴⁰	39.4	85	40	24	51	23	17 51 35	26 58		
8	303	24.7	40.9	111	48.8 ¹⁴⁰	47.9	85	35	28	54	23	18 02 37	16 56		
9	318	24.9	41.9	126	21.7 ¹³⁹	+15 56.2	83	30	32	17 56	24	11 38	7 08 54		
10	333	25.0	42.8	140	54.6 ¹³⁹	+16 04.5	83	20	38	18 01	26	26 42	6 54 50		
11	348	25.2	-7 43.7	155	27.5 ¹³⁹	+16 12.8	83	10 N	17 44	18 05	18 30	18 40 44	6 41 48		
12	3	25.3	-7 44.7	170	00.3 ¹³⁸	+16 21.0	82	0	17 50	18 10	18 35	18 53 46	6 30 45		
13	18	25.5	45.6	184	33.0 ¹³⁷	29.1	81	10 S	17 55	16	41	19 06 49	18 43		
14	33	25.6	46.5	199	05.8 ¹³⁸	37.1	80	20	18 01	24	18 50	20 51	6 06 40		
15	48	25.8	47.5	213	38.4 ¹³⁶	45.0	79	30	08	33	19 01	36 54	5 52 37		
16	63	25.9	48.4	228	11.1 ¹³⁷	+16 52.9	79	35	13	38	09	45 56	43 36		
17	78	26.1	-7 49.3	242	43.6 ¹³⁵	+17 00.8	79	40	18 17	18 45	19 18	19 56 57	5 34 33		
18	93	26.2	-7 50.3	257	16.2 ¹³⁶	+17 08.5	77	45	18 23	18 53	19 29	20 09 59	5 23 31		
19	108	26.4	51.2	271	48.7 ¹³⁵	16.2	77	50	29	19 03	44	24 63	10 27		
20	123	26.5	52.1	286	21.1 ¹³⁴	23.8	76	52	32	08	51	31 65	5 04 26		
21	138	26.7	53.1	300	53.5 ¹³⁴	31.3	75	54	36	13	19 59	39 66	4 58 23		
22	153	26.8	54.0	315	25.9 ¹³⁴	38.8	75	56	40	19	20 08	48 69	50 22		
23	168	27.0	54.9	329	58.2 ¹³³	46.1	73	58	44	26	19	20 59 70	42 19		
24	183	27.1	-7 55.9	344	30.5 ¹³³	+17 53.4	73	60 S	18 48	19 33	20 31	21 10 74	4 33 16		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 22 ^h 31 ^m 5		Mag: -3.9 PMG: 12 ^h 46 ^m			Mag: +1.2 PMG: 7 ^h 43 ^m			Mag: -2.9 PMG: 0 ^h 57 ^m			Mag: +0.7 PMG: 11 ^h 51 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	21	12.7	168 37.7	-12 34.6	244 08.8	+17 48.8	345 40.0	+12 34.6	181 49.3	-5 45.8					
1	36	15.2	183 37.2	35.7	259 09.9	48.4	0 42.8	34.5	196 51.5	45.9					
2	51	17.7	198 36.7	36.8	274 10.9	48.0	15 45.6	34.4	211 53.7	46.0					
3	66	20.1	213 36.2	38.0	289 11.9	47.6	30 48.3	34.3	226 55.9	46.1					
4	81	22.6	228 35.7	39.1	304 12.9	47.3	45 51.1	34.1	241 58.1	46.2					
5	96	25.1	243 35.2	-12 40.2	319 13.9	+17 46.9	60 53.8	+12 34.0	257 00.2	-5 46.3					
6	111	27.5	258 34.7	-12 41.4	334 14.9	+17 46.5	75 56.6	+12 33.9	272 02.4	-5 46.4					
7	126	30.0	273 34.2	42.5	349 15.9	46.1	90 59.4	33.8	287 04.6	46.6					
8	141	32.5	288 33.7	43.6	4 17.0	45.7	106 02.1	33.7	302 06.8	46.7					
9	156	34.9	303 33.2	44.7	19 18.0	45.3	121 04.9	33.6	317 09.0	46.8					
10	171	37.4	318 32.7	45.9	34 19.0	45.0	136 07.7	33.5	332 11.1	46.9					
11	186	39.8	333 32.2	-12 47.0	49 20.0	+17 44.6	151 10.4	+12 33.4	347 13.3	-5 47.0					
12	201	42.3	348 31.6	-12 48.1	64 21.0	+17 44.2	166 13.2	+12 33.3	2 15.5	-5 47.1					
13	216	44.8	3 31.1	49.2	79 22.0	43.8	181 15.9	33.2	17 17.7	47.2					
14	231	47.2	18 30.6	50.4	94 23.1	43.4	196 18.7	33.1	32 19.9	47.4					
15	246	49.7	33 30.1	51.5	109 24.1	43.1	211 21.5	33.0	47 22.0	47.5					
16	261	52.2	48 29.6	52.6	124 25.1	42.7	226 24.2	32.9	62 24.2	47.6					
17	276	54.6	63 29.1	-12 53.7	139 26.1	+17 42.3	241 27.0	+12 32.8	77 26.4	-5 47.7					
18	291	57.1	78 28.6	-12 54.9	154 27.1	+17 41.9	256 29.8	+12 32.7	92 28.6	-5 47.8					
19	306	59.6	93 28.1	56.0	169 28.1	41.5	271 32.5	32.6	107 30.8	47.9					
20	322	02.0	108 27.6	57.1	184 29.2	41.2	286 35.3	32.5	122 32.9	48.0					
21	337	04.5	123 27.0	58.2	199 30.2	40.8	301 38.1	32.4	137 35.1	48.2					
22	352	07.0	138 26.5	-12 59.3	214 31.2	40.4	316 40.8	32.3	152 37.3	48.3					
23	7	09.4	153 26.0	-13 00.5	229 32.2	40.0	331 43.6	32.2	167 39.5	48.4					
24	22	11.9	168 25.5	-13 01.6	244 33.2	+17 39.6	346 46.4	+12 32.1	182 41.7	-5 48.5					
Dif	—		-5 -11		+10 -4		+28 -1		+22 -1				-1		

ALMANAQUE NÁUTICO PERSEIS

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16°0			Edad: 17 ^d 5 PHE { 4 ^h : 54°3 12 ^h : 54°4 20 ^h : 54°5										
	PMG: 11 ^h 45 ^m 8			SD: 14°8 PMG: 1 ^h 51 ^m R°: 49 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m
0	183	30.7	-8 18.2	333	11.1	+20 24.1	51	60 N	16 52	17 34	18 22	17 28 39	10 57 63	
1	198	30.8	19.1	347	42.2 ¹²¹	29.2	51	58	16 57	36	21	45 40	41 61	
2	213	31.0	20.0	2	13.3 ¹²¹	34.3	50	56	17 00	38	21	17 58 42	27 60	
3	228	31.1	21.0	16	44.4 ¹²¹	39.3	50	54	04	39	20	18 10 43	16 55	
4	243	31.2	21.9	31	15.4 ¹²⁰	44.2	49	52	07	41	20	21 43	10 05 58	
5	258	31.4	-8 22.8	45	46.3 ¹¹⁹	+20 49.0	48	50	17 10	17 42	18 20	18 31 44	9 56 57	
6	273	31.5	-8 23.7	60	17.2 ¹¹⁹	+20 53.8	48	45	17 16	17 45	18 19	18 51 45	9 36 56	
7	288	31.7	24.7	74	48.1 ¹¹⁹	+20 58.4	46	40	21	48	20	19 07 46	21 54	
8	303	31.8	25.6	89	18.9 ¹¹⁸	+21 02.9	45	35	26	51	21	20 47	9 07 54	
9	318	31.9	26.5	103	49.7 ¹¹⁸	07.3	44	30	30	54	22	32 48	8 56 52	
10	333	32.1	27.4	118	20.4 ¹¹⁷	11.7	44	20	37	17 59	25	19 53 48	36 51	
11	348	32.2	-8 28.4	132	51.1 ¹¹⁷	+21 15.9	42	10 N	17 43	18 04	18 29	20 11 49	8 19 50	
12	3	32.4	-8 29.3	147	21.8 ¹¹⁷	+21 20.0	41	0	17 49	18 10	18 34	20 28 50	8 02 50	
13	18	32.5	30.2	161	52.4 ¹¹⁶	24.1	41	10 S	17 55	17	41	20 44 51	7 46 48	
14	33	32.7	31.1	176	22.9 ¹¹⁵	28.0	39	20	18 02	24	18 51	21 02 52	29 47	
15	48	32.8	32.1	190	53.5 ¹¹⁶	31.8	38	30	10	34	19 03	23 52	7 09 46	
16	63	32.9	33.0	205	23.9 ¹¹⁴	35.6	38	35	14	40	11	35 53	6 58 44	
17	78	33.1	-8 33.9	219	54.4 ¹¹⁵	+21 39.2	36	40	18 19	18 47	19 20	21 49 54	6 45 43	
18	93	33.2	-8 34.8	234	24.8 ¹¹⁴	+21 42.7	35	45	18 25	18 56	19 32	22 06 54	6 29 42	
19	108	33.4	35.8	248	55.2 ¹¹⁴	46.2	35	50	33	19 06	48	27 54	10 40	
20	123	33.5	36.7	263	25.5 ¹¹³	49.5	33	52	36	11	19 55	37 55	6 01 39	
21	138	33.6	37.6	277	55.8 ¹¹³	52.7	32	54	40	17	20 04	22 48 55	5 51 38	
22	153	33.8	38.5	292	26.1 ¹¹³	55.9	30	56	44	23	13	23 00 56	40 36	
23	168	33.9	39.5	306	56.3 ¹¹²	+21 58.9	30	58	48	31	25	15 57	27 34	
24	183	34.0	-8 40.4	321	26.5 ¹¹²	+22 01.8	29	60 S	18 53	19 39	20 38	23 32 58	5 11 33	
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 22 ^h 23 ^m 6		Mag: -3.8 PMG: 12 ^h 48 ^m		Mag: +1.2 PMG: 7 ^h 40 ^m		Mag: -2.9 PMG: 0 ^h 48 ^m		Mag: +0.7 PMG: 11 ^h 44 ^m					
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	23	11.0	168	13.0	-13 28.3	244	57.8	+17 30.4	347	52.8	+12 29.6	183	34.0	-5 51.2
1	38	13.5	183	12.5	29.4	259	58.8	30.0	2	55.5	29.5	198	36.2	51.3
2	53	15.9	198	12.0	30.5	274	59.8	29.6	17	58.3	29.4	213	38.3	51.5
3	68	18.4	213	11.5	31.6	290	00.9	29.3	33	01.1	29.3	228	40.5	51.6
4	83	20.9	228	10.9	32.7	305	01.9	28.9	48	03.8	29.2	243	42.7	51.7
5	98	23.3	243	10.4	-13 33.8	320	02.9	+17 28.5	63	06.6	+12 29.1	258	44.9	-5 51.8
6	113	25.8	258	09.9	-13 34.9	335	04.0	+17 28.1	78	09.4	+12 29.0	273	47.0	-5 51.9
7	128	28.3	273	09.4	36.0	350	05.0	27.7	93	12.1	28.9	288	49.2	52.0
8	143	30.7	288	08.8	37.1	5	06.0	27.3	108	14.9	28.8	303	51.4	52.1
9	158	33.2	303	08.3	38.2	20	07.0	26.9	123	17.7	28.7	318	53.6	52.3
10	173	35.7	318	07.8	39.3	35	08.1	26.6	138	20.4	28.6	333	55.8	52.4
11	188	38.1	333	07.2	-13 40.4	50	09.1	+17 26.2	153	23.2	+12 28.5	348	57.9	-5 52.5
12	203	40.6	348	06.7	-13 41.5	65	10.1	+17 25.8	168	26.0	+12 28.4	4	00.1	-5 52.6
13	218	43.1	3	06.2	42.6	80	11.2	25.4	183	28.8	28.3	19	02.3	52.7
14	233	45.5	18	05.6	43.7	95	12.2	25.0	198	31.5	28.2	34	04.5	52.8
15	248	48.0	33	05.1	44.8	110	13.2	24.6	213	34.3	28.1	49	06.7	52.9
16	263	50.4	48	04.6	45.9	125	14.3	24.2	228	37.1	28.0	64	08.8	53.1
17	278	52.9	63	04.0	-13 47.0	140	15.3	+17 23.9	243	39.8	+12 27.9	79	11.0	-5 53.2
18	293	55.4	78	03.5	-13 48.1	155	16.3	+17 23.5	258	42.6	+12 27.8	94	13.2	-5 53.3
19	308	57.8	93	03.0	49.2	170	17.4	23.1	273	45.4	27.7	109	15.4	53.4
20	324	00.3	108	02.4	50.3	185	18.4	22.7	288	48.1	27.6	124	17.6	53.5
21	339	02.8	123	01.9	51.4	200	19.4	22.3	303	50.9	27.5	139	19.7	53.6
22	354	05.2	138	01.4	52.5	215	20.5	21.9	318	53.7	27.4	154	21.9	53.7
23	9	07.7	153	00.8	53.6	230	21.5	21.5	333	56.5	27.3	169	24.1	53.9
24	24	10.2	168	00.3	-13 54.7	245	22.5	+17 21.1	348	59.2	+12 27.2	184	26.3	-5 54.0
Dif	—		-5		-11		+10		-4		+28		-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 6			Edad: 18 ^d 5 PHE { 4 ^h : 54'6 12 ^h : 54'7 20 ^h : 54'9 PMG: 2 ^h 40 ^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	183	34.0	-8	40.4	321	26.5	+22	01.8	28	60 N	5	10	5	58	6	41	18 07 54
1	198	34.2		41.3	335	56.6 ¹¹¹		04.6	28	58	11	56		36	25	53	11 42 52
2	213	34.3		42.2	350	26.7 ¹¹¹		07.3	27	56	12	55		32	40	53	27 52
3	228	34.5		43.1	4	56.8 ¹¹¹		09.9	26	54	12	53		29	18	53	53
4	243	34.6		44.1	19	26.8 ¹¹⁰		12.4	25	52	12	52		26	19	04	53
5	258	34.7	-8	45.0	33	56.9 ¹¹¹	+22	14.8	24	50	5	13	5	50	6	23	19 15 52
6	273	34.9	-8	45.9	48	26.8 ¹⁰⁹	+22	17.1	23	45	5	13	5	47	6	16	19 36 52
7	288	35.0		46.8	62	56.8 ¹¹⁰		19.3	22	40	12	44		11	19	53	52
8	303	35.1		47.8	77	26.7 ¹⁰⁹		21.3	20	35	11	41		06	20	07	52
9	318	35.3		48.7	91	56.5 ¹⁰⁸		23.3	20	30	10	38	6	02	20	52	9 48 51
10	333	35.4		49.6	106	26.4 ¹⁰⁹		25.1	18	20	07	33	5	55	20	41	52
11	348	35.6	-8	50.5	120	56.2 ¹⁰⁸	+22	26.9	18	10 N	5	03	5	27	5	48	21 00 51
12	3	35.7	-8	51.4	135	26.0 ¹⁰⁸	+22	28.5	16	0	4	57	5	21	5	42	21 18 50
13	18	35.8		52.4	149	55.7 ¹⁰⁷		30.1	16	10 S	50	15		36	35	51	34 51
14	33	36.0		53.3	164	25.5 ¹⁰⁸		31.5	14	20	41	5	07	29	21	54	50
15	48	36.1		54.2	178	55.2 ¹⁰⁷		32.8	13	30	28	4	57	21	22	15	50
16	63	36.2		55.1	193	24.8 ¹⁰⁶		34.0	12	35	20	51		17	28	49	42 50
17	78	36.4	-8	56.0	207	54.5 ¹⁰⁷	+22	35.1	11	40	4	10	4	44	5	12	22 43 49
18	93	36.5	-8	57.0	222	24.1 ¹⁰⁶	+22	36.0	9	45	3	58	4	35	5	05	23 00 49
19	108	36.6		57.9	236	53.7 ¹⁰⁶		36.9	9	50	43	24	4	58	21	48	6 50 48
20	123	36.8		58.8	251	23.2 ¹⁰⁵		37.7	8	52	35	19		55	32	47	40 48
21	138	36.9	-8	59.7	265	52.7 ¹⁰⁵		38.3	6	54	27	14		51	43	47	29 47
22	153	37.0	-9	00.6	280	22.3 ¹⁰⁶		38.8	5	56	17	07		47	23	56	47
23	168	37.2		01.5	294	51.7 ¹⁰⁴		39.2	4	58	3	06	4	00	42	** ** *	6 01 47
24	183	37.3	-9	02.5	309	21.2 ¹⁰⁵	+22	39.5	3	60 S	2	52	3	52	4	37	** ** *

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 22 ^h 19 ^m 7		Mag: -3.8 PMG: 12 ^h 48 ^m			Mag: +1.2 PMG: 7 ^h 38 ^m			Mag: -2.9 PMG: 0 ^h 44 ^m			Mag: +0.7 PMG: 11 ^h 41 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	24	10.2	168	00.3	-13	54.7	245	22.5	+17	21.1	348	59.2	+12	27.2
1	39	12.6	182	59.8		55.7	260	23.6		20.8	4	02.0		27.1
2	54	15.1	197	59.2		56.8	275	24.6		20.4	19	04.8		26.9
3	69	17.6	212	58.7		57.9	290	25.6		20.0	34	07.6		26.8
4	84	20.0	227	58.2	-13	59.0	305	26.7		19.6	49	10.3		26.7
5	99	22.5	242	57.6	-14	00.1	320	27.7	+17	19.2	64	13.1	+12	26.6
6	114	24.9	257	57.1	-14	01.2	335	28.7	+17	18.8	79	15.9	+12	26.5
7	129	27.4	272	56.5		02.3	350	29.8		18.4	94	18.6		26.4
8	144	29.9	287	56.0		03.4	5	30.8		18.0	109	21.4		26.3
9	159	32.3	302	55.5		04.5	20	31.8		17.7	124	24.2		26.2
10	174	34.8	317	54.9		05.5	35	32.9		17.3	139	27.0		26.1
11	189	37.3	332	54.4	-14	06.6	50	33.9	+17	16.9	154	29.7	+12	26.0
12	204	39.7	347	53.8	-14	07.7	65	34.9	+17	16.5	169	32.5	+12	25.9
13	219	42.2	2	53.3		08.8	80	36.0		16.1	184	35.3		25.8
14	234	44.7	17	52.8		09.9	95	37.0		15.7	199	38.1		25.7
15	249	47.1	32	52.2		11.0	110	38.1		15.3	214	40.8		25.6
16	264	49.6	47	51.7		12.1	125	39.1		14.9	229	43.6		25.5
17	279	52.1	62	51.1	-14	13.1	140	40.1	+17	14.6	244	46.4	+12	25.4
18	294	54.5	77	50.6	-14	14.2	155	41.2	+17	14.2	259	49.1	+12	25.3
19	309	57.0	92	50.0		15.3	170	42.2		13.8	274	51.9		25.2
20	324	59.4	107	49.5		16.4	185	43.3		13.4	289	54.7		25.1
21	340	01.9	122	49.0		17.5	200	44.3		13.0	304	57.5		25.0
22	355	04.4	137	48.4		18.5	215	45.3		12.6	320	00.2		24.9
23	10	06.8	152	47.9		19.6	230	46.4		12.2	335	03.0		24.8
24	25	09.3	167	47.3	-14	20.7	245	47.4	+17	11.8	350	05.8	+12	24.6

Dif	—	-5	-11	+10	-4	+28	-1	+22	-1

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16'0			Edad: 19 ^d 5	PHE { 4 ^h : 55'0 12 ^h : 55'2 20 ^h : 55'4										
	PMG: 11 ^h 45 ^m 4					SD: 15'0			R°: 51 ^m						
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Civil	Náutico		Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	m	h m m	m
0	183	37.3	-9 02.5	309	21.2	+22 39.5	2	60 N	16 46	17 29	18 17	19 01 67		12 52 38	
1	198	37.4	03.4	323	50.6 ¹⁰⁴	39.7	2	58	51	31	16	18 66		34 40	
2	213	37.6	04.3	338	20.1 ¹⁰⁵	39.8	1	56	55	33	16	33 64		19 42	
3	228	37.7	05.2	352	49.5 ¹⁰⁴	39.8	0	54	16 59	35	16	46 63		12 06 43	
4	243	37.8	06.1	7	18.8 ¹⁰³	39.6	2	52	17 03	37	16	19 57 62		11 55 43	
5	258	37.9	-9 07.0	21	48.2 ¹⁰⁴	+22 39.4	2	50	17 06	17 38	18 16	20 07 61		11 45 44	
6	273	38.1	-9 08.0	36	17.5 ¹⁰³	+22 39.0	4	45	17 12	17 42	18 16	20 28 59		11 23 46	
7	288	38.2	08.9	50	46.8 ¹⁰³	38.5	5	40	18	46	17	45 58		11 06 47	
8	303	38.3	09.8	65	16.1 ¹⁰³	37.9	6	35	23	49	18	20 59 57		10 52 48	
9	318	38.5	10.7	79	45.4 ¹⁰³	37.2	7	30	28	52	20	21 12 55		39 49	
10	333	38.6	11.6	94	14.7 ¹⁰³	36.3	9	20	35	17 58	23	33 54		10 18 49	
11	348	38.7	-9 12.5	108	43.9 ¹⁰²	+22 35.4	9	10 N	17 42	18 03	18 28	21 51 53		9 59 51	
12	3	38.9	-9 13.4	123	13.1 ¹⁰²	+22 34.3	11	0	17 49	18 10	18 34	22 08 52		9 42 51	
13	18	39.0	14.4	137	42.4 ¹⁰³	33.1	12	10 S	17 55	17	42	26 50		25 51	
14	33	39.1	15.3	152	11.6 ¹⁰²	31.9	12	20	18 03	25	18 51	22 44 49		9 06 53	
15	48	39.2	16.2	166	40.7 ¹⁰¹	30.4	15	30	11	36	19 04	23 05 47		8 44 54	
16	63	39.4	17.1	181	09.9 ¹⁰²	28.9	15	35	16	42	13	17 46		32 54	
17	78	39.5	-9 18.0	195	39.1 ¹⁰²	+22 27.3	16	40	18 21	18 49	19 23	23 32 44		8 17 55	
18	93	39.6	-9 18.9	210	08.2 ¹⁰¹	+22 25.5	18	45	18 28	18 59	19 36	23 49 43		8 00 55	
19	108	39.8	19.8	224	37.4 ¹⁰²	23.7	18	50	36	19 10	19 52	*** ** *		7 38 57	
20	123	39.9	20.8	239	06.5 ¹⁰¹	21.7	20	52	40	15	20 00	*** ** *		28 57	
21	138	40.0	21.7	253	35.6 ¹⁰¹	19.6	21	54	44	21	09	*** ** *		16 58	
22	153	40.1	22.6	268	04.7 ¹⁰¹	17.4	22	56	48	28	19	*** ** *		7 03 59	
23	168	40.3	23.5	282	33.8 ¹⁰¹	15.0	24	58	53	36	31	0 12 46		6 48 59	
24	183	40.4	-9 24.4	297	02.9 ¹⁰¹	+22 12.6	24	60 S	18 59	19 45	20 45	0 30 45		6 29 61	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 22 ^h 15 ^m 7		Mag: -3.8 PMG: 12 ^h 49 ^m			Mag: +1.2 PMG: 7 ^h 36 ^m			Mag: -2.9 PMG: 0 ^h 39 ^m			Mag: +0.7 PMG: 11 ^h 37 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	
0	25	09.3	167	47.3	-14 20.7	245	47.4	+17 11.8	350	05.8	+12 24.6	185	18.6	-5 56.7	
1	40	11.8	182	46.8	21.8	260	48.5	11.4	5	08.6	24.5	200	20.8	56.8	
2	55	14.2	197	46.2	22.8	275	49.5	11.1	20	11.3	24.4	215	22.9	56.9	
3	70	16.7	212	45.7	23.9	290	50.5	10.7	35	14.1	24.3	230	25.1	57.0	
4	85	19.2	227	45.1	25.0	305	51.6	10.3	50	16.9	24.2	245	27.3	57.1	
5	100	21.6	242	44.6	-14 26.1	320	52.6	+17 09.9	65	19.7	+12 24.1	260	29.5	-5 57.3	
6	115	24.1	257	44.0	-14 27.1	335	53.7	+17 09.5	80	22.4	+12 24.0	275	31.7	-5 57.4	
7	130	26.5	272	43.5	28.2	350	54.7	09.1	95	25.2	23.9	290	33.8	57.5	
8	145	29.0	287	42.9	29.3	5	55.8	08.7	110	28.0	23.8	305	36.0	57.6	
9	160	31.5	302	42.4	30.4	20	56.8	08.3	125	30.8	23.7	320	38.2	57.7	
10	175	33.9	317	41.8	31.4	35	57.8	07.9	140	33.5	23.6	335	40.4	57.8	
11	190	36.4	332	41.3	-14 32.5	50	58.9	+17 07.5	155	36.3	+12 23.5	350	42.6	-5 57.9	
12	205	38.9	347	40.7	-14 33.6	65	59.9	+17 07.2	170	39.1	+12 23.4	5	44.7	-5 58.1	
13	220	41.3	2	40.2	34.7	81	01.0	06.8	185	41.9	23.3	20	46.9	58.2	
14	235	43.8	17	39.6	35.7	96	02.0	06.4	200	44.7	23.2	35	49.1	58.3	
15	250	46.3	32	39.0	36.8	111	03.1	06.0	215	47.4	23.1	50	51.3	58.4	
16	265	48.7	47	38.5	37.9	126	04.1	05.6	230	50.2	23.0	65	53.5	58.5	
17	280	51.2	62	37.9	-14 38.9	141	05.2	+17 05.2	245	53.0	+12 22.9	80	55.6	-5 58.6	
18	295	53.7	77	37.4	-14 40.0	156	06.2	+17 04.8	260	55.8	+12 22.7	95	57.8	-5 58.7	
19	310	56.1	92	36.8	41.1	171	07.2	04.4	275	58.5	22.6	111	00.0	58.8	
20	325	58.6	107	36.3	42.1	186	08.3	04.0	291	01.3	22.5	126	02.2	59.0	
21	341	01.0	122	35.7	43.2	201	09.3	03.6	306	04.1	22.4	141	04.4	59.1	
22	356	03.5	137	35.2	44.3	216	10.4	03.3	321	06.9	22.3	156	06.5	59.2	
23	11	06.0	152	34.6	45.3	231	11.4	02.9	336	09.6	22.2	171	08.7	59.3	
24	26	08.4	167	34.0	-14 46.4	246	12.5	+17 02.5	351	12.4	+12 22.1	186	10.9	-5 59.4	
Dif	—		-6	-11		+10	-4		+28	-1		+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 2			Edad: 20 ^d 5 PHE { 4 ^h : 55'6 12 ^h : 55'8 20 ^h : 56'0 PMG: 4 ^h 21 ^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	183	40.4	-9	297	02.9	+22	12.6	60 N	5	15	6	03	6	46	20
1	198	40.5		311	32.0 ¹⁰¹		10.0	58	15	6	01	41	24	75	13
2	213	40.6		326	01.0 ¹⁰⁰		07.3	56	16	5	59	37	37	73	13
3	228	40.8		340	30.1 ¹⁰¹		04.5	54	16		57	33	49	70	12
4	243	40.9		354	59.2 ¹⁰¹	+22	01.6	52	16		55	29	20	59	69
5	258	41.0	-9	9	28.2 ¹⁰⁰	+21	58.6	50	5	16	5	53	6	26	21
6	273	41.1	-9	23	57.3 ¹⁰¹	+21	55.5	45	5	15	5	49	6	19	21
7	288	41.3		38	26.3 ¹⁰⁰		52.2	40	14		46	13	43	62	11
8	303	41.4		52	55.3 ¹⁰⁰		48.8	35	13		42	08	21	56	60
9	318	41.5		67	24.4 ¹⁰¹		45.3	30	11		39	6	04	22	07
10	333	41.6		81	53.4 ¹⁰⁰		41.7	20	08		33	5	56	27	56
11	348	41.7	-9	96	22.5 ¹⁰¹	+21	38.0	10 N	5	03	5	27	5	49	22
12	3	41.9	-9	110	51.5 ¹⁰⁰	+21	34.2	0	4	57	5	21	5	42	23
13	18	42.0		125	20.5 ¹⁰⁰		30.2	10 S	49		14	35	16	49	10
14	33	42.1		139	49.5 ¹⁰⁰		26.2	20	39		5	05	28	33	46
15	48	42.2		154	18.6 ¹⁰¹		22.0	30	26		4	55	19	23	52
16	63	42.4		168	47.6 ¹⁰⁰		17.7	35	17		48	14	**	**	**
17	78	42.5	-9	183	16.6 ¹⁰⁰	+21	13.3	40	4	07	4	41	5	09	**
18	93	42.6	-9	197	45.7 ¹⁰¹	+21	08.8	45	3	54	4	31	5	02	**
19	108	42.7		212	14.7 ¹⁰⁰	+21	04.2	50	38		20	4	54	0	09
20	123	42.8		226	43.7 ¹⁰⁰	+20	59.4	52	30		15	50	19	40	35
21	138	43.0		241	12.8 ¹⁰¹		54.5	54	21		08	46	30	39	25
22	153	43.1		255	41.8 ¹⁰⁰		49.6	56	3	11	4	02	42	43	37
23	168	43.2		270	10.8 ¹⁰⁰		44.5	58	2	59	3	54	37	0	58
24	183	43.3	-9	284	39.9 ¹⁰¹	+20	39.3	60 S	2	44	3	45	4	31	1

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 22 ^h 11 ^m 8		Mag: -3.8 PMG: 12 ^h 50 ^m		Mag: +1.2 PMG: 7 ^h 35 ^m		Mag: -2.9 PMG: 0 ^h 35 ^m		Mag: +0.7 PMG: 11 ^h 34 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	26	08.4	167	34.0	-14	46.4	246	12.5	+17	02.5
1	41	10.9	182	33.5		47.4	261	13.5		02.1
2	56	13.4	197	32.9		48.5	276	14.6		01.7
3	71	15.8	212	32.4		49.6	291	15.6		01.3
4	86	18.3	227	31.8		50.6	306	16.7		00.9
5	101	20.8	242	31.2	-14	51.7	321	17.7	+17	00.5
6	116	23.2	257	30.7	-14	52.7	336	18.8	+17	00.1
7	131	25.7	272	30.1		53.8	351	19.8	+16	59.7
8	146	28.2	287	29.6		54.9	6	20.9		59.3
9	161	30.6	302	29.0		55.9	21	21.9		58.9
10	176	33.1	317	28.4		57.0	36	23.0		58.6
11	191	35.5	332	27.9	-14	58.0	51	24.0	+16	58.2
12	206	38.0	347	27.3	-14	59.1	66	25.1	+16	57.8
13	221	40.5	2	26.7	-15	00.1	81	26.1		57.4
14	236	42.9	17	26.2		01.2	96	27.2		57.0
15	251	45.4	32	25.6		02.3	111	28.2		56.6
16	266	47.9	47	25.0		03.3	126	29.3		56.2
17	281	50.3	62	24.5	-15	04.4	141	30.3	+16	55.8
18	296	52.8	77	23.9	-15	05.4	156	31.4	+16	55.4
19	311	55.3	92	23.3		06.5	171	32.4		55.0
20	326	57.7	107	22.8		07.5	186	33.5		54.6
21	342	00.2	122	22.2		08.6	201	34.6		54.2
22	357	02.7	137	21.6		09.6	216	35.6		53.8
23	12	05.1	152	21.1		10.7	231	36.7		53.5
24	27	07.6	167	20.5	-15	11.7	246	37.7	+16	53.1
Dif	—		-6		-11		+11		-4	

UT	SOL		 LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16:1		Edad: 21 ^d 5 PHE { 4 ^h : 56:3 12 ^h : 56:5 20 ^h : 56:8											
	PMG: 11 ^h 45 ^m 0		SD: 15:3		PMG: 5 ^h 12 ^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	
0	183	43.3	-9 46.2		284	39.9	+20 39.3	60 N	16 41	17 23	18 12	21 26 86	13 58 20	
1	198	43.4	47.1		299	08.9 ¹⁰⁰	34.0	53	58	46	26	11 39 82	45 23	
2	213	43.6	48.0		313	38.0 ¹⁰¹	28.5	55	56	50	28	11 50 79	33 26	
3	228	43.7	48.9		328	07.1 ¹⁰¹	23.0	55	54	55	31	11 21 59 77	23 28	
4	243	43.8	49.8		342	36.1 ¹⁰⁰	17.3	57	52	16 58	33	12 22 08 74	14 30	
5	258	43.9	-9 50.8		357	05.2 ¹⁰¹	+20 11.6	57	50	17 02	17 34	18 12 22 15 73	13 06 32	
6	273	44.0	-9 51.7		11	34.3 ¹⁰¹	+20 05.7	59	45	17 09	17 39	18 13 22 32 68	12 49 36	
7	288	44.1	52.6		26	03.3 ¹⁰⁰	+19 59.7	60	40	15	43	14 45 65	35 38	
8	303	44.3	53.5		40	32.4 ¹⁰¹	53.6	61	35	21	46	16 22 56 63	23 41	
9	318	44.4	54.4		55	01.5 ¹⁰¹	47.4	62	30	25	50	18 23 06 61	12 13 42	
10	333	44.5	55.3		69	30.6 ¹⁰¹	41.1	63	20	34	17 56	22 23 57	11 55 45	
11	348	44.6	-9 56.2		83	59.7 ¹⁰¹	+19 34.7	64	10 N	17 41	18 03	18 27 23 37 54	11 39 48	
12	3	44.7	-9 57.1		98	28.9 ¹⁰²	+19 28.1	66	0	17 48	18 09	18 34 23 51 51	11 24 51	
13	18	44.8	58.0		112	58.0 ¹⁰¹	21.5	66	10 S	17 56	17	42 *** ** *	11 09 54	
14	33	45.0	58.9		127	27.1 ¹⁰¹	14.7	68	20	18 03	26	18 52 *** ** *	10 53 57	
15	48	45.1	-9 59.8		141	56.3 ¹⁰²	07.9	68	30	12	37	19 06 *** ** *	35 60	
16	63	45.2	-10 00.7		156	25.4 ¹⁰¹	+19 00.9	70	35	18	44	15 0 03 42	24 62	
17	78	45.3	-10 01.6		170	54.6 ¹⁰²	+18 53.8	71	40	18 24	18 52	19 25 0 16 40	10 12 64	
18	93	45.4	-10 02.5		185	23.7 ¹⁰¹	+18 46.7	71	45	18 31	19 01	19 39 0 32 37	9 57 67	
19	108	45.5	03.4		199	52.9 ¹⁰²	39.4	73	50	39	13	19 56 50 35	39 70	
20	123	45.6	04.3		214	22.1 ¹⁰²	32.0	74	52	43	19	20 04 0 59 33	31 71	
21	138	45.8	05.2		228	51.3 ¹⁰²	24.5	75	54	47	26	14 1 09 31	21 74	
22	153	45.9	06.1		243	20.5 ¹⁰²	16.9	76	56	52	33	24 20 29	9 10 76	
23	168	46.0	07.0		257	49.7 ¹⁰²	09.1	78	58	18 58	41	37 33 26	8 58 79	
24	183	46.1	-10 07.9		272	18.9 ¹⁰²	+18 01.3	78	60 S	19 04	19 50	20 53 1 48 23	8 44 82	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG 22 ^h 07 ^m 9		Mag: -3.8 PMG: 12 ^h 51 ^m		Mag: +1.2 PMG: 7 ^h 33 ^m		Mag: -2.9 PMG: 0 ^h 31 ^m		Mag: +0.7 PMG: 11 ^h 30 ^m					
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	27	07.6	167	20.5	-15 11.7	246	37.7	+16 53.1	352	19.1	+12 19.6	187	03.2	-6 02.1
1	42	10.0	182	19.9	12.8	261	38.8	52.7	7	21.9	19.5	202	05.4	02.2
2	57	12.5	197	19.3	13.8	276	39.8	52.3	22	24.7	19.3	217	07.6	02.4
3	72	15.0	212	18.8	14.8	291	40.9	51.9	37	27.5	19.2	232	09.7	02.5
4	87	17.4	227	18.2	15.9	306	41.9	51.5	52	30.2	19.1	247	11.9	02.6
5	102	19.9	242	17.6	-15 16.9	321	43.0	+16 51.1	67	33.0	+12 19.0	262	14.1	-6 02.7
6	117	22.4	257	17.1	-15 18.0	336	44.1	+16 50.7	82	35.8	+12 18.9	277	16.3	-6 02.8
7	132	24.8	272	16.5	19.0	351	45.1	50.3	97	38.6	18.8	292	18.5	02.9
8	147	27.3	287	15.9	20.1	6	46.2	49.9	112	41.4	18.7	307	20.6	03.0
9	162	29.8	302	15.3	21.1	21	47.2	49.5	127	44.1	18.6	322	22.8	03.1
10	177	32.2	317	14.8	22.1	36	48.3	49.1	142	46.9	18.5	337	25.0	03.3
11	192	34.7	332	14.2	-15 23.2	51	49.3	+16 48.7	157	49.7	+12 18.4	352	27.2	-6 03.4
12	207	37.1	347	13.6	-15 24.2	66	50.4	+16 48.3	172	52.5	+12 18.3	7	29.4	-6 03.5
13	222	39.6	2	13.0	25.3	81	51.5	47.9	187	55.3	18.2	22	31.5	03.6
14	237	42.1	17	12.5	26.3	96	52.5	47.6	202	58.1	18.1	37	33.7	03.7
15	252	44.5	32	11.9	27.3	111	53.6	47.2	218	00.8	18.0	52	35.9	03.8
16	267	47.0	47	11.3	28.4	126	54.6	46.8	233	03.6	17.8	67	38.1	03.9
17	282	49.5	62	10.7	-15 29.4	141	55.7	+16 46.4	248	06.4	+12 17.7	82	40.3	-6 04.0
18	297	51.9	77	10.1	-15 30.5	156	56.8	+16 46.0	263	09.2	+12 17.6	97	42.4	-6 04.2
19	312	54.4	92	09.6	31.5	171	57.8	45.6	278	12.0	17.5	112	44.6	04.3
20	327	56.9	107	09.0	32.5	186	58.9	45.2	293	14.7	17.4	127	46.8	04.4
21	342	59.3	122	08.4	33.6	201	59.9	44.8	308	17.5	17.3	142	49.0	04.5
22	358	01.8	137	07.8	34.6	217	01.0	44.4	323	20.3	17.2	157	51.2	04.6
23	13	04.3	152	07.2	35.6	232	02.1	44.0	338	23.1	17.1	172	53.3	04.7
24	28	06.7	167	06.6	-15 36.7	247	03.1	+16 43.6	353	25.9	+12 17.0	187	55.5	-6 04.8
Dif	—		-6		-10	+11		-4	+28		-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 44 ^m 8			Edad: 22 ^d 5 PHE { 4 ^h : 57:1 12 ^h : 57:3 20 ^h : 57:6 SD: 15:5 PMG: 6 ^h 03 ^m R°: 51 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	
0	183	46.1	-10	07.9	272	18.9	+18	01.3	60 N	5	20	6	08	6	51	22	52
1	198	46.2		08.8	286	48.1	+17	53.4	58		20		05	45	23	01	
2	213	46.3		09.7	301	17.4		45.4	56		19		03	41	09	82	
3	228	46.4		10.6	315	46.6		37.2	54		19	6	00	36	16	80	
4	243	46.5		11.5	330	15.9		29.0	52		19	5	58	33	22	78	
5	258	46.7	-10	12.4	344	45.2	+17	20.7	50	5	19	5	56	6	29	23	28
6	273	46.8	-10	13.3	359	14.4	+17	12.2	45	5	18	5	52	6	22	23	40
7	288	46.9		14.2	13	43.7	+17	03.7	40		16		48	15	50	68	
8	303	47.0		15.1	28	13.0	+16	55.1	35		15		44	10	23	59	
9	318	47.1		16.0	42	42.3		46.3	30		13		41	6	05	**	
10	333	47.2		16.9	57	11.6		37.5	20		08		34	5	56	**	
11	348	47.3	-10	17.8	71	40.9	+16	28.6	10 N	5	03	5	27	5	49	**	
12	3	47.4	-10	18.7	86	10.3	+16	19.5	0	4	56	5	20	5	41	**	
13	18	47.5		19.6	100	39.6		10.4	10 S		48		13	34	0	05	
14	33	47.6		20.5	115	09.0	+16	01.2	20		37		04	26	19	45	
15	48	47.8		21.4	129	38.3	+15	51.8	30		23	4	53	17	36	41	
16	63	47.9		22.3	144	07.7		42.4	35		15		46	12	45	39	
17	78	48.0	-10	23.2	158	37.1	+15	32.9	40	4	04	4	38	5	06	0	56
18	93	48.1	-10	24.1	173	06.4	+15	23.3	45	3	51	4	28	4	59	1	09
19	108	48.2		25.0	187	35.8		13.6	50		33		16	50	25	29	
20	123	48.3		25.9	202	05.2	+15	03.8	52		25		10	46	32	28	
21	138	48.4		26.7	216	34.6	+14	53.9	54		16	4	03	42	40	26	
22	153	48.5		27.6	231	04.6		43.9	56	3	05	3	56	37	49	23	
23	168	48.6		28.5	245	33.5		33.8	58	2	52		48	31	1	59	
24	183	48.7	-10	29.4	260	02.9	+14	23.7	60 S	2	36	3	39	4	25	2	11

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 22 ^h 03 ^m 9		Mag: -3.8 PMG: 12 ^h 52 ^m		Mag: +1.2 PMG: 7 ^h 31 ^m		Mag: -2.9 PMG: 0 ^h 26 ^m		Mag: +0.7 PMG: 11 ^h 27 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	28	06.7	167	06.6	-15	36.7	247	03.1	+16	43.6
1	43	09.2	182	06.1		37.7	262	04.2		43.2
2	58	11.6	197	05.5		38.7	277	05.3		42.8
3	73	14.1	212	04.9		39.7	292	06.3		42.4
4	88	16.6	227	04.3		40.8	307	07.4		42.0
5	103	19.0	242	03.7	-15	41.8	322	08.4	+16	41.6
6	118	21.5	257	03.1	-15	42.8	337	09.5	+16	41.2
7	133	24.0	272	02.6		43.9	352	10.6		40.8
8	148	26.4	287	02.0		44.9	7	11.6		40.5
9	163	28.9	302	01.4		45.9	22	12.7		40.1
10	178	31.4	317	00.8		46.9	37	13.8		39.7
11	193	33.8	332	00.2	-15	48.0	52	14.8	+16	39.3
12	208	36.3	346	59.6	-15	49.0	67	15.9	+16	38.9
13	223	38.8	1	59.0		50.0	82	17.0		38.5
14	238	41.2	16	58.4		51.0	97	18.0		38.1
15	253	43.7	31	57.9		52.1	112	19.1		37.7
16	268	46.1	46	57.3		53.1	127	20.2		37.3
17	283	48.6	61	56.7	-15	54.1	142	21.2	+16	36.9
18	298	51.1	76	56.1	-15	55.1	157	22.3	+16	36.5
19	313	53.5	91	55.5		56.1	172	23.4		36.1
20	328	56.0	106	54.9		57.1	187	24.4		35.7
21	343	58.5	121	54.3		58.2	202	25.5		35.3
22	359	00.9	136	53.7	-15	59.2	217	26.6		34.9
23	14	03.4	151	53.1	-16	00.2	232	27.6		34.5
24	29	05.9	166	52.5	-16	01.2	247	28.7	+16	34.1
Dif	—		-6	-10		+11	-4		+28	-1

UT	SOL				☾ LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna				
	SD: 16:1 PMG: 11 ^h 44 ^m 7				Edad: 23 ^d 5 PHE { 4 ^h : 57:9 12 ^h : 58:2 20 ^h : 58:6 Rº: 50 ^m															
	hG ☉		Dec		hG ☾		Dif				Dec		Dif		Civil		Náutico		Hora Rº	
h	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	h	m
0	183	48.7	-10	29.4	260	02.9	+14	23.7	60 N	16 35	17 18	18 06	** ** *	** ** *	14 33	12				
1	198	48.8		30.3	274	32.3 ¹⁰⁴		13.4 ¹⁰³	58	41	21	06	** ** *	** ** *	26	16				
2	213	48.9		31.2	289	01.8 ¹⁰⁵	+14	03.1 ¹⁰³	56	46	24	07	** ** *	** ** *	20	18				
3	228	49.0		32.1	303	31.2 ¹⁰⁴	+13	52.6 ¹⁰⁵	54	50	26	07	** ** *	** ** *	15	20				
4	243	49.1		33.0	318	00.7 ¹⁰⁵		42.1 ¹⁰⁵	52	54	29	08	** ** *	** ** *	10	23				
5	258	49.2	-10	33.9	332	30.1 ¹⁰⁴	+13	31.5 ¹⁰⁶	50	16 58	17 31	18 08	** ** *	** ** *	14 06	24				
6	273	49.3	-10	34.8	346	59.6 ¹⁰⁵	+13	20.8 ¹⁰⁷	45	17 06	17 36	18 10	** ** *	** ** *	13 56	29				
7	288	49.4		35.7	1	29.0 ¹⁰⁴	+13	10.0 ¹⁰⁸	40	12	40	11	** ** *	** ** *	48	32				
8	303	49.5		36.6	15	58.5 ¹⁰⁵	+12	59.2 ¹⁰⁸	35	18	44	13	** ** *	** ** *	41	35				
9	318	49.7		37.5	30	28.0 ¹⁰⁵		48.2 ¹¹⁰	30	23	48	16	0 07	62	35	38				
10	333	49.8		38.4	44	57.4 ¹⁰⁴		37.2 ¹¹⁰	20	32	17 55	21	20	58	24	43				
11	348	49.9	-10	39.2	59	26.9 ¹⁰⁵	+12	26.1 ¹¹¹	10 N	17 40	18 02	18 26	0 31	54	13 15	47				
12	3	50.0	-10	40.1	73	56.4 ¹⁰⁵	+12	14.9 ¹¹²	0	17 48	18 09	18 34	0 42	50	13 06	50				
13	18	50.1		41.0	88	25.9 ¹⁰⁵	+12	03.6 ¹¹³	10 S	17 56	17	42	0 52	47	12 57	54				
14	33	50.2		41.9	102	55.3 ¹⁰⁴	+11	52.2 ¹¹⁴	20	18 04	27	18 53	1 04	43	47	59				
15	48	50.3		42.8	117	24.8 ¹⁰⁵		40.8 ¹¹⁴	30	14	38	19 08	17	38	36	63				
16	63	50.4		43.7	131	54.3 ¹⁰⁵		29.3 ¹¹⁵	35	19	46	17	24	36	30	66				
17	78	50.5	-10	44.6	146	23.8 ¹⁰⁵	+11	17.7 ¹¹⁶	40	18 26	18 54	19 28	1 32	34	12 23	69				
18	93	50.6	-10	45.5	160	53.3 ¹⁰⁵	+11	06.0 ¹¹⁷	45	18 33	19 04	19 42	1 42	30	12 14	73				
19	108	50.7		46.4	175	22.7 ¹⁰⁴	+10	54.3 ¹¹⁷	50	42	17	20 00	1 54	26	12 04	77				
20	123	50.8		47.3	189	52.2 ¹⁰⁵		42.5 ¹¹⁸	52	47	23	09	2 00	24	11 59	79				
21	138	50.9		48.1	204	21.7 ¹⁰⁵		30.6 ¹¹⁹	54	51	30	19	06	21	53	82				
22	153	51.0		49.0	218	51.2 ¹⁰⁵		18.6 ¹²⁰	56	18 57	37	30	12	20	47	85				
23	168	51.1		49.9	233	20.6 ¹⁰⁴	+10	06.6 ¹²⁰	58	19 02	46	20 44	20	16	41	87				
24	183	51.2	-10	50.8	247	50.1 ¹⁰⁵	+9	54.5 ¹²¹	60 S	19 09	19 56	21 00	2 28	14	11 33	91				
UT	ARIES				VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 22 ^h 00 ^m 0				Mag: -3.8 PMG: 12 ^h 53 ^m				Mag: +1.2 PMG: 7 ^h 30 ^m				Mag: -2.9 PMG: 0 ^h 22 ^m				Mag: +0.7 PMG: 11 ^h 23 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♎		Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	29	05.9	166	52.5	-16	01.2	247	28.7	+16	34.1	354	32.7	+12	14.4	188	47.8	-6	07.5		
1	44	08.3	181	51.9		02.2	262	29.8		33.7	9	35.5		14.3	203	50.0		07.7		
2	59	10.8	196	51.3		03.2	277	30.9		33.3	24	38.3		14.2	218	52.2		07.8		
3	74	13.2	211	50.7		04.3	292	31.9		32.9	39	41.0		14.1	233	54.4		07.9		
4	89	15.7	226	50.1		05.3	307	33.0		32.5	54	43.8		14.0	248	56.6		08.0		
5	104	18.2	241	49.5	-16	06.3	322	34.1	+16	32.1	69	46.6	+12	13.9	263	58.7	-6	08.1		
6	119	20.6	256	48.9	-16	07.3	337	35.1	+16	31.7	84	49.4	+12	13.7	279	00.9	-6	08.2		
7	134	23.1	271	48.3		08.3	352	36.2		31.3	99	52.2		13.6	294	03.1		08.3		
8	149	25.6	286	47.7		09.3	7	37.3		30.9	114	55.0		13.5	309	05.3		08.4		
9	164	28.0	301	47.1		10.3	22	38.4		30.6	129	57.7		13.4	324	07.5		08.5		
10	179	30.5	316	46.5		11.3	37	39.4		30.2	145	00.5		13.3	339	09.6		08.7		
11	194	33.0	331	45.9	-16	12.3	52	40.5	+16	29.8	160	03.3	+12	13.2	354	11.8	-6	08.8		
12	209	35.4	346	45.3	-16	13.3	67	41.6	+16	29.4	175	06.1	+12	13.1	9	14.0	-6	08.9		
13	224	37.9	1	44.7		14.4	82	42.6		29.0	190	08.9		13.0	24	16.2		09.0		
14	239	40.4	16	44.1		15.4	97	43.7		28.6	205	11.7		12.9	39	18.4		09.1		
15	254	42.8	31	43.5		16.4	112	44.8		28.2	220	14.5		12.8	54	20.5		09.2		
16	269	45.3	46	42.9		17.4	127	45.9		27.8	235	17.3		12.7	69	22.7		09.3		
17	284	47.7	61	42.3	-16	18.4	142	46.9	+16	27.4	250	20.0	+12	12.6	84	24.9	-6	09.4		
18	299	50.2	76	41.7	-16	19.4	157	48.0	+16	27.0	265	22.8	+12	12.4	99	27.1	-6	09.6		
19	314	52.7	91	41.1		20.4	172	49.1		26.6	280	25.6		12.3	114	29.3		09.7		
20	329	55.1	106	40.5		21.4	187	50.2		26.2	295	28.4		12.2	129	31.4		09.8		
21	344	57.6	121	39.9		22.4	202	51.2		25.8	310	31.2		12.1	144	33.6		09.9		
22	0	00.1	136	39.3		23.4	217	52.3		25.4	325	34.0		12.0	159	35.8		10.0		
23	15	02.5	151	38.7		24.4	232	53.4		25.0	340	36.8		11.9	174	38.0		10.1		
24	30	05.0	166	38.1	-16	25.4	247	54.5	+16	24.6	355	39.5	+12	11.8	189	40.2	-6	10.2		
Dif	—		-6		-10		+11		-4		+28		-1		+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: 24 ^d 5 PHE { SD: 16'0 PMG: 7 ^h 44 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m		
0	183	51.2	-10	50.8	247	50.1	+9	54.5	60 N	5	24	6	13	6	56	0	21	
1	198	51.3		51.7	262	19.6 ¹⁰⁵		42.3 ¹²²	58		24		09	50	26	89		
2	213	51.4		52.6	276	49.0 ¹⁰⁴		30.0 ¹²³	56		23		07	45	31	86		
3	228	51.5		53.5	291	18.5 ¹⁰⁵		17.7 ¹²³	54		23		04	40	36	83		
4	243	51.6		54.4	305	47.9 ¹⁰⁴	+9	05.3 ¹²⁴	52		22		6	02	36	40		
5	258	51.7	-10	55.2	320	17.3 ¹⁰⁴	+8	52.9 ¹²⁴	50	5	22	5	59	6	32	0	44	
6	273	51.7	-10	56.1	334	46.8 ¹⁰⁵	+8	40.4 ¹²⁵	45	5	20	5	54	6	24	0	52	
7	288	51.8		57.0	349	16.2 ¹⁰⁴		27.8 ¹²⁶	40		18		50	17	0	58		
8	303	51.9		57.9	3	45.6 ¹⁰⁴		15.1 ¹²⁷	35		16		46	11	1	04		
9	318	52.0		58.8	18	15.0 ¹⁰⁴	+8	02.4 ¹²⁷	30		14		42	6	06	09		
10	333	52.1	-10	59.7	32	44.4 ¹⁰⁴	+7	49.7 ¹²⁷	20		09		35	5	57	18		
11	348	52.2	-11	00.6	47	13.8 ¹⁰⁴	+7	36.8 ¹²⁹	10 N	5	03	5	28	5	49	1	25	
12	3	52.3	-11	01.4	61	43.2 ¹⁰⁴	+7	23.9 ¹²⁹	0	4	56	5	20	5	41	1	32	
13	18	52.4		02.3	76	12.5 ¹⁰³	+7	11.0 ¹²⁹	10 S		47		12	33	39	47		
14	33	52.5		03.2	90	41.8 ¹⁰³	+6	58.0 ¹³⁰	20		36		5	02	25	47		
15	48	52.6		04.1	105	11.2 ¹⁰⁴		44.9 ¹³¹	30		21		4	50	15	1		
16	63	52.7		05.0	119	40.5 ¹⁰³		31.8 ¹³¹	35		12		43	09	2	00		
17	78	52.8	-11	05.9	134	09.8 ¹⁰³	+6	18.7 ¹³¹	40	4	01	4	35	5	03	2	06	
18	93	52.9	-11	06.7	148	39.1 ¹⁰³	+6	05.4 ¹³³	45	3	47	4	24	4	55	2	12	
19	108	53.0		07.6	163	08.3 ¹⁰²	+5	52.2 ¹³²	50		29		11	46	20	24		
20	123	53.1		08.5	177	37.6 ¹⁰³		38.9 ¹³³	52		20		4	05	42	24		
21	138	53.2		09.4	192	06.8 ¹⁰²		25.5 ¹³⁴	54	3	10	3	59	37	27	20		
22	153	53.3		10.3	206	36.0 ¹⁰²	+5	12.1 ¹³⁴	56	2	58		51	32	32	17		
23	168	53.3		11.1	221	05.2 ¹⁰²	+4	58.6 ¹³⁵	58		44		42	26	36	15		
24	183	53.4	-11	12.0	235	34.4 ¹⁰²	+4	45.1 ¹³⁵	60 S	2	28	3	32	4	19	2	42	
UT	ARIES		VENUS			MARTE			JÚPITER				SATURNO					
	PMG: 21 ^h 56 ^m 1		Mag: -3.8 PMG: 12 ^h 54 ^m			Mag: +1.2 PMG: 7 ^h 28 ^m			Mag: -2.9 PMG: 0 ^h 17 ^m				Mag: +0.7 PMG: 11 ^h 20 ^m					
	hG ♈		hG ♀ Dec			hG ♂ Dec			hG ♃ Dec				hG ♄ Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	30	05.0	166	38.1	-16	25.4	247	54.5	+16	24.6	355	39.5	+12	11.8	189	40.2		
1	45	07.5	181	37.5		26.4	262	55.6		24.2	10	42.3		11.7	204	42.3		
2	60	09.9	196	36.9		27.4	277	56.6		23.8	25	45.1		11.6	219	44.5		
3	75	12.4	211	36.3		28.4	292	57.7		23.4	40	47.9		11.5	234	46.7		
4	90	14.9	226	35.7		29.4	307	58.8		23.0	55	50.7		11.4	249	48.9		
5	105	17.3	241	35.0	-16	30.4	322	59.9	+16	22.6	70	53.5	+12	11.3	264	51.1		
6	120	19.8	256	34.4	-16	31.3	338	00.9	+16	22.2	85	56.3	+12	11.1	279	53.2		
7	135	22.2	271	33.8		32.3	353	02.0		21.8	100	59.0		11.0	294	55.4		
8	150	24.7	286	33.2		33.3	8	03.1		21.4	116	01.8		10.9	309	57.6		
9	165	27.2	301	32.6		34.3	23	04.2		21.0	131	04.6		10.8	324	59.8		
10	180	29.6	316	32.0		35.3	38	05.3		20.6	146	07.4		10.7	340	02.0		
11	195	32.1	331	31.4	-16	36.3	53	06.3	+16	20.2	161	10.2	+12	10.6	355	04.1		
12	210	34.6	346	30.8	-16	37.3	68	07.4	+16	19.8	176	13.0	+12	10.5	10	06.3		
13	225	37.0	1	30.2		38.3	83	08.5		19.4	191	15.8		10.4	25	08.5		
14	240	39.5	16	29.5		39.3	98	09.6		19.0	206	18.6		10.3	40	10.7		
15	255	42.0	31	28.9		40.3	113	10.7		18.6	221	21.3		10.2	55	12.9		
16	270	44.4	46	28.3		41.2	128	11.7		18.2	236	24.1		10.1	70	15.0		
17	285	46.9	61	27.7	-16	42.2	143	12.8	+16	17.8	251	26.9	+12	09.9	85	17.2		
18	300	49.3	76	27.1	-16	43.2	158	13.9	+16	17.4	266	29.7	+12	09.8	100	19.4		
19	315	51.8	91	26.5		44.2	173	15.0		17.0	281	32.5		09.7	115	21.6		
20	330	54.3	106	25.8		45.2	188	16.1		16.6	296	35.3		09.6	130	23.8		
21	345	56.7	121	25.2		46.2	203	17.2		16.2	311	38.1		09.5	145	25.9		
22	0	59.2	136	24.6		47.2	218	18.2		15.8	326	40.9		09.4	160	28.1		
23	16	01.7	151	24.0		48.1	233	19.3		15.4	341	43.7		09.3	175	30.3		
24	31	04.1	166	23.4	-16	49.1	248	20.4	+16	15.0	356	46.4	+12	09.2	190	32.5		
Dif	—		-6			-10	+11		-4		+28		-1		+22		-	

UT	SOL			☉ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16:1 PMG: 11 ^h 44 ^m 4			Edad: 25 ^d 5 PHE { 4 ^h : 59'8 12 ^h : 60'0 20 ^h : 60'3 R°: 53 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	h m	h m	h m	h m	h m	h m	h m	h m
0	183	53.4	-11	12.0	235	34.4	+4 45.1	60 N	16 29	17 13	18 01	1 53 95	14 56 12		
1	198	53.5		12.9	250	03.6 ¹⁰²	31.5 ¹³⁶	58	35	16	02	55 92	56 14		
2	213	53.6		13.8	264	32.7 ¹⁰¹	18.0 ¹³⁵	56	41	19	02	57 89	55 17		
3	228	53.7		14.7	279	01.8 ¹⁰¹	+4 04.3 ¹³⁷	54	46	22	03	1 59 86	55 19		
4	243	53.8		15.5	293	30.9 ¹⁰¹	+3 50.6 ¹³⁷	52	50	25	04	2 01 83	54 22		
5	258	53.9	-11	16.4	307	59.9 ¹⁰⁰	+3 36.9 ¹³⁷	50	16 54	17 27	18 05	2 02 82	14 54 24		
6	273	54.0	-11	17.3	322	29.0 ¹⁰¹	+3 23.2 ¹³⁷	45	17 02	17 32	18 07	2 06 76	14 53 28		
7	288	54.1		18.2	336	58.0 ¹⁰⁰	+3 09.4 ¹³⁸	40	10	37	09	09 72	52 32		
8	303	54.2		19.1	351	27.0 ¹⁰⁰	+2 55.6 ¹³⁸	35	16	42	11	11 69	51 36		
9	318	54.2		19.9	5	55.9 ⁹⁹	41.7 ¹³⁹	30	21	46	14	13 66	51 38		
10	333	54.3		20.8	20	24.8 ⁹⁹	27.8 ¹³⁹	20	31	17 53	19	17 61	50 43		
11	348	54.4	-11	21.7	34	53.7 ⁹⁹	+2 13.9 ¹³⁹	10 N	17 40	18 01	18 26	2 20 56	14 49 48		
12	3	54.5	-11	22.6	49	22.6 ⁹⁹	+2 00.0 ¹³⁹	0	17 48	18 09	18 33	2 23 52	14 48 52		
13	18	54.6		23.4	63	51.4 ⁹⁸	+1 46.0 ¹⁴⁰	10 S	17 56	17	43	26 48	47 57		
14	33	54.7		24.3	78	20.2 ⁹⁸	32.0 ¹⁴⁰	20	18 05	28	18 54	30 43	46 61		
15	48	54.8		25.2	92	49.0 ⁹⁸	18.0 ¹⁴⁰	30	15	40	19 09	33 38	44 67		
16	63	54.9		26.1	107	17.7 ⁹⁷	+1 03.9 ¹⁴¹	35	21	48	19	36 35	44 69		
17	78	54.9	-11	27.0	121	46.4 ⁹⁷	+0 49.8 ¹⁴¹	40	18 28	18 56	19 31	2 38 32	14 43 73		
18	93	55.0	-11	27.8	136	15.1 ⁹⁷	+0 35.7 ¹⁴¹	45	18 36	19 07	19 45	2 41 28	14 42 77		
19	108	55.1		28.7	150	43.7 ⁹⁶	21.6 ¹⁴¹	50	46	21	20 04	44 24	40 83		
20	123	55.2		29.6	165	12.3 ⁹⁶	+0 07.5 ¹⁴¹	52	50	27	13	46 21	40 84		
21	138	55.3		30.5	179	40.9 ⁹⁶	-0 06.6 ¹⁴¹	54	18 55	34	24	47 20	39 87		
22	153	55.4		31.3	194	09.4 ⁹⁵	20.8 ¹⁴²	56	19 01	42	36	49 17	39 89		
23	168	55.5		32.2	208	37.9 ⁹⁵	35.0 ¹⁴²	58	07	19 51	20 51	51 14	38 93		
24	183	55.5	-11	33.1	223	06.3 ⁹⁴	-0 49.2 ¹⁴²	60 S	19 14	20 02	21 08	2 53 12	14 37 96		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 21 ^h 52 ^m 1		Mag: -3.8 PMG: 12 ^h 55 ^m		Mag: +1.2 PMG: 7 ^h 26 ^m		Mag: -2.9 PMG: 0 ^h 13 ^m		Mag: +0.7 PMG: 11 ^h 16 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	31	04.1	166	23.4	-16	49.1	248	20.4	+16	15.0
1	46	06.6	181	22.7		50.1	263	21.5		14.6
2	61	09.1	196	22.1		51.1	278	22.6		14.2
3	76	11.5	211	21.5		52.1	293	23.7		13.8
4	91	14.0	226	20.9		53.0	308	24.8		13.4
5	106	16.5	241	20.3	-16	54.0	323	25.8	+16	13.0
6	121	18.9	256	19.6	-16	55.0	338	26.9	+16	12.6
7	136	21.4	271	19.0		56.0	353	28.0		12.2
8	151	23.8	286	18.4		56.9	8	29.1		11.8
9	166	26.3	301	17.8		57.9	23	30.2		11.4
10	181	28.8	316	17.1		58.9	38	31.3		11.0
11	196	31.2	331	16.5	-16	59.9	53	32.4	+16	10.6
12	211	33.7	346	15.9	-17	00.8	68	33.4	+16	10.2
13	226	36.2	1	15.3		01.8	83	34.5		09.8
14	241	38.6	16	14.6		02.8	98	35.6		09.4
15	256	41.1	31	14.0		03.7	113	36.7		09.0
16	271	43.6	46	13.4		04.7	128	37.8		08.6
17	286	46.0	61	12.7	-17	05.7	143	38.9	+16	08.2
18	301	48.5	76	12.1	-17	06.6	158	40.0	+16	07.8
19	316	50.9	91	11.5		07.6	173	41.1		07.4
20	331	53.4	106	10.9		08.6	188	42.2		07.0
21	346	55.9	121	10.2		09.5	203	43.3		06.6
22	1	58.3	136	09.6		10.5	218	44.3		06.2
23	17	00.8	151	09.0		11.5	233	45.4		05.8
24	32	03.3	166	08.3	-17	12.4	248	46.5	+16	05.4
Dif	—		-6		-10		+11		-4	

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: 26 ^d 5 PHE { 4 ^h : 60'5 12 ^h : 60'8 20 ^h : 60'9 SD: 16'5 PMG: 9 ^h 28 ^m R°: 54 ^m												
	hG ☉		Dec		hG ☾ Dif		Dec Dif			Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	183	55.5	-11	33.1	223	06.3	-0	49.2	60 N	5	29	6	17	7	01	3	28
1	198	55.6		33.9	237	34.7	94	-1	03.4 ¹⁴²	58	28	14	6	55	27	94	10
2	213	55.7		34.8	252	03.1	94		17.6 ¹⁴²	56	27	11	49	26	91	12	19
3	228	55.8		35.7	266	31.4	93		31.8 ¹⁴²	54	26	08	44	25	88	14	22
4	243	55.9		36.6	280	59.7	93	-1	46.0 ¹⁴²	52	26	05	40	24	86	16	24
5	258	56.0	-11	37.4	295	27.9	92	-2	00.2 ¹⁴²	50	5	25	6	02	3	24	26
6	273	56.0	-11	38.3	309	56.1	92	-2	14.5 ¹⁴³	45	5	23	5	57	3	22	31
7	288	56.1		39.2	324	24.3	92		28.7 ¹⁴²	40	20	52	20	21	75	24	35
8	303	56.2		40.0	338	52.3	90		42.9 ¹⁴²	35	18	47	13	20	71	27	38
9	318	56.3		40.9	353	20.4	91	-2	57.1 ¹⁴²	30	15	43	6	08	19	68	29
10	333	56.4		41.8	7	48.4	90	-3	11.3 ¹⁴²	20	10	35	5	58	18	62	33
11	348	56.4	-11	42.7	22	16.3	89	-3	25.5 ¹⁴²	10 N	5	03	5	28	3	16	50
12	3	56.5	-11	43.5	36	44.2	89	-3	39.8 ¹⁴³	0	4	55	5	20	3	15	55
13	18	56.6		44.4	51	12.1	89	-3	53.9 ¹⁴¹	10 S	46	11	32	14	49	44	59
14	33	56.7		45.3	65	39.9	88	-4	08.1 ¹⁴²	20	34	5	01	23	13	45	64
15	48	56.8		46.1	80	07.7	88		22.3 ¹⁴²	30	19	4	48	13	11	40	69
16	63	56.8		47.0	94	35.4	87		36.4 ¹⁴¹	35	4	09	41	07	11	36	72
17	78	56.9	-11	47.9	109	03.0	86	-4	50.6 ¹⁴²	40	3	57	4	32	3	10	76
18	93	57.0	-11	48.7	123	30.6	86	-5	04.7 ¹⁴¹	45	3	43	4	21	4	52	80
19	108	57.1		49.6	137	58.1	85		18.8 ¹⁴¹	50	24	07	42	08	25	15	84
20	123	57.2		50.5	152	25.6	85		32.9 ¹⁴¹	52	15	4	01	37	07	23	87
21	138	57.2		51.3	166	53.0	84	-5	46.9 ¹⁴⁰	54	3	04	3	54	07	20	90
22	153	57.3		52.2	181	20.4	84	-6	01.0 ¹⁴¹	56	2	52	46	27	06	18	93
23	168	57.4		53.1	195	47.7	83		15.0 ¹⁴⁰	58	37	36	21	05	16	11	95
24	183	57.5	-11	53.9	210	15.0	83	-6	28.9 ¹³⁹	60 S	2	19	3	26	3	05	99

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 21 ^h 48 ^m 2		Mag: -3.8 PMG: 12 ^h 56 ^m		Mag: +1.2 PMG: 7 ^h 24 ^m		Mag: -2.9 PMG: 0 ^h 08 ^m		Mag: +0.7 PMG: 11 ^h 13 ^m	
	hG ♈		hG ♀ Dec		hG ♂ Dec		hG ♃ Dec		hG ♄ Dec	
h	°	'	°	'	°	'	°	'	°	'
0	32	03.3	166	08.3	-17	12.4	248	46.5	+16	05.4
1	47	05.7	181	07.7		13.4	263	47.6		05.0
2	62	08.2	196	07.1		14.3	278	48.7		04.6
3	77	10.7	211	06.4		15.3	293	49.8		04.2
4	92	13.1	226	05.8		16.3	308	50.9		03.8
5	107	15.6	241	05.2	-17	17.2	323	52.0	+16	03.4
6	122	18.1	256	04.5	-17	18.2	338	53.1	+16	03.0
7	137	20.5	271	03.9		19.1	353	54.2		02.6
8	152	23.0	286	03.3		20.1	8	55.3		02.2
9	167	25.4	301	02.6		21.1	23	56.4		01.8
10	182	27.9	316	02.0		22.0	38	57.5		01.4
11	197	30.4	331	01.3	-17	23.0	53	58.6	+16	01.0
12	212	32.8	346	00.7	-17	23.9	68	59.7	+16	00.6
13	227	35.3	1	00.1		24.9	84	00.8	+16	00.2
14	242	37.8	15	59.4		25.8	99	01.8	+15	59.8
15	257	40.2	30	58.8		26.8	114	02.9		59.4
16	272	42.7	45	58.1		27.7	129	04.0		59.0
17	287	45.2	60	57.5	-17	28.7	144	05.1	+15	58.6
18	302	47.6	75	56.9	-17	29.6	159	06.2	+15	58.2
19	317	50.1	90	56.2		30.6	174	07.3		57.8
20	332	52.6	105	55.6		31.5	189	08.4		57.4
21	347	55.0	120	54.9		32.5	204	09.5		57.0
22	2	57.5	135	54.3		33.4	219	10.6		56.6
23	17	59.9	150	53.6		34.3	234	11.7		56.2
24	33	02.4	165	53.0	-17	35.3	249	12.8	+15	55.8
Dif	—		-6		-10		+11		-4	
							+28		-1	
									+22	
									-	

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16'1			Edad: 27 ^d 5 PHE { 4 ^h : 61'1 12 ^h : 61'2 20 ^h : 61'3 R°: 57 ^m										
	PMG: 11 ^h 44 ^m 1			SD: 16'6 PMG: 10 ^h 22 ^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	57.5	-11 53.9	210	15.0	-6 28.9	82	60 N	16 24	17 08	17 56	5 06 100	15 21 16	
1	198	57.5	54.8	224	42.2	42.9	140	58	30	11	57	5 01 97	26 20	
2	213	57.6	55.7	239	09.3	56.8	81	56	36	15	58	4 57 93	31 23	
3	228	57.7	56.5	253	36.4	10.7	139	54	41	18	17 59	53 91	36 26	
4	243	57.8	57.4	268	03.4	24.5	138	52	46	21	18 00	50 88	40 28	
5	258	57.8	-11 58.3	282	30.4	38.3	138	50	16 50	17 23	18 01	4 47 86	15 44 30	
6	273	57.9	-11 59.1	296	57.3	52.1	138	45	16 59	17 29	18 04	4 41 80	15 52 35	
7	288	58.0	-12 00.0	311	24.1	05.8	137	40	17 07	35	06	36 76	15 59 39	
8	303	58.1	-12 00.9	325	50.9	19.5	137	35	14	39	09	31 73	16 05 42	
9	318	58.1	01.7	340	17.6	33.1	136	30	19	44	12	27 70	10 45	
10	333	58.2	02.6	354	44.3	46.7	136	20	30	17 52	18	20 65	19 50	
11	348	58.3	-12 03.5	9	10.9	00.2	135	10 N	17 39	18 00	18 25	4 14 61	16 27 54	
12	3	58.4	-12 04.3	23	37.4	13.7	135	0	17 47	18 09	18 33	4 09 56	16 35 58	
13	18	58.4	05.2	38	03.8	27.1	134	10 S	17 56	18	43	4 03 52	43 61	
14	33	58.5	06.0	52	30.2	40.5	134	20	18 06	28	18 55	3 58 47	16 51 66	
15	48	58.6	06.9	66	56.6	53.8	133	30	17	42	19 11	51 43	17 00 71	
16	63	58.7	07.8	81	22.8	07.1	133	35	23	49	21	47 40	05 74	
17	78	58.7	-12 08.6	95	49.0	20.3	132	40	18 30	18 59	19 33	3 43 37	17 12 76	
18	93	58.8	-12 09.5	110	15.2	33.4	131	45	18 39	19 10	19 49	3 38 33	17 19 81	
19	108	58.9	10.3	124	41.2	46.5	131	50	49	24	20 08	33 28	27 86	
20	123	58.9	11.2	139	07.3	59.5	130	52	54	31	18	30 26	31 88	
21	138	59.0	12.1	153	33.2	12.4	129	54	18 59	39	29	27 24	36 90	
22	153	59.1	12.9	167	59.1	25.3	129	56	19 05	47	42	24 21	41 93	
23	168	59.1	13.8	182	24.9	38.1	128	58	12	19 57	20 58	21 18	46 97	
24	183	59.2	-12 14.6	196	50.6	50.8	127	60 S	19 19	20 08	21 17	3 17 14	17 52 101	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 21 ^h 44 ^m 3		Mag: -3.8 PMG: 12 ^h 57 ^m		Mag: +1.1 PMG: 7 ^h 23 ^m		Mag: -2.9 PMG: 0 ^h 04 ^m		Mag: +0.7 PMG: 11 ^h 09 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	33	02.4	165 53.0	-17 35.3	249 12.8	+15 55.8	359 00.3	+12 03.9	192 17.2	-6 18.3
1	48	04.9	180 52.3	36.2	264 13.9	55.4	14 03.1	03.8	207 19.3	18.4
2	63	07.3	195 51.7	37.2	279 15.0	55.0	29 05.9	03.7	222 21.5	18.5
3	78	09.8	210 51.1	38.1	294 16.1	54.6	44 08.7	03.6	237 23.7	18.6
4	93	12.3	225 50.4	39.1	309 17.2	54.2	59 11.5	03.5	252 25.9	18.7
5	108	14.7	240 49.8	-17 40.0	324 18.3	+15 53.8	74 14.3	+12 03.4	267 28.1	-6 18.8
6	123	17.2	255 49.1	-17 40.9	339 19.4	+15 53.4	89 17.1	+12 03.3	282 30.2	-6 18.9
7	138	19.7	270 48.5	41.9	354 20.5	53.0	104 19.9	03.2	297 32.4	19.0
8	153	22.1	285 47.8	42.8	9 21.6	52.6	119 22.7	03.1	312 34.6	19.1
9	168	24.6	300 47.2	43.8	24 22.7	52.2	134 25.5	02.9	327 36.8	19.3
10	183	27.0	315 46.5	44.7	39 23.8	51.8	149 28.3	02.8	342 39.0	19.4
11	198	29.5	330 45.9	-17 45.6	54 24.9	+15 51.4	164 31.0	+12 02.7	357 41.1	-6 19.5
12	213	32.0	345 45.2	-17 46.6	69 26.0	+15 51.0	179 33.8	+12 02.6	12 43.3	-6 19.6
13	228	34.4	0 44.6	47.5	84 27.1	50.6	194 36.6	02.5	27 45.5	19.7
14	243	36.9	15 43.9	48.4	99 28.3	50.2	209 39.4	02.4	42 47.7	19.8
15	258	39.4	30 43.3	49.4	114 29.4	49.8	224 42.2	02.3	57 49.9	19.9
16	273	41.8	45 42.6	50.3	129 30.5	49.4	239 45.0	02.2	72 52.1	20.0
17	288	44.3	60 41.9	-17 51.2	144 31.6	+15 49.0	254 47.8	+12 02.1	87 54.2	-6 20.1
18	303	46.8	75 41.3	-17 52.1	159 32.7	+15 48.6	269 50.6	+12 02.0	102 56.4	-6 20.2
19	318	49.2	90 40.6	53.1	174 33.8	48.2	284 53.4	01.8	117 58.6	20.4
20	333	51.7	105 40.0	54.0	189 34.9	47.8	299 56.2	01.7	133 00.8	20.5
21	348	54.2	120 39.3	54.9	204 36.0	47.4	314 59.0	01.6	148 03.0	20.6
22	3	56.6	135 38.7	55.9	219 37.1	47.0	330 01.8	01.5	163 05.1	20.7
23	18	59.1	150 38.0	56.8	234 38.2	46.6	345 04.5	01.4	178 07.3	20.8
24	34	01.5	165 37.3	-17 57.7	249 39.3	+15 46.2	0 07.3	+12 01.3	193 09.5	-6 20.9
Dif	—		-7	-9	+11	-4	-8972	-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 44 ^m 0			Edad: 28 ^d 5 SD: 16'7 PMG: 11 ^h 19 ^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	59.2	-12	14.6	196	50.6	-11	50.8	60 N	5 33	6 22	7 06	6 46	101	15 37	22	
1	198	59.3		15.5	211	16.3	67	-12	03.4	58	32	18	6 59	38 96	46	27	
2	213	59.4		16.4	225	41.9	66		16.0	56	31	15	53	30 93	15 54	30	
3	228	59.4		17.2	240	07.4	65		28.5	54	30	11	48	24 90	16 02	32	
4	243	59.5		18.1	254	32.9	65		40.9	52	29	08	43	18 88	08	35	
5	258	59.6	-12	18.9	268	58.3	64	-12	53.2	50	5 28	6 06	6 39	6 13 85	16 14	37	
6	273	59.6	-12	19.8	283	23.6	63	-13	05.5	45	5 25	5 59	6 30	6 01 81	16 27	41	
7	288	59.7		20.6	297	48.9	63		17.6	40	22	54	22	5 52 77	38	44	
8	303	59.8		21.5	312	14.1	62		29.7	35	19	49	15	44 74	47	47	
9	318	59.8		22.4	326	39.2	61		41.6	30	17	45	6 09	37 71	16 55	49	
10	333	59.9		23.2	341	04.3	61	-13	53.5	20	10	36	5 59	25 67	17 09	53	
11	349	00.0	-12	24.1	355	29.3	60	-14	05.3	10 N	5 03	5 28	5 49	5 15 62	17 21	57	
12	4	00.0	-12	24.9	9	54.3	60	-14	17.0	0	4 55	5 19	5 41	5 05 59	17 33	60	
13	19	00.1		25.8	24	19.1	58		28.6	10 S	45	5 10	32	4 55 56	44	64	
14	34	00.1		26.6	38	43.9	58		40.1	20	33	4 59	22	45 52	17 57	67	
15	49	00.2		27.5	53	08.7	58	-14	51.4	30	17	46	11	34 47	18 11	71	
16	64	00.3		28.3	67	33.4	57	-15	02.7	35	4 07	38	5 05	27 45	19	73	
17	79	00.3	-12	29.2	81	58.0	56	-15	13.9	40	3 54	4 29	4 57	4 20 41	18 28	77	
18	94	00.4	-12	30.0	96	22.5	55	-15	25.0	45	3 39	4 17	4 49	4 11 38	18 40	79	
19	109	00.5		30.9	110	47.0	55		35.9	50	19	4 03	38	4 01 33	53	84	
20	124	00.5		31.7	125	11.4	54		46.8	52	3 09	3 56	33	3 56 31	18 59	86	
21	139	00.6		32.6	139	35.8	54	-15	57.5	54	2 58	49	28	51 29	19 06	88	
22	154	00.7		33.4	154	00.1	53	-16	08.1	56	45	40	22	45 26	14	91	
23	169	00.7		34.3	168	24.3	52		18.6	58	30	30	15	39 23	23	94	
24	184	00.8	-12	35.1	182	48.5	52	-16	29.0	60 S	2 11	3 19	4 08	3 31 20	19 33	98	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 21 ^h 40 ^m 3		Mag: -3.8 PMG: 12 ^h 58 ^m		Mag: +1.1 PMG: 7 ^h 21 ^m		Mag: -2.9 PMG: 23 ^h 55 ^m		Mag: +0.7 PMG: 11 ^h 06 ^m	
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄	
h	°	'	°	'	°	'	°	'	°	'
0	34	01.5	165	37.3	249	39.3	+15	07.3	193	09.5
1	49	04.0	180	36.7	264	40.4		01.2	208	11.7
2	64	06.5	195	36.0	279	41.5		01.1	223	13.9
3	79	08.9	210	35.4	294	42.6		01.0	238	16.0
4	94	11.4	225	34.7	309	43.7		00.9	253	18.2
5	109	13.9	240	34.0	324	44.8	+15	44.2	268	20.4
6	124	16.3	255	33.4	339	46.0	+15	43.8	283	22.6
7	139	18.8	270	32.7	354	47.1		43.4	298	24.8
8	154	21.3	285	32.1	9	48.2		43.0	313	27.0
9	169	23.7	300	31.4	24	49.3		42.6	328	29.1
10	184	26.2	315	30.7	39	50.4		42.1	343	31.3
11	199	28.6	330	30.1	54	51.5	+15	41.7	358	33.5
12	214	31.1	345	29.4	69	52.6	+15	41.3	13	35.7
13	229	33.6	0	28.7	84	53.7		40.9	28	37.9
14	244	36.0	15	28.1	99	54.8		40.5	43	40.0
15	259	38.5	30	27.4	114	56.0		40.1	58	42.2
16	274	41.0	45	26.7	129	57.1		39.7	73	44.4
17	289	43.4	60	26.1	144	58.2	+15	39.3	88	46.6
18	304	45.9	75	25.4	159	59.3	+15	38.9	103	48.8
19	319	48.4	90	24.7	175	00.4		38.5	118	51.0
20	334	50.8	105	24.1	190	01.5		38.1	133	53.1
21	349	53.3	120	23.4	205	02.6		37.7	148	55.3
22	4	55.8	135	22.7	220	03.7		37.3	163	57.5
23	19	58.2	150	22.1	235	04.9		36.9	178	59.7
24	35	00.7	165	21.4	250	06.0	+15	36.5	194	01.9
Dif	—		-7	-9	+11	-4	+28	-1	+22	-1

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16'1			Edad: 29 ^d 5	PHE {	4 ^h : 61'3 12 ^h : 61'2 20 ^h : 61'1			Final del crepúsculo			Salida de Luna		Puesta de Luna	
	PMG: 11 ^h 43 ^m 9								SD: 16'7			PMG: 12 ^h 18 ^m			Rº: 62 ^m
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Civil	Náutico		Hora	Rº	Hora	Rº
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m
0	184	00.8	-12 35.1	182	48.5	-16 29.0		60 N	16 18	17 02	17 51	8 27 94	15 59 34		
1	199	00.8	36.0	197	12.6	51 39.3	103	58	25	07	53	14 91	16 13 37		
2	214	00.9	36.8	211	36.7	51 49.5	102	56	31	10	54	8 03 88	24 40		
3	229	01.0	37.7	226	00.7	50 -16 59.5	100	54	37	14	55	7 54 85	34 42		
4	244	01.0	38.5	240	24.6	49 -17 09.4	99	52	42	17	56	46 83	43 44		
5	259	01.1	-12 39.4	254	48.5	49 -17 19.2	98	50	16 46	17 20	17 58	7 38 81	16 51 45		
6	274	01.1	-12 40.2	269	12.4	49 -17 28.8	96	45	16 56	17 26	18 01	7 22 78	17 08 49		
7	289	01.2	41.1	283	36.2	48 38.4	96	40	17 04	32	04	7 09 75	22 51		
8	304	01.3	41.9	297	59.9	47 47.8	94	35	11	37	07	6 58 72	34 53		
9	319	01.3	42.8	312	23.6	47 -17 57.0	92	30	18	42	10	48 71	17 44 55		
10	334	01.4	43.6	326	47.2	46 -18 06.2	92	20	29	17 51	17	32 67	18 02 58		
11	349	01.4	-12 44.5	341	10.8	46 -18 15.2	90	10 N	17 38	18 00	18 25	6 17 64	18 18 60		
12	4	01.5	-12 45.3	355	34.3	45 -18 24.0	88	0	17 47	18 08	18 33	6 04 61	18 33 62		
13	19	01.5	46.2	9	57.8	45 32.7	87	10 S	17 57	18	43	5 51 58	18 48 64		
14	34	01.6	47.0	24	21.2	44 41.3	86	20	18 07	29	18 56	37 55	19 04 66		
15	49	01.7	47.9	38	44.6	44 49.8	85	30	18	43	19 13	21 52	22 69		
16	64	01.7	48.7	53	07.9	43 -18 58.1	83	35	25	18 51	23	12 50	32 71		
17	79	01.8	-12 49.6	67	31.2	43 -19 06.3	82	40	18 33	19 01	19 36	5 01 48	19 45 72		
18	94	01.8	-12 50.4	81	54.5	43 -19 14.3	80	45	18 42	19 13	19 52	4 49 45	19 59 74		
19	109	01.9	51.2	96	17.7	42 22.2	79	50	53	28	20 13	34 41	20 17 77		
20	124	01.9	52.1	110	40.9	42 29.9	77	52	18 58	35	23	27 39	25 79		
21	139	02.0	52.9	125	04.0	41 37.5	76	54	19 03	43	34	20 37	34 81		
22	154	02.0	53.8	139	27.1	41 44.9	74	56	10	19 52	20 48	11 35	45 82		
23	169	02.1	54.6	153	50.2	41 52.2	73	58	17	20 02	21 05	4 02 31	20 57 85		
24	184	02.2	-12 55.5	168	13.2	40 -19 59.4	72	60 S	19 25	20 14	21 25	3 51 28	21 11 88		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 21 ^h 36 ^m 4		Mag: -3.8 PMG: 12 ^h 59 ^m			Mag: +1.1 PMG: 7 ^h 19 ^m			Mag: -2.9 PMG: 23 ^h 51 ^m			Mag: +0.7 PMG: 11 ^h 02 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	°	'	°	'	°	°	'	°	°	'	°	'
0	35	00.7	165	21.4	-18 19.7	250	06.0	+15 36.5	1	14.3	+11 58.7	194	01.9	-6 23.6	
1	50	03.1	180	20.7	20.6	265	07.1	36.1	16	17.1	58.5	209	04.0	23.7	
2	65	05.6	195	20.0	21.5	280	08.2	35.7	31	19.9	58.4	224	06.2	23.8	
3	80	08.1	210	19.4	22.4	295	09.3	35.3	46	22.7	58.3	239	08.4	23.9	
4	95	10.5	225	18.7	23.3	310	10.4	34.9	61	25.5	58.2	254	10.6	24.0	
5	110	13.0	240	18.0	-18 24.2	325	11.6	+15 34.5	76	28.3	+11 58.1	269	12.8	-6 24.1	
6	125	15.5	255	17.4	-18 25.1	340	12.7	+15 34.1	91	31.1	+11 58.0	284	14.9	-6 24.2	
7	140	17.9	270	16.7	26.0	355	13.8	33.7	106	33.9	57.9	299	17.1	24.3	
8	155	20.4	285	16.0	26.9	10	14.9	33.3	121	36.7	57.8	314	19.3	24.4	
9	170	22.9	300	15.3	27.8	25	16.0	32.9	136	39.5	57.7	329	21.5	24.5	
10	185	25.3	315	14.6	28.7	40	17.1	32.5	151	42.3	57.6	344	23.7	24.7	
11	200	27.8	330	14.0	-18 29.5	55	18.3	+15 32.1	166	45.1	+11 57.4	359	25.9	-6 24.8	
12	215	30.3	345	13.3	-18 30.4	70	19.4	+15 31.7	181	47.9	+11 57.3	14	28.0	-6 24.9	
13	230	32.7	0	12.6	31.3	85	20.5	31.3	196	50.7	57.2	29	30.2	25.0	
14	245	35.2	15	11.9	32.2	100	21.6	30.9	211	53.4	57.1	44	32.4	25.1	
15	260	37.6	30	11.3	33.1	115	22.7	30.5	226	56.2	57.0	59	34.6	25.2	
16	275	40.1	45	10.6	34.0	130	23.9	30.1	241	59.0	56.9	74	36.8	25.3	
17	290	42.6	60	09.9	-18 34.9	145	25.0	+15 29.6	257	01.8	+11 56.8	89	39.0	-6 25.4	
18	305	45.0	75	09.2	-18 35.8	160	26.1	+15 29.2	272	04.6	+11 56.7	104	41.1	-6 25.5	
19	320	47.5	90	08.5	36.7	175	27.2	28.8	287	07.4	56.6	119	43.3	25.6	
20	335	50.0	105	07.9	37.6	190	28.3	28.4	302	10.2	56.5	134	45.5	25.8	
21	350	52.4	120	07.2	38.5	205	29.5	28.0	317	13.0	56.3	149	47.7	25.9	
22	5	54.9	135	06.5	39.3	220	30.6	27.6	332	15.8	56.2	164	49.9	26.0	
23	20	57.4	150	05.8	40.2	235	31.7	27.2	347	18.6	56.1	179	52.0	26.1	
24	35	59.8	165	05.1	-18 41.1	250	32.8	+15 26.8	2	21.4	+11 56.0	194	54.2	-6 26.2	
Dif	—	—	-7	-9		+11	-4		+28	-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: 1 ^d 2 PHE { SD: 16'6 PMG: 13 ^h 20 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m		
0	184	02.2	-12	55.5	168	13.2	-19	59.4	60 N	5 38	6 27	7 11	10 01	79	16 33	50		
1	199	02.2		56.3	182	36.2	40	-20	06.3	58	36	22	7 04	77	16 50	51		
2	214	02.3		57.1	196	59.2	40		13.2	56	35	19	6 58	75	17 04	53		
3	229	02.3		58.0	211	22.1	39		19.9	54	33	15	52	74	16	55		
4	244	02.4		58.8	225	45.0	39		26.4	52	32	12	47	73	27	55		
5	259	02.4	-12	59.7	240	07.9	39	-20	32.8	50	5 31	6 09	6 42	72	17 36	56		
6	274	02.5	-13	00.5	254	30.8	39	-20	39.0	45	5 28	6 02	6 32	70	17 57	57		
7	289	02.5		01.3	268	53.7	39		45.1	40	24	5 56	24	68	18 13	58		
8	304	02.6		02.2	283	16.5	38		51.0	35	21	51	17	68	27	59		
9	319	02.6		03.0	297	39.3	38	-20	56.7	30	18	46	6 11	66	18 39	60		
10	334	02.7		03.9	312	02.1	38	-21	02.3	20	11	37	5 59	65	19 00	60		
11	349	02.7	-13	04.7	326	24.9	38	-21	07.8	10 N	5 03	5 28	5 50	64	19 18	61		
12	4	02.8	-13	05.5	340	47.7	38	-21	13.1	0	4 55	5 19	5 40	62	19 35	62		
13	19	02.8		06.4	355	10.4	37		18.2	10 S	44	5 09	31	61	19 52	62		
14	34	02.9		07.2	9	33.2	38		23.1	20	31	4 58	21	60	20 10	63		
15	49	02.9		08.0	23	55.9	37		27.9	30	15	44	09	57	31	64		
16	64	03.0		08.9	38	18.6	37		32.6	35	4 04	36	5 02	56	43	64		
17	79	03.0	-13	09.7	52	41.4	38	-21	37.0	40	3 51	4 26	4 55	54	20 57	65		
18	94	03.1	-13	10.6	67	04.1	37	-21	41.4	45	3 35	4 14	4 46	53	21 13	66		
19	109	03.1		11.4	81	26.8	37		45.5	50	15	3 59	34	51	34	66		
20	124	03.2		12.2	95	49.6	38		49.5	52	3 04	52	29	50	44	66		
21	139	03.2		13.1	110	12.3	37		53.3	54	2 53	44	24	48	21 55	67		
22	154	03.3		13.9	124	35.1	38	-21	57.0	56	39	35	17	46	22	68		
23	169	03.3		14.7	138	57.8	37	-22	00.5	58	22	25	10	44	22	68		
24	184	03.3	-13	15.6	153	20.6	38	-22	03.8	60 S	2 01	3 12	4 02	41	22 39	69		
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 21 ^h 32 ^m 5		Mag: -3.8 PMG: 13 ^h 00 ^m				Mag: +1.1 PMG: 7 ^h 17 ^m				Mag: -2.9 PMG: 23 ^h 46 ^m				Mag: +0.7 PMG: 10 ^h 59 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	35	59.8	165	05.1	-18	41.1	250	32.8	+15	26.8	2	21.4	+11	56.0	194	54.2	-6	26.2
1	51	02.3	180	04.4		42.0	265	33.9		26.4	17	24.2		55.9	209	56.4		26.3
2	66	04.7	195	03.8		42.9	280	35.1		26.0	32	27.0		55.8	224	58.6		26.4
3	81	07.2	210	03.1		43.8	295	36.2		25.6	47	29.7		55.7	240	00.8		26.5
4	96	09.7	225	02.4		44.6	310	37.3		25.2	62	32.5		55.6	255	03.0		26.6
5	111	12.1	240	01.7	-18	45.5	325	38.4	+15	24.8	77	35.3	+11	55.5	270	05.1	-6	26.7
6	126	14.6	255	01.0	-18	46.4	340	39.6	+15	24.4	92	38.1	+11	55.4	285	07.3	-6	26.8
7	141	17.1	270	00.3		47.3	355	40.7		24.0	107	40.9		55.2	300	09.5		27.0
8	156	19.5	284	59.6		48.2	10	41.8		23.6	122	43.7		55.1	315	11.7		27.1
9	171	22.0	299	58.9		49.0	25	42.9		23.2	137	46.5		55.0	330	13.9		27.2
10	186	24.5	314	58.3		49.9	40	44.1		22.8	152	49.3		54.9	345	16.1		27.3
11	201	26.9	329	57.6	-18	50.8	55	45.2	+15	22.4	167	52.1	+11	54.8	0	18.2	-6	27.4
12	216	29.4	344	56.9	-18	51.7	70	46.3	+15	22.0	182	54.9	+11	54.7	15	20.4	-6	27.5
13	231	31.9	359	56.2		52.5	85	47.4		21.6	197	57.7		54.6	30	22.6		27.6
14	246	34.3	14	55.5		53.4	100	48.6		21.2	213	00.5		54.5	45	24.8		27.7
15	261	36.8	29	54.8		54.3	115	49.7		20.8	228	03.3		54.4	60	27.0		27.8
16	276	39.2	44	54.1		55.1	130	50.8		20.4	243	06.1		54.3	75	29.1		27.9
17	291	41.7	59	53.4	-18	56.0	145	52.0	+15	19.9	258	08.8	+11	54.1	90	31.3	-6	28.1
18	306	44.2	74	52.7	-18	56.9	160	53.1	+15	19.5	273	11.6	+11	54.0	105	33.5	-6	28.2
19	321	46.6	89	52.0		57.8	175	54.2		19.1	288	14.4		53.9	120	35.7		28.3
20	336	49.1	104	51.3		58.6	190	55.3		18.7	303	17.2		53.8	135	37.9		28.4
21	351	51.6	119	50.6	-18	59.5	205	56.5		18.3	318	20.0		53.7	150	40.1		28.5
22	6	54.0	134	49.9	-19	00.4	220	57.6		17.9	333	22.8		53.6	165	42.2		28.6
23	21	56.5	149	49.2		01.2	235	58.7		17.5	348	25.6		53.5	180	44.4		28.7
24	36	59.0	164	48.5	-19	02.1	250	59.9	+15	17.1	3	28.4	+11	53.4	195	46.6	-6	28.8
Dif	—		-7		-9		+11		-4		+28		-1		+22		-	

UT	SOL				● LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna		
	SD: 16°1 PMG: 11 ^h 43 ^m 7				Edad: 2 ^d 2 PHE { 4 ^h : 60°/3 12 ^h : 60°/0 20 ^h : 59°/7 R°: 60 ^m													
	hG ☉		Dec		hG ☾		Dif				Dec		Dif		Civil	Náutico	Hora	R°
h	°	'	°	'	°	'	°	'	°	'	h m	h m	h m	h m m		h m m		
0	184	03.3	-13	15.6	153	20.6	-22	03.8	60 N	16 13	16 57	17 46	11 20 58		17 23 68			
1	199	03.4		16.4	167	43.4	38	07.0	58	20	17 02	48	11 02 58		41 67			
2	214	03.4		17.2	182	06.2	38	10.0	56	27	06	50	10 46 59		17 57 66			
3	229	03.5		18.1	196	29.0	38	12.9	54	33	10	51	33 59		18 10 66			
4	244	03.5		18.9	210	51.8	38	15.5	52	38	13	53	22 59		22 65			
5	259	03.6	-13	19.7	225	14.7	39	-22 18.1	50	16 43	17 16	17 54	10 11 60		18 32 65			
6	274	03.6	-13	20.6	239	37.6	39	-22 20.4	45	16 53	17 24	17 58	9 50 60		18 54 63			
7	289	03.7		21.4	254	00.5	39	22.6	40	17 02	30	18 02	32 61		19 11 63			
8	304	03.7		22.2	268	23.4	39	24.6	35	09	35	05	18 60		26 62			
9	319	03.7		23.1	282	46.3	39	26.5	30	16	40	09	9 05 61		19 39 62			
10	334	03.8		23.9	297	09.3	40	28.2	20	27	50	16	8 44 60		20 00 61			
11	349	03.8	-13	24.7	311	32.3	40	-22 29.8	10 N	17 38	17 59	18 24	8 25 61		20 19 60			
12	4	03.9	-13	25.5	325	55.4	41	-22 31.1	0	17 47	18 08	18 33	8 07 61		20 37 59			
13	19	03.9		26.4	340	18.5	41	32.4	10 S	17 57	19	44	7 50 61		20 54 59			
14	34	04.0		27.2	354	41.6	41	33.4	20	18 07	30	18 57	32 60		21 13 58			
15	49	04.0		28.0	9	04.8	42	34.3	30	20	45	19 15	7 10 61		35 57			
16	64	04.0		28.9	23	28.0	42	35.1	35	27	18 53	25	6 58 61		21 47 57			
17	79	04.1	-13	29.7	37	51.2	42	-22 35.6	40	18 35	19 04	19 39	6 43 61		22 02 55			
18	94	04.1	-13	30.5	52	14.5	43	-22 36.1	45	18 44	19 16	19 55	6 27 60		22 19 54			
19	109	04.2		31.3	66	37.8	43	36.3	50	18 56	32	20 17	6 06 60		40 53			
20	124	04.2		32.2	81	01.2	44	36.4	52	19 01	39	28	5 56 60		22 50 53			
21	139	04.2		33.0	95	24.7	45	36.4	54	07	47	40	45 60		23 02 51			
22	154	04.3		33.8	109	48.2	45	36.1	56	14	19 57	20 55	32 60		15 50			
23	169	04.3		34.6	124	11.7	45	35.8	58	21	20 08	21 12	17 60		30 49			
24	184	04.4	-13	35.5	138	35.3	46	-22 35.3	60 S	19 30	20 21	21 35	5 00 59		23 48 47			
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 21 ^h 28 ^m 5		Mag: -3.8 PMG: 13 ^h 01 ^m				Mag: +1.1 PMG: 7 ^h 15 ^m				Mag: -2.9 PMG: 23 ^h 42 ^m				Mag: +0.7 PMG: 10 ^h 55 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	36	59.0	164	48.5	-19	02.1	250	59.9	+15	17.1	3	28.4	+11	53.4	195	46.6	-6	28.8
1	52	01.4	179	47.8		02.9	266	01.0		16.7	18	31.2		53.3	210	48.8		28.9
2	67	03.9	194	47.1		03.8	281	02.1		16.3	33	34.0		53.2	225	51.0		29.0
3	82	06.4	209	46.4		04.7	296	03.3		15.9	48	36.8		53.0	240	53.2		29.1
4	97	08.8	224	45.8		05.5	311	04.4		15.5	63	39.6		52.9	255	55.3		29.3
5	112	11.3	239	45.1	-19	06.4	326	05.5	+15	15.1	78	42.4	+11	52.8	270	57.5	-6	29.4
6	127	13.7	254	44.4	-19	07.2	341	06.7	+15	14.7	93	45.1	+11	52.7	285	59.7	-6	29.5
7	142	16.2	269	43.6		08.1	356	07.8		14.3	108	47.9		52.6	301	01.9		29.6
8	157	18.7	284	42.9		09.0	11	08.9		13.9	123	50.7		52.5	316	04.1		29.7
9	172	21.1	299	42.2		09.8	26	10.1		13.5	138	53.5		52.4	331	06.3		29.8
10	187	23.6	314	41.5		10.7	41	11.2		13.1	153	56.3		52.3	346	08.4		29.9
11	202	26.1	329	40.8	-19	11.5	56	12.3	+15	12.7	168	59.1	+11	52.2	1	10.6	-6	30.0
12	217	28.5	344	40.1	-19	12.4	71	13.5	+15	12.3	184	01.9	+11	52.1	16	12.8	-6	30.1
13	232	31.0	359	39.4		13.2	86	14.6		11.9	199	04.7		51.9	31	15.0		30.2
14	247	33.5	14	38.7		14.1	101	15.7		11.4	214	07.5		51.8	46	17.2		30.3
15	262	35.9	29	38.0		14.9	116	16.9		11.0	229	10.3		51.7	61	19.4		30.5
16	277	38.4	44	37.3		15.8	131	18.0		10.6	244	13.1		51.6	76	21.5		30.6
17	292	40.9	59	36.6	-19	16.6	146	19.1	+15	10.2	259	15.9	+11	51.5	91	23.7	-6	30.7
18	307	43.3	74	35.9	-19	17.5	161	20.3	+15	09.8	274	18.7	+11	51.4	106	25.9	-6	30.8
19	322	45.8	89	35.2		18.3	176	21.4		09.4	289	21.5		51.3	121	28.1		30.9
20	337	48.2	104	34.5		19.2	191	22.5		09.0	304	24.2		51.2	136	30.3		31.0
21	352	50.7	119	33.8		20.0	206	23.7		08.6	319	27.0		51.1	151	32.5		31.1
22	7	53.2	134	33.1		20.9	221	24.8		08.2	334	29.8		51.0	166	34.6		31.2
23	22	55.6	149	32.4		21.7	236	26.0		07.8	349	32.6		50.8	181	36.8		31.3
24	37	58.1	164	31.7	-19	22.5	251	27.1	+15	07.4	4	35.4	+11	50.7	196	39.0	-6	31.4
Dif	—		-7		-9		+11		-4		+28		-1		+22		-	

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16'1 PMG: 11 ^h 43 ^m 7			Edad: 3 ^d 2 PHE { SD: 16'2 PMG: 15 ^h 22 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°	
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m
0	184	04.4	-13	35.5	138	35.3	-22	35.3	7	58	5	42	6	31	7	16
1	199	04.4		36.3	152	59.0	47	34.6	9	58	40	27	08		12	18
2	214	04.4		37.1	167	22.7	47	33.7	7	56	39	22	7	02	12	00
3	229	04.5		37.9	181	46.5	48	32.7	10	54	37	19	6	56	11	45
4	244	04.5		38.8	196	10.3	48	31.6	11	52	35	15	50		32	44
5	259	04.5	-13	39.6	210	34.2	49	-22	30.3	13	50	5	34	6	21	46
6	274	04.6	-13	40.4	224	58.2	50	-22	28.9	14	45	5	30	6	24	46
7	289	04.6		41.2	239	22.3	51	27.3	16	40	26	5	58	26	11	11
8	304	04.6		42.0	253	46.4	51	25.5	18	35	23	53	19		47	19
9	319	04.7		42.9	268	10.6	52	23.6	19	30	19	47	12		50	30
10	334	04.7		43.7	282	34.8	52	21.6	20	20	12	38	6	00	53	41
11	349	04.7	-13	44.5	296	59.1	53	-22	19.4	22	10 N	5	04	5	26	55
12	4	04.8	-13	45.3	311	23.5	54	-22	17.1	23	0	4	54	5	26	56
13	19	04.8		46.2	325	48.0	55	14.6	25	25	10 S	43	5	09	58	58
14	34	04.8		47.0	340	12.6	56	12.0	26	20	30	4	57	20	59	59
15	49	04.9		47.8	354	37.2	56	09.2	28	30	13	42	07		61	62
16	64	04.9		48.6	9	01.9	57	06.3	29	35	4	02	34	5	62	62
17	79	04.9	-13	49.4	23	26.7	58	-22	03.3	30	40	3	48	4	63	63
18	94	05.0	-13	50.2	37	51.6	59	-22	00.1	32	45	3	32	4	64	64
19	109	05.0		51.1	52	16.5	59	-21	56.8	33	50	3	10	3	65	65
20	124	05.0		51.9	66	41.6	61	53.3	35	52	2	59	48	25	66	66
21	139	05.1		52.7	81	06.7	61	49.8	35	54	47	39	19		67	67
22	154	05.1		53.5	95	31.9	62	46.0	38	56	32	30	13		68	68
23	169	05.1		54.3	109	57.2	63	42.2	38	58	2	14	19	4	69	69
24	184	05.2	-13	55.1	124	22.6	64	-21	38.2	40	60 S	1	52	3	70	70

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 21 ^h 24 ^m 6		Mag: -3.8 PMG: 13 ^h 03 ^m		Mag: +1.1 PMG: 7 ^h 14 ^m		Mag: -2.9 PMG: 23 ^h 37 ^m		Mag: +0.7 PMG: 10 ^h 52 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	37	58.1	164	31.7	251	27.1	4	35.4	196	39.0
1	53	00.6	179	30.9	266	28.2	+11	50.7	-6	31.4
2	68	03.0	194	30.2	281	29.4		50.6		31.5
3	83	05.5	209	29.5	296	30.5		50.5		31.6
4	98	08.0	224	28.8	311	31.6		50.4		31.8
5	113	10.4	239	28.1	326	32.8	+15	50.2		31.9
6	128	12.9	254	27.4	341	33.9	+15	50.1		32.0
7	143	15.4	269	26.7	356	35.1		50.0		32.1
8	158	17.8	284	26.0	11	36.2		49.9		32.2
9	173	20.3	299	25.2	26	37.3		49.7		32.3
10	188	22.7	314	24.5	41	38.5		49.6		32.4
11	203	25.2	329	23.8	56	39.6	+15	49.5		32.5
12	218	27.7	344	23.1	71	40.8	+15	49.4		32.6
13	233	30.1	359	22.4	86	41.9		49.3		32.7
14	248	32.6	14	21.7	101	43.1		49.2		32.8
15	263	35.1	29	20.9	116	44.2		49.1		32.9
16	278	37.5	44	20.2	131	45.3		49.0		33.0
17	293	40.0	59	19.5	146	46.5	+15	48.9		33.1
18	308	42.5	74	18.8	161	47.6	+15	48.8		33.2
19	323	44.9	89	18.1	176	48.8	+14	48.7		33.3
20	338	47.4	104	17.3	191	49.9		48.5		33.4
21	353	49.8	119	16.6	206	51.1		48.4		33.5
22	8	52.3	134	15.9	221	52.2		48.3		33.6
23	23	54.8	149	15.2	236	53.4		48.2		33.7
24	38	57.2	164	14.5	251	54.5	+14	48.1		33.8
Dif	—		-7		+11		+28		+22	

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16:1 PMG: 11 ^h 43 ^m 6			Edad: 4 ^d 2 PHE { SD: 16:0 PMG: 16 ^h 19 ^m 4 ^h : 58/5 12 ^h : 58/2 20 ^h : 57/8 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	184	05.2	-13	55.1	124	22.6	-21 38.2	60 N	16 08	16 53	17 42	12 56 24	19 50 84	
1	199	05.2		56.0	138	48.0	64 34.1	58	16	16 57	44	41 28	20 05 80	
2	214	05.2		56.8	153	13.6	66 29.8	56	22	17 02	46	28 30	17 78	
3	229	05.3		57.6	167	39.2	66 25.4	54	29	06	48	16 33	28 75	
4	244	05.3		58.4	182	05.0	68 20.9	52	34	10	49	12 07 34	38 73	
5	259	05.3	-13	59.2	196	30.8	68 -21 16.3	50	16 39	17 13	17 51	11 58 36	20 46 72	
6	274	05.3	-14	00.0	210	56.7	69 -21 11.5	45	16 50	17 21	17 55	11 39 39	21 05 67	
7	289	05.4	-14	00.8	225	22.7	70 06.6	40	16 59	27	17 59	23 42	19 65	
8	304	05.4		01.7	239	48.9	72 -21 01.6	35	17 07	33	18 03	11 10 44	32 63	
9	319	05.4		02.5	254	15.1	72 -20 56.5	30	14	39	07	10 59 46	21 43 60	
10	334	05.5		03.3	268	41.4	73 51.3	20	26	49	15	39 49	22 01 58	
11	349	05.5	-14	04.1	283	07.8	74 -20 45.9	10 N	17 37	17 59	18 24	10 22 51	22 17 55	
12	4	05.5	-14	04.9	297	34.2	74 -20 40.4	0	17 47	18 08	18 33	10 06 54	22 32 52	
13	19	05.5		05.7	312	00.8	76 34.8	10 S	17 57	19	44	9 50 56	22 47 49	
14	34	05.6		06.5	326	27.5	77 29.1	20	18 08	31	18 58	33 58	23 03 46	
15	49	05.6		07.3	340	54.3	78 23.3	30	21	46	19 16	13 62	21 43	
16	64	05.6		08.1	355	21.2	79 17.3	35	29	18 55	28	9 02 63	32 41	
17	79	05.6	-14	09.0	9	48.1	79 -20 11.3	40	18 37	19 06	19 42	8 48 66	23 44 38	
18	94	05.7	-14	09.8	24	15.2	81 -20 05.1	45	18 47	19 19	19 59	8 33 67	23 58 36	
19	109	05.7		10.6	38	42.4	82 -19 58.9	50	18 59	35	20 21	13 71	** ** *	
20	124	05.7		11.4	53	09.6	82 52.5	52	19 05	43	33	8 04 72	** ** *	
21	139	05.7		12.2	67	37.0	84 46.0	54	11	19 52	20 46	7 54 74	** ** *	
22	154	05.7		13.0	82	04.5	85 39.4	56	18	20 02	21 01	42 76	0 05 37	
23	169	05.8		13.8	96	32.0	85 32.7	58	26	13	20	29 79	19 34	
24	184	05.8	-14	14.6	110	59.7	87 -19 25.9	60 S	19 35	20 27	21 44	7 13 82	0 35 31	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 21 ^h 20 ^m 7		Mag: -3.8 PMG: 13 ^h 04 ^m		Mag: +1.1 PMG: 7 ^h 12 ^m		Mag: -2.9 PMG: 23 ^h 33 ^m		Mag: +0.7 PMG: 10 ^h 48 ^m					
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	38	57.2	164	14.5	251	54.5	+14 57.7	5 42.4	+11 48.1	197 31.4	-6 34.0			
1	53	59.7	179	13.7	266	55.7	57.3	20 45.2	48.0	212 33.6	34.1			
2	69	02.2	194	13.0	281	56.8	56.9	35 48.0	47.9	227 35.8	34.3			
3	84	04.6	209	12.3	296	57.9	56.5	50 50.8	47.8	242 38.0	34.4			
4	99	07.1	224	11.6	311	59.1	56.0	65 53.6	47.7	257 40.2	34.5			
5	114	09.6	239	10.8	327	00.2	+14 55.6	80 56.4	+11 47.6	272 42.3	-6 34.6			
6	129	12.0	254	10.1	342	01.4	+14 55.2	95 59.2	+11 47.5	287 44.5	-6 34.7			
7	144	14.5	269	09.4	357	02.5	54.8	111 02.0	47.3	302 46.7	34.8			
8	159	17.0	284	08.7	49.0	12 03.7	54.4	126 04.8	47.2	317 48.9	34.9			
9	174	19.4	299	07.9	49.8	27 04.8	54.0	141 07.6	47.1	332 51.1	35.0			
10	189	21.9	314	07.2	50.6	42 06.0	53.6	156 10.3	47.0	347 53.3	35.1			
11	204	24.3	329	06.5	-19 51.4	57 07.1	+14 53.2	171 13.1	+11 46.9	2 55.4	-6 35.2			
12	219	26.8	344	05.7	-19 52.2	72 08.3	+14 52.8	186 15.9	+11 46.8	17 57.6	-6 35.3			
13	234	29.3	359	05.0	53.1	87 09.4	52.4	201 18.7	46.7	32 59.8	35.4			
14	249	31.7	14 04.3	53.9	102 10.6	52.0	216 21.5	46.6	48 02.0	35.5				
15	264	34.2	29 03.6	54.7	117 11.7	51.6	231 24.3	46.5	63 04.2	35.7				
16	279	36.7	44 02.8	55.5	132 12.9	51.2	246 27.1	46.4	78 06.4	35.8				
17	294	39.1	59 02.1	-19 56.3	147 14.0	+14 50.8	261 29.9	+11 46.2	93 08.5	-6 35.9				
18	309	41.6	74 01.4	-19 57.1	162 15.2	+14 50.4	276 32.7	+11 46.1	108 10.7	-6 36.0				
19	324	44.1	89 00.6	57.9	177 16.3	50.0	291 35.5	46.0	123 12.9	36.1				
20	339	46.5	103 59.9	58.7	192 17.5	49.6	306 38.3	45.9	138 15.1	36.2				
21	354	49.0	118 59.2	-19 59.5	207 18.7	49.2	321 41.1	45.8	153 17.3	36.3				
22	9	51.5	133 58.4	-20 00.3	222 19.8	48.7	336 43.8	45.7	168 19.5	36.4				
23	24	53.9	148 57.7	01.1	237 21.0	48.3	351 46.6	45.6	183 21.7	36.5				
24	39	56.4	163 57.0	-20 01.9	252 22.1	+14 47.9	6 49.4	+11 45.5	198 23.8	-6 36.6				
Dif	—		-7		-8		+28		-1		+22		-	

UT	SOL				 LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna							
	SD: 16:1 PMG: 11 ^h 43 ^m 6				Edad: 5 ^d 2 PHE { 4 ^h : 57/5 12 ^h : 57/2 20 ^h : 56/9 R°: 49 ^m SD: 15:7 PMG: 17 ^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	184	05.8	-14	14.6	110	59.7	-19	25.9	60 N	5	47	6	36	7	21	13	20	17	21	14		
1	199	05.8		15.4	125	27.4	87	19.0	58	44	31	13	13	09	20		25	80				
2	214	05.8		16.2	139	55.3	89	12.0	56	42	26	06	12	58	23		35	77				
3	229	05.9		17.0	154	23.3	90	-19 05.0	54	40	22	7	00		49	25		43	75			
4	244	05.9		17.8	168	51.3	90	-18 57.8	52	39	19	6	54		41	27		51	72			
5	259	05.9	-14	18.6	183	19.5	92	-18 50.5	50	5	37	6	15	6	49	12	34	29	21	58		
6	274	05.9	-14	19.4	197	47.7	92	-18 43.1	45	5	33	6	07	6	38	12	18	33	22	12		
7	289	05.9		20.2	212	16.1	94	35.7	40	28	6	00	29	12	05	36		24	64			
8	304	06.0		21.0	226	44.5	94	28.1	35	25	5	54	21	11	54	38		35	60			
9	319	06.0		21.8	241	13.0	95	20.4	30	21	49	14		45	40		43	59				
10	334	06.0		22.7	255	41.7	97	12.7	20	12	39	6	01	28	44		22	59	54			
11	349	06.0	-14	23.5	270	10.4	97	-18 04.9	10 N	5	04	5	29	11	13	47		23	12	51		
12	4	06.0	-14	24.3	284	39.3	99	-17 57.0	0	4	54	5	19	5	40	11	00	50	23	24		
13	19	06.0		25.1	299	08.2	99	49.0	10 S	43	5	08	30	10	46	53		36	45			
14	34	06.1		25.9	313	37.2	100	40.9	20	29	4	56	19		31	56		23	49	42		
15	49	06.1		26.7	328	06.3	101	32.7	30	4	11	41	5	06	15	59		***	***	***		
16	64	06.1		27.5	342	35.6	103	24.5	35	3	59	31	4	58	10	05	61		***	***	***	
17	79	06.1	-14	28.3	357	04.9	103	-17 16.1	40	3	45	4	21	4	50	9	54	64		***	***	***
18	94	06.1	-14	29.1	11	34.3	104	-17 07.7	45	3	28	4	07	4	39	9	40	67		***	***	***
19	109	06.1		29.9	26	03.8	105	-16 59.3	50	3	05	3	51	27		24	71		0	15	32	
20	124	06.2		30.7	40	33.4	106	50.7	52	2	54	43	21		16	73		23	31			
21	139	06.2		31.4	55	03.1	107	42.1	54		41	34	15		9	08	75		32	29		
22	154	06.2		32.2	69	32.9	108	33.4	56		25	24	08		8	58	78		42	26		
23	169	06.2		33.0	84	02.7	108	24.6	58	2	06	3	13	4	00	48	79		0	53	24	
24	184	06.2	-14	33.8	98	32.7	110	-16 15.7	60 S	1	42	2	59	3	51	8	35	83		1	06	21
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO							
	PMG: 21 ^h 16 ^m 7		Mag: -3.8 PMG: 13 ^h 05 ^m				Mag: +1.1 PMG: 7 ^h 10 ^m				Mag: -2.9 PMG: 23 ^h 28 ^m				Mag: +0.7 PMG: 10 ^h 45 ^m							
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	39	56.4	163	57.0	-20	01.9	252	22.1	+14	47.9	6	49.4	+11	45.5	198	23.8	-6	36.6				
1	54	58.8	178	56.2		02.7	267	23.3		47.5	21	52.2		45.4	213	26.0		36.7				
2	70	01.3	193	55.5		03.5	282	24.4		47.1	36	55.0		45.3	228	28.2		36.8				
3	85	03.8	208	54.8		04.3	297	25.6		46.7	51	57.8		45.2	243	30.4		36.9				
4	100	06.2	223	54.0		05.1	312	26.7		46.3	67	00.6		45.0	258	32.6		37.1				
5	115	08.7	238	53.3	-20	05.9	327	27.9	+14	45.9	82	03.4	+11	44.9	273	34.8	-6	37.2				
6	130	11.2	253	52.5	-20	06.6	342	29.0	+14	45.5	97	06.2	+11	44.8	288	36.9	-6	37.3				
7	145	13.6	268	51.8		07.4	357	30.2		45.1	112	09.0		44.7	303	39.1		37.4				
8	160	16.1	283	51.1		08.2	12	31.4		44.7	127	11.8		44.6	318	41.3		37.5				
9	175	18.6	298	50.3		09.0	27	32.5		44.3	142	14.5		44.5	333	43.5		37.6				
10	190	21.0	313	49.6		09.8	42	33.7		43.9	157	17.3		44.4	348	45.7		37.7				
11	205	23.5	328	48.8	-20	10.6	57	34.8	+14	43.5	172	20.1	+11	44.3	3	47.9	-6	37.8				
12	220	26.0	343	48.1	-20	11.4	72	36.0	+14	43.1	187	22.9	+11	44.2	18	50.1	-6	37.9				
13	235	28.4	358	47.4		12.2	87	37.1		42.7	202	25.7		44.1	33	52.2		38.0				
14	250	30.9	13	46.6		13.0	102	38.3		42.3	217	28.5		44.0	48	54.4		38.1				
15	265	33.3	28	45.9		13.7	117	39.5		41.8	232	31.3		43.9	63	56.6		38.2				
16	280	35.8	43	45.1		14.5	132	40.6		41.4	247	34.1		43.7	78	58.8		38.3				
17	295	38.3	58	44.4	-20	15.3	147	41.8	+14	41.0	262	36.9	+11	43.6	94	01.0	-6	38.5				
18	310	40.7	73	43.6	-20	16.1	162	42.9	+14	40.6	277	39.7	+11	43.5	109	03.2	-6	38.6				
19	325	43.2	88	42.9		16.9	177	44.1		40.2	292	42.5		43.4	124	05.4		38.7				
20	340	45.7	103	42.1		17.6	192	45.3		39.8	307	45.2		43.3	139	07.5		38.8				
21	355	48.1	118	41.4		18.4	207	46.4		39.4	322	48.0		43.2	154	09.7		38.9				
22	10	50.6	133	40.7		19.2	222	47.6		39.0	337	50.8		43.1	169	11.9		39.0				
23	25	53.1	148	39.9		20.0	237	48.7		38.6	352	53.6		43.0	184	14.1		39.1				
24	40	55.5	163	39.2	-20	20.7	252	49.9	+14	38.2	7	56.4	+11	42.9	199	16.3	-6	39.2				
Dif	—		-7		-8		+12		-4		+28		-1		+22		-		-			

UT	SOL				☾ LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna				
	SD: 16 ^h 1 PMG: 11 ^h 43 ^m 6				Edad: 6 ^d 2 SD: 15 ^h 5 PMG: 18 ^h 01 ^m						PHE { 4 ^h : 56 ^m 6 12 ^h : 56 ^m 3 20 ^h : 56 ^m 1 R°: 45 ^m									
	hG ☉		Dec		hG ☾		Dif				Dec		Dif		Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	h	m
0	184	06.2	-14	33.8	98	32.7	-16	15.7	60 N	16 03	16 48	17 37	13 37	12	22 37	80				
1	199	06.2		34.6	113	02.8 ¹¹¹	-16	06.8 ⁸⁹	58	11	53	40	29	15	45	77				
2	214	06.2		35.4	127	32.9 ¹¹¹	-15	57.8 ⁹⁰	56	18	16 58	42	21	18	52	74				
3	229	06.3		36.2	142	03.1 ¹¹²		48.7 ⁹¹	54	25	17 02	44	14	20	22	58	72			
4	244	06.3		37.0	156	33.5 ¹¹⁴		39.6 ⁹¹	52	31	06	46	08	22	23	03	71			
5	259	06.3	-14	37.8	171	03.9 ¹¹⁴	-15	30.4 ⁹²	50	16 36	17 10	17 48	13 03	23	23	08	69			
6	274	06.3	-14	38.6	185	34.4 ¹¹⁵	-15	21.1 ⁹³	45	16 47	17 18	17 53	12 51	27	23	19	64			
7	289	06.3		39.4	200	05.0 ¹¹⁶		11.8 ⁹³	40	16 57	25	17 57	41	30	28	61				
8	304	06.3		40.2	214	35.7 ¹¹⁷	-15	02.4 ⁹⁴	35	17 05	31	18 01	32	33	35	59				
9	319	06.3		41.0	229	06.4 ¹¹⁷	-14	53.0 ⁹⁴	30	13	37	06	25	35	42	56				
10	334	06.3		41.8	243	37.3 ¹¹⁹		43.4 ⁹⁶	20	25	48	14	12	39	23	53	52			
11	349	06.4	-14	42.6	258	08.2 ¹¹⁹	-14	33.9 ⁹⁵	10 N	17 36	17 58	18 23	12 00	43	**	**	**			
12	4	06.4	-14	43.4	272	39.2 ¹²⁰	-14	24.2 ⁹⁷	0	17 47	18 08	18 33	11 50	46	**	**	**			
13	19	06.4		44.2	287	10.3 ¹²¹		14.6 ⁹⁶	10 S	17 58	20	45	39	49	**	**	**			
14	34	06.4		45.0	301	41.5 ¹²²	-14	04.8 ⁹⁸	20	18 09	32	18 59	27	53	**	**	**			
15	49	06.4		45.7	316	12.8 ¹²³	-13	55.0 ⁹⁸	30	23	48	19 18	14	57	0	04	38			
16	64	06.4		46.5	330	44.1 ¹²³		45.2 ⁹⁸	35	31	18 58	30	11 06	60	13	35				
17	79	06.4	-14	47.3	345	15.6 ¹²⁵	-13	35.3 ⁹⁹	40	18 39	19 09	19 44	10 58	62	0	22	33			
18	94	06.4	-14	48.1	359	47.1 ¹²⁵	-13	25.3 ¹⁰⁰	45	18 50	19 22	20 02	10 47	66	0	34	30			
19	109	06.4		48.9	14	18.7 ¹²⁶		15.3 ¹⁰⁰	50	19 03	39	26	35	69	47	26				
20	124	06.4		49.7	28	50.3 ¹²⁶	-13	05.2 ¹⁰¹	52	09	47	38	29	71	0	54	24			
21	139	06.4		50.5	43	22.1 ¹²⁸	-12	55.1 ¹⁰¹	54	15	19 57	20 51	23	73	1	01	22			
22	154	06.4		51.3	57	53.9 ¹²⁸		45.0 ¹⁰¹	56	23	20 07	21 08	16	75	08	21				
23	169	06.5		52.0	72	25.8 ¹²⁹		34.7 ¹⁰³	58	31	19	28	10 07	79	17	18				
24	184	06.5	-14	52.8	86	57.8 ¹³⁰	-12	24.5 ¹⁰²	60 S	19 41	20 33	21 55	9 58	82	1	27	15			
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO					
	PMG: 21 ^h 12 ^m 8		Mag: -3.8 PMG: 13 ^h 06 ^m				Mag: +1.1 PMG: 7 ^h 08 ^m				Mag: -2.9 PMG: 23 ^h 24 ^m				Mag: +0.7 PMG: 10 ^h 41 ^m					
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	40	55.5	163	39.2	-20	20.7	252	49.9	+14	38.2	7	56.4	+11	42.9	199	16.3	-6	39.2		
1	55	58.0	178	38.4		21.5	267	51.1		37.8	22	59.2		42.8	214	18.5		39.3		
2	71	00.4	193	37.7		22.3	282	52.2		37.4	38	02.0		42.7	229	20.7		39.4		
3	86	02.9	208	36.9		23.1	297	53.4		37.0	53	04.8		42.5	244	22.8		39.5		
4	101	05.4	223	36.2		23.8	312	54.6		36.6	68	07.6		42.4	259	25.0		39.6		
5	116	07.8	238	35.4	-20	24.6	327	55.7	+14	36.2	83	10.4	+11	42.3	274	27.2	-6	39.7		
6	131	10.3	253	34.7	-20	25.4	342	56.9	+14	35.8	98	13.1	+11	42.2	289	29.4	-6	39.8		
7	146	12.8	268	33.9		26.1	357	58.1		35.3	113	15.9		42.1	304	31.6		40.0		
8	161	15.2	283	33.2		26.9	12	59.2		34.9	128	18.7		42.0	319	33.8		40.1		
9	176	17.7	298	32.4		27.7	28	00.4		34.5	143	21.5		41.9	334	36.0		40.2		
10	191	20.2	313	31.6		28.4	43	01.5		34.1	158	24.3		41.8	349	38.1		40.3		
11	206	22.6	328	30.9	-20	29.2	58	02.7	+14	33.7	173	27.1	+11	41.7	4	40.3	-6	40.4		
12	221	25.1	343	30.1	-20	30.0	73	03.9	+14	33.3	188	29.9	+11	41.6	19	42.5	-6	40.5		
13	236	27.6	358	29.4		30.7	88	05.0		32.9	203	32.7		41.5	34	44.7		40.6		
14	251	30.0	13	28.6		31.5	103	06.2		32.5	218	35.5		41.4	49	46.9		40.7		
15	266	32.5	28	27.9		32.2	118	07.4		32.1	233	38.3		41.2	64	49.1		40.8		
16	281	34.9	43	27.1		33.0	133	08.5		31.7	248	41.0		41.1	79	51.3		40.9		
17	296	37.4	58	26.4	-20	33.8	148	09.7	+14	31.3	263	43.8	+11	41.0	94	53.4	-6	41.0		
18	311	39.9	73	25.6	-20	34.5	163	10.9	+14	30.9	278	46.6	+11	40.9	109	55.6	-6	41.1		
19	326	42.3	88	24.8		35.3	178	12.1		30.5	293	49.4		40.8	124	57.8		41.2		
20	341	44.8	103	24.1		36.0	193	13.2		30.1	308	52.2		40.7	140	00.0		41.3		
21	356	47.3	118	23.3		36.8	208	14.4		29.7	323	55.0		40.6	155	02.2		41.4		
22	11	49.7	133	22.6		37.5	223	15.6		29.3	338	57.8		40.5	170	04.4		41.6		
23	26	52.2	148	21.8		38.3	238	16.7		28.9	354	00.6		40.4	185	06.6		41.7		
24	41	54.7	163	21.1	-20	39.0	253	17.9	+14	28.4	9	03.4	+11	40.3	200	08.7	-6	41.8		
Dif	—		-8		-8		+12		-4		+28		-1		+22		-1			

UT	SOL			 LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16'1			Edad: 7 ^d 2	PHE {	SD: 15'2		R°: 43 ^m	Náutico		Civil	Hora	R°	Hora	R°	
	PMG: 11 ^h 43 ^m 6															
	hG ☉	Dec		hG ☾	Dif	Dec	Dif									
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m
0	184	06.5	-14	52.8	86	57.8	-12	24.5	60 N	5 51	6 41	7 26	13 49	10	23 57	78
1	199	06.5		53.6	101	29.8	14.2	103	58	48	35	18	44	12	***	***
2	214	06.5		54.4	116	01.9	131	103	56	46	30	10	39	15	***	***
3	229	06.5		55.2	130	34.1	132	104	54	44	26	7 04	34	17	***	***
4	244	06.5		56.0	145	06.4	133	105	52	42	22	6 58	30	19	***	***
5	259	06.5	-14	56.8	159	38.7	133	104	50	5 40	6 18	6 52	13 26	21	***	***
6	274	06.5	-14	57.5	174	11.1	134	105	45	5 35	6 10	6 41	13 18	24	***	***
7	289	06.5		58.3	188	43.6	135	106	40	31	6 03	31	11	28	***	***
8	304	06.5		59.1	203	16.1	135	106	35	26	5 56	22	05	31	***	***
9	319	06.5	-14	59.9	217	48.7	136	106	30	22	50	15	13 00	33	***	***
10	334	06.5	-15	00.7	232	21.4	137	107	20	13	39	6 02	12 51	37	***	***
11	349	06.5	-15	01.5	246	54.1	137	107	10 N	5 04	5 29	5 51	12 43	40	0 03	48
12	4	06.5	-15	02.2	261	26.9	138	107	0	4 54	5 19	5 40	12 36	43	0 12	45
13	19	06.5		03.0	275	59.7	138	108	10 S	42	5 07	29	28	47	21	42
14	34	06.5		03.8	290	32.7	140	108	20	27	4 55	18	20	51	31	38
15	49	06.5		04.6	305	05.6	139	108	30	4 09	39	5 04	11	55	42	34
16	64	06.5		05.4	319	38.7	141	109	35	3 57	29	4 56	06	57	48	32
17	79	06.5	-15	06.1	334	11.8	141	109	40	3 42	4 18	4 47	12 00	60	0 55	29
18	94	06.5	-15	06.9	348	44.9	141	109	45	3 24	4 04	4 37	11 53	63	1 04	25
19	109	06.5		07.7	3	18.2	143	109	50	3 01	3 47	24	44	67	13	22
20	124	06.5		08.5	17	51.4	142	110	52	2 49	39	18	40	69	18	20
21	139	06.5		09.3	32	24.8	144	110	54	35	30	11	36	71	23	18
22	154	06.5		10.0	46	58.1	143	111	56	2 19	19	4 04	31	73	29	16
23	169	06.5		10.8	61	31.6	145	110	58	1 58	3 07	3 55	26	76	35	14
24	184	06.5	-15	11.6	76	05.1	145	111	60 S	1 31	2 53	3 46	11 20	78	1 42	11

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 21 ^h 08 ^m 9		Mag: -3.8 PMG: 13 ^h 07 ^m		Mag: +1.1 PMG: 7 ^h 06 ^m		Mag: -2.9 PMG: 23 ^h 19 ^m		Mag: +0.7 PMG: 10 ^h 38 ^m									
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	41	54.7	163	21.1	-20	39.0	253	17.9	+14	28.4	9	03.4	+11	40.3	200	08.7	-6	41.8
1	56	57.1	178	20.3		39.8	268	19.1		28.0	24	06.1		40.2	215	10.9		41.9
2	71	59.6	193	19.5		40.5	283	20.2		27.6	39	08.9		40.1	230	13.1		42.0
3	87	02.1	208	18.8		41.3	298	21.4		27.2	54	11.7		39.9	245	15.3		42.1
4	102	04.5	223	18.0		42.0	313	22.6		26.8	69	14.5		39.8	260	17.5		42.2
5	117	07.0	238	17.2	-20	42.8	328	23.8	+14	26.4	84	17.3	+11	39.7	275	19.7	-6	42.3
6	132	09.4	253	16.5	-20	43.5	343	24.9	+14	26.0	99	20.1	+11	39.6	290	21.9	-6	42.4
7	147	11.9	268	15.7		44.3	358	26.1		25.6	114	22.9		39.5	305	24.0		42.5
8	162	14.4	283	14.9		45.0	13	27.3		25.2	129	25.7		39.4	320	26.2		42.6
9	177	16.8	298	14.2		45.8	28	28.4		24.8	144	28.5		39.3	335	28.4		42.7
10	192	19.3	313	13.4		46.5	43	29.6		24.4	159	31.2		39.2	350	30.6		42.8
11	207	21.8	328	12.7	-20	47.2	58	30.8	+14	24.0	174	34.0	+11	39.1	5	32.8	-6	42.9
12	222	24.2	343	11.9	-20	48.0	73	32.0	+14	23.6	189	36.8	+11	39.0	20	35.0	-6	43.0
13	237	26.7	358	11.1		48.7	88	33.1		23.2	204	39.6		38.9	35	37.2		43.1
14	252	29.2	13	10.4		49.5	103	34.3		22.8	219	42.4		38.8	50	39.4		43.3
15	267	31.6	28	09.6		50.2	118	35.5		22.4	234	45.2		38.7	65	41.5		43.4
16	282	34.1	43	08.8		50.9	133	36.7		21.9	249	48.0		38.5	80	43.7		43.5
17	297	36.5	58	08.0	-20	51.7	148	37.8	+14	21.5	264	50.8	+11	38.4	95	45.9	-6	43.6
18	312	39.0	73	07.3	-20	52.4	163	39.0	+14	21.1	279	53.5	+11	38.3	110	48.1	-6	43.7
19	327	41.5	88	06.5		53.1	178	40.2		20.7	294	56.3		38.2	125	50.3		43.8
20	342	43.9	103	05.7		53.9	193	41.4		20.3	309	59.1		38.1	140	52.5		43.9
21	357	46.4	118	05.0		54.6	208	42.5		19.9	325	01.9		38.0	155	54.7		44.0
22	12	48.9	133	04.2		55.3	223	43.7		19.5	340	04.7		37.9	170	56.8		44.1
23	27	51.3	148	03.4		56.1	238	44.9		19.1	355	07.5		37.8	185	59.0		44.2
24	42	53.8	163	02.6	-20	56.8	253	46.1	+14	18.7	10	10.3	+11	37.7	201	01.2	-6	44.3
Dif	—		-8	-7			+12	-4			+28	-1			+22	-1		

UT	SOL		☾ LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16 ^h 1		Edad: 8 ^d 2 PHE { 4 ^h : 55/2 12 ^h : 55/0 20 ^h : 54/8 R°: 42 ^m											
	PMG: 11 ^h 43 ^m 6		SD: 15 ^h 1 PMG: 19 ^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	184	06.5	-15	11.6	76	05.1	-8 07.0	60 N	15 57	16 43	17 33	13 59 9	** ** *	** ** *
1	199	06.5		12.4	90	38.6 ¹⁴⁵	-7 55.9 ¹¹¹	58	16 06		49 36	56 11	0 02 75	
2	214	06.5		13.1	105	12.2 ¹⁴⁶	44.7 ¹¹²	56	14	54	38	54 13	06 73	
3	229	06.5		13.9	119	45.8 ¹⁴⁶	33.6 ¹¹¹	54	21	16 59	41	51 16	10 70	
4	244	06.5		14.7	134	19.5 ¹⁴⁷	22.4 ¹¹²	52	27	17 03	43	49 17	14 68	
5	259	06.5	-15	15.5	148	53.3 ¹⁴⁸	-7 11.2 ¹¹²	50	16 33	17 07	17 45	13 47 19	0 17 66	
6	274	06.5	-15	16.2	163	27.1 ¹⁴⁸	-7 00.0 ¹¹²	45	16 45	17 15	17 50	13 42 23	0 23 63	
7	289	06.5		17.0	178	00.9 ¹⁴⁸	-6 48.7 ¹¹³	40	16 55	23	17 55	39 25	29 59	
8	304	06.5		17.8	192	34.8 ¹⁴⁹	37.4 ¹¹³	35	17 03	30	18 00	36 28	34 56	
9	319	06.5		18.6	207	08.7 ¹⁴⁹	26.2 ¹¹²	30	11	36	04	33 30	38 54	
10	334	06.5		19.3	221	42.6 ¹⁴⁹	14.9 ¹¹³	20	24	47	13	28 35	45 50	
11	349	06.4	-15	20.1	236	16.7 ¹⁵¹	-6 03.6 ¹¹³	10 N	17 36	17 58	18 23	13 23 39	0 51 46	
12	4	06.4	-15	20.9	250	50.7 ¹⁵⁰	-5 52.2 ¹¹⁴	0	17 47	18 08	18 33	13 19 42	0 57 43	
13	19	06.4		21.6	265	24.8 ¹⁵¹	40.9 ¹¹³	10 S	17 58	20	18 46	15 46	1 03 39	
14	34	06.4		22.4	279	58.9 ¹⁵¹	29.5 ¹¹⁴	20	18 10	33	19 01	11 49	09 35	
15	49	06.4		23.2	294	33.1 ¹⁵²	18.1 ¹¹⁴	30	24	18 50	20	06 53	16 31	
16	64	06.4		24.0	309	07.3 ¹⁵²	-5 06.7 ¹¹⁴	35	32	19 00	32	03 56	20 29	
17	79	06.4	-15	24.7	323	41.5 ¹⁵²	-4 55.3 ¹¹⁴	40	18 42	19 11	19 47	13 00 58	1 24 27	
18	94	06.4	-15	25.5	338	15.8 ¹⁵³	-4 43.9 ¹¹⁴	45	18 53	19 25	20 06	12 56 62	1 29 24	
19	109	06.4		26.3	352	50.1 ¹⁵³	32.5 ¹¹⁴	50	19 06	43	30	51 66	35 20	
20	124	06.4		27.0	7	24.5 ¹⁵⁴	21.1 ¹¹⁴	52	12	19 52	43	49 68	38 18	
21	139	06.4		27.8	21	58.8 ¹⁵³	-4 09.6 ¹¹⁵	54	19	20 01	20 57	47 69	41 17	
22	154	06.4		28.6	36	33.2 ¹⁵⁴	-3 58.2 ¹¹⁴	56	27	12	21 15	44 72	45 14	
23	169	06.3		29.3	51	07.7 ¹⁵⁵	46.7 ¹¹⁵	58	36	25	21 36	42 74	49 11	
24	184	06.3	-15	30.1	65	42.2 ¹⁵⁵	-3 35.3 ¹¹⁴	60 S	19 46	20 40	22 06	12 38 77	1 53 9	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 21 ^h 05 ^m 0		Mag: -3.8 PMG: 13 ^h 09 ^m		Mag: +1.1 PMG: 7 ^h 04 ^m		Mag: -2.9 PMG: 23 ^h 15 ^m		Mag: +0.7 PMG: 10 ^h 34 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	42	53.8	163	02.6	-20	56.8	253	46.1	+14	18.7
1	57	56.3	178	01.9		57.5	268	47.3		18.3
2	72	58.7	193	01.1		58.2	283	48.4		17.9
3	88	01.2	208	00.3		59.0	298	49.6		17.5
4	103	03.7	222	59.6	-20	59.7	313	50.8		17.1
5	118	06.1	237	58.8	-21	00.4	328	52.0	+14	16.7
6	133	08.6	252	58.0	-21	01.1	343	53.2	+14	16.3
7	148	11.0	267	57.2		01.8	358	54.3		15.9
8	163	13.5	282	56.4		02.6	13	55.5		15.4
9	178	16.0	297	55.7		03.3	28	56.7		15.0
10	193	18.4	312	54.9		04.0	43	57.9		14.6
11	208	20.9	327	54.1	-21	04.7	58	59.1	+14	14.2
12	223	23.4	342	53.3	-21	05.4	74	00.2	+14	13.8
13	238	25.8	357	52.6		06.1	89	01.4		13.4
14	253	28.3	12	51.8		06.9	104	02.6		13.0
15	268	30.8	27	51.0		07.6	119	03.8		12.6
16	283	33.2	42	50.2		08.3	134	05.0		12.2
17	298	35.7	57	49.4	-21	09.0	149	06.2	+14	11.8
18	313	38.2	72	48.7	-21	09.7	164	07.3	+14	11.4
19	328	40.6	87	47.9		10.4	179	08.5		11.0
20	343	43.1	102	47.1		11.1	194	09.7		10.6
21	358	45.5	117	46.3		11.8	209	10.9		10.2
22	13	48.0	132	45.5		12.5	224	12.1		09.8
23	28	50.5	147	44.7		13.2	239	13.3		09.4
24	43	52.9	162	44.0	-21	13.9	254	14.5	+14	09.0

Dif	—	-8	-7	+12	-4	+28	-1	+22	-

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16'1 PMG: 11 ^h 43 ^m 6			Edad: 9 ^d 2 PHE { SD: 14'9 PMG: 20 ^h 11 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	Rº	Hora	Rº	
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m
0	184	06.3	-15 30.1	65	42.2	-3 35.3		60 N	5 55	6 45	7 31	14 08	8	1 15	76	
1	199	06.3	30.9	80	16.7 ¹⁵⁵	23.8 ¹¹⁵		58	52	40	22	07 11		17 74		
2	214	06.3	31.6	94	51.2 ¹⁵⁵	12.3 ¹¹⁵		56	50	34	15	07 13		19 71		
3	229	06.3	32.4	109	25.7 ¹⁵⁵	-3 00.8 ¹¹⁵		54	47	30	08	07 15		20 69		
4	244	06.3	33.2	124	00.3 ¹⁵⁶	-2 49.3 ¹¹⁵		52	45	25	7 01	06 17		22 67		
5	259	06.3	-15 33.9	138	34.9 ¹⁵⁶	-2 37.8 ¹¹⁵		50	5 43	6 21	6 56	14 06	18	1 23	65	
6	274	06.3	-15 34.7	153	09.6 ¹⁵⁷	-2 26.3 ¹¹⁵		45	5 38	6 12	6 43	14 05	22	1 26	61	
7	289	06.2	35.4	167	44.2 ¹⁵⁶	14.8 ¹¹⁵		40	33	6 05	33	04 26		28 58		
8	304	06.2	36.2	182	18.9 ¹⁵⁷	-2 03.3 ¹¹⁵		35	28	5 58	24	04 28		30 55		
9	319	06.2	37.0	196	53.6 ¹⁵⁷	-1 51.8 ¹¹⁵		30	23	52	17	03 31		32 53		
10	334	06.2	37.7	211	28.3 ¹⁵⁷	40.3 ¹¹⁵		20	14	40	6 03	03 34		35 48		
11	349	06.2	-15 38.5	226	03.0 ¹⁵⁷	-1 28.8 ¹¹⁵		10 N	5 04	5 30	5 51	14 02	38	1 37	45	
12	4	06.2	-15 39.2	240	37.8 ¹⁵⁸	-1 17.3 ¹¹⁵		0	4 54	5 19	5 40	14 01	42	1 40	41	
13	19	06.2	40.0	255	12.6 ¹⁵⁸	-1 05.8 ¹¹⁵		10 S	41	5 07	29	01 44		42 38		
14	34	06.1	40.8	269	47.4 ¹⁵⁸	-0 54.3 ¹¹⁵		20	26	4 53	17	14 00	48	44	35	
15	49	06.1	41.5	284	22.2 ¹⁵⁸	42.8 ¹¹⁵		30	4 07	37	5 03	13 59	53	47	31	
16	64	06.1	42.3	298	57.0 ¹⁵⁸	31.3 ¹¹⁵		35	3 54	27	4 54	59 55		49 28		
17	79	06.1	-15 43.0	313	31.8 ¹⁵⁸	-0 19.8 ¹¹⁵		40	3 40	4 15	4 45	13 58	58	1 51	25	
18	94	06.1	-15 43.8	328	06.7 ¹⁵⁹	-0 08.3 ¹¹⁵		45	3 21	4 01	4 34	13 58	61	1 53	22	
19	109	06.1	44.6	342	41.6 ¹⁵⁹	+0 03.2 ¹¹⁵		50	2 56	3 43	20	57 65		55 19		
20	124	06.0	45.3	357	16.4 ¹⁵⁸	14.7 ¹¹⁵		52	44	35	14	57 66		56 17		
21	139	06.0	46.1	11	51.3 ¹⁵⁹	26.2 ¹¹⁵		54	29	25	4 07	56 69		58 15		
22	154	06.0	46.8	26	26.2 ¹⁵⁹	37.7 ¹¹⁵		56	2 12	14	3 59	56 71		1 59	13	
23	169	06.0	47.6	41	01.1 ¹⁵⁹	+0 49.1 ¹¹⁴		58	1 50	3 01	50	56 72		2 00	11	
24	184	06.0	-15 48.3	55	36.0 ¹⁵⁹	+1 00.6 ¹¹⁵		60 S	1 20	2 46	3 40	13 55	76	2 02	9	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 21 ^h 01 ^m 0		Mag: -3.8 PMG: 13 ^h 10 ^m		Mag: +1.1 PMG: 7 ^h 02 ^m		Mag: -2.9 PMG: 23 ^h 11 ^m		Mag: +0.7 PMG: 10 ^h 31 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	43	52.9	162	44.0	-21 13.9	254	14.5	+14 09.0	11	17.2	+11 35.1	201	53.7	-6 46.9
1	58	55.4	177	43.2	14.6	269	15.6	08.5	26	19.9	35.0	216	55.9	47.0
2	73	57.9	192	42.4	15.3	284	16.8	08.1	41	22.7	34.9	231	58.1	47.1
3	89	00.3	207	41.6	16.0	299	18.0	07.7	56	25.5	34.8	247	00.3	47.2
4	104	02.8	222	40.8	16.7	314	19.2	07.3	71	28.3	34.7	262	02.5	47.3
5	119	05.3	237	40.0	-21 17.4	329	20.4	+14 06.9	86	31.1	+11 34.6	277	04.7	-6 47.4
6	134	07.7	252	39.2	-21 18.1	344	21.6	+14 06.5	101	33.9	+11 34.5	292	06.8	-6 47.5
7	149	10.2	267	38.4	18.8	359	22.8	06.1	116	36.7	34.4	307	09.0	47.6
8	164	12.6	282	37.7	19.5	14	24.0	05.7	131	39.4	34.3	322	11.2	47.7
9	179	15.1	297	36.9	20.2	29	25.1	05.3	146	42.2	34.2	337	13.4	47.8
10	194	17.6	312	36.1	20.9	44	26.3	04.9	161	45.0	34.0	352	15.6	47.9
11	209	20.0	327	35.3	-21 21.6	59	27.5	+14 04.5	176	47.8	+11 33.9	7	17.8	-6 48.0
12	224	22.5	342	34.5	-21 22.3	74	28.7	+14 04.1	191	50.6	+11 33.8	22	20.0	-6 48.1
13	239	25.0	357	33.7	23.0	89	29.9	03.7	206	53.4	33.7	37	22.2	48.2
14	254	27.4	12	32.9	23.7	104	31.1	03.3	221	56.1	33.6	52	24.4	48.3
15	269	29.9	27	32.1	24.3	119	32.3	02.9	236	58.9	33.5	67	26.5	48.4
16	284	32.4	42	31.3	25.0	134	33.5	02.5	252	01.7	33.4	82	28.7	48.5
17	299	34.8	57	30.5	-21 25.7	149	34.7	+14 02.1	267	04.5	+11 33.3	97	30.9	-6 48.6
18	314	37.3	72	29.7	-21 26.4	164	35.9	+14 01.6	282	07.3	+11 33.2	112	33.1	-6 48.7
19	329	39.8	87	29.0	27.1	179	37.1	01.2	297	10.1	33.1	127	35.3	48.9
20	344	42.2	102	28.2	27.8	194	38.2	00.8	312	12.9	33.0	142	37.5	49.0
21	359	44.7	117	27.4	28.4	209	39.4	+14 00.4	327	15.6	32.9	157	39.7	49.1
22	14	47.1	132	26.6	29.1	224	40.6	+14 00.0	342	18.4	32.8	172	41.9	49.2
23	29	49.6	147	25.8	29.8	239	41.8	+13 59.6	357	21.2	32.7	187	44.1	49.3
24	44	52.1	162	25.0	-21 30.5	254	43.0	+13 59.2	12	24.0	+11 32.6	202	46.2	-6 49.4

Dif	—	-8	-7	+12	-4	+28	-1	+22	-1

UT	SOL		LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16:1		Edad: 10 ^d 2	PHE {	4 ^h : 54:3 12 ^h : 54:2 20 ^h : 54:1	Final del crepúsculo			Salida de Luna		Puesta de Luna				
	PMG: 11 ^h 43 ^m 6					SD: 14:8			R°: 42 ^m		Hora		R°		
	hG ☉	Dec	hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	h m	h m	h m	h m m		h m m		
0	184	06.0	-15 48.3	55	36.0	+1 00.6	60 N	15 52	16 39	17 29	14 16	9	2 31	76	
1	199	05.9	49.1	70	11.0	12.0	58	16 02	45	32	18 12		31	72	
2	214	05.9	49.8	84	45.9	23.5	56	10	50	35	20 14		30	70	
3	229	05.9	50.6	99	20.8	34.9	54	17	16 55	37	22 15		29	69	
4	244	05.9	51.4	113	55.8	46.3	52	23	17 00	40	23 18		29	66	
5	259	05.9	-15 52.1	128	30.7	+1 57.7	50	16 29	17 04	17 42	14 24	20	2 28	65	
6	274	05.8	-15 52.9	143	05.7	+2 09.1	45	16 42	17 13	17 48	14 27	23	2 27	61	
7	289	05.8	53.6	157	40.6	20.5	40	16 53	21	53	30 25		26	58	
8	304	05.8	54.4	172	15.6	31.9	35	17 02	28	17 58	32 28		25	55	
9	319	05.8	55.1	186	50.5	43.2	30	10	34	18 03	34 30		25	52	
10	334	05.8	55.9	201	25.5	+2 54.6	20	23	46	12	37 35		23	49	
11	349	05.7	-15 56.6	216	00.4	+3 05.9	10 N	17 36	17 57	18 23	14 40	38	2 22	45	
12	4	05.7	-15 57.4	230	35.4	+3 17.2	0	17 47	18 09	18 34	14 43	41	2 21	41	
13	19	05.7	58.1	245	10.3	28.5	10 S	17 59	21	18 46	45 45		20	38	
14	34	05.7	58.9	259	45.3	39.8	20	18 11	35	19 02	48 49		19	34	
15	49	05.6	-15 59.6	274	20.2	+3 51.1	30	26	18 51	22	52 52		18	30	
16	64	05.6	-16 00.4	288	55.1	+4 02.3	35	34	19 02	35	54 54		17	28	
17	79	05.6	-16 01.1	303	30.1	+4 13.5	40	18 44	19 14	19 50	14 56	57	2 16	25	
18	94	05.6	-16 01.9	318	05.0	+4 24.7	45	18 56	19 28	20 09	14 59	60	2 15	22	
19	109	05.5	02.6	332	39.9	35.9	50	19 10	47	35	15 02	64	14	19	
20	124	05.5	03.3	347	14.8	47.1	52	16	19 56	20 48	03 66		13	17	
21	139	05.5	04.1	1	49.7	+4 58.2	54	23	20 06	21 03	05 68		13	15	
22	154	05.5	04.8	16	24.6	+5 09.4	56	32	17	22	07 70		12	13	
23	169	05.4	05.6	30	59.4	20.5	58	41	31	21 45	08 73		11	12	
24	184	05.4	-16 06.3	45	34.3	+5 31.6	60 S	19 51	20 47	22 19	15 11	75	2 11	8	

UT	ARIES		VENUS		MARTE		JÚPITER			SATURNO		
	PMG: 20 ^h 57 ^m 1		Mag: -3.8 PMG: 13 ^h 11 ^m		Mag: +1.0 PMG: 7 ^h 01 ^m		Mag: -2.9 PMG: 23 ^h 06 ^m			Mag: +0.7 PMG: 10 ^h 27 ^m		
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'
0	44	52.1	162 25.0	-21 30.5	254 43.0	+13 59.2	12	24.0	+11 32.6	202 46.2	-6 49.4	
1	59	54.5	177 24.2	31.2	269 44.2	58.8	27	26.8	32.5	217 48.4	49.5	
2	74	57.0	192 23.4	31.8	284 45.4	58.4	42	29.6	32.3	232 50.6	49.6	
3	89	59.5	207 22.6	32.5	299 46.6	58.0	57	32.3	32.2	247 52.8	49.7	
4	105	01.9	222 21.8	33.2	314 47.8	57.6	72	35.1	32.1	262 55.0	49.8	
5	120	04.4	237 21.0	-21 33.9	329 49.0	+13 57.2	87	37.9	+11 32.0	277 57.2	-6 49.9	
6	135	06.9	252 20.2	-21 34.5	344 50.2	+13 56.8	102	40.7	+11 31.9	292 59.4	-6 50.0	
7	150	09.3	267 19.4	35.2	359 51.4	56.4	117	43.5	31.8	308 01.6	50.1	
8	165	11.8	282 18.6	35.9	14 52.6	56.0	132	46.3	31.7	323 03.8	50.2	
9	180	14.2	297 17.8	36.5	29 53.8	55.6	147	49.0	31.6	338 05.9	50.3	
10	195	16.7	312 17.0	37.2	44 55.0	55.2	162	51.8	31.5	353 08.1	50.4	
11	210	19.2	327 16.2	-21 37.9	59 56.2	+13 54.7	177	54.6	+11 31.4	8 10.3	-6 50.5	
12	225	21.6	342 15.4	-21 38.5	74 57.4	+13 54.3	192	57.4	+11 31.3	23 12.5	-6 50.6	
13	240	24.1	357 14.6	39.2	89 58.6	53.9	208	00.2	31.2	38 14.7	50.7	
14	255	26.6	12 13.8	39.9	104 59.8	53.5	223	03.0	31.1	53 16.9	50.8	
15	270	29.0	27 13.0	40.5	120 01.0	53.1	238	05.7	31.0	68 19.1	50.9	
16	285	31.5	42 12.2	41.2	135 02.2	52.7	253	08.5	30.9	83 21.3	51.0	
17	300	34.0	57 11.4	-21 41.8	150 03.4	+13 52.3	268	11.3	+11 30.8	98 23.5	-6 51.2	
18	315	36.4	72 10.6	-21 42.5	165 04.6	+13 51.9	283	14.1	+11 30.7	113 25.6	-6 51.3	
19	330	38.9	87 09.7	43.2	180 05.8	51.5	298	16.9	30.6	128 27.8	51.4	
20	345	41.4	102 08.9	43.8	195 07.0	51.1	313	19.6	30.4	143 30.0	51.5	
21	0	43.8	117 08.1	44.5	210 08.2	50.7	328	22.4	30.3	158 32.2	51.6	
22	15	46.3	132 07.3	45.1	225 09.4	50.3	343	25.2	30.2	173 34.4	51.7	
23	30	48.7	147 06.5	45.8	240 10.6	49.9	358	28.0	30.1	188 36.6	51.8	
24	45	51.2	162 05.7	-21 46.4	255 11.8	+13 49.5	13	30.8	+11 30.0	203 38.8	-6 51.9	
Dif	—		-8	-7	+12	-4	+28		-1	+22		-1

UT	SOL			O 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 2 PHE { 4 ^h : 54'1 12 ^h : 54'0 20 ^h : 54'0 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	184	05.4	-16	06.3	45	34.3	+5	31.6	60 N	6 00	6 50	7 37	14 25	11		3 47	75				
1	199	05.4		07.1	60	09.2 ¹⁵⁹		42.6 ¹¹⁰	58	5 56	44	27	30	13		43	73				
2	214	05.3		07.8	74	44.0 ¹⁵⁸	+5	53.6 ¹¹⁰	56	54	38	19	34	15		40	71				
3	229	05.3		08.6	89	18.8 ¹⁵⁸	+6	04.6 ¹¹⁰	54	51	33	11	37	18		38	68				
4	244	05.3		09.3	103	53.6 ¹⁵⁸		15.6 ¹¹⁰	52	48	29	7 05	41	19		35	66				
5	259	05.3	-16	10.0	118	28.4 ¹⁵⁸	+6	26.6 ¹¹⁰	50	5 46	6 24	6 59	14 44	20		3 33	64				
6	274	05.2	-16	10.8	133	03.2 ¹⁵⁸	+6	37.5 ¹⁰⁹	45	5 40	6 15	6 46	14 50	24		3 28	61				
7	289	05.2		11.5	147	38.0 ¹⁵⁸		48.4 ¹⁰⁹	40	35	07	35	14 55	28		24	57				
8	304	05.2		12.3	162	12.7 ¹⁵⁷	+6	59.3 ¹⁰⁹	35	30	6 00	26	15 00	30		20	55				
9	319	05.1		13.0	176	47.4 ¹⁵⁷	+7	10.1 ¹⁰⁸	30	25	5 53	18	04	32		17	53				
10	334	05.1		13.7	191	22.1 ¹⁵⁷		21.0 ¹⁰⁹	20	15	41	6 04	12	36		12	48				
11	349	05.1	-16	14.5	205	56.8 ¹⁵⁷	+7	31.8 ¹⁰⁸	10 N	5 05	5 30	5 52	15 18	39		3 07	45				
12	4	05.0	-16	15.2	220	31.5 ¹⁵⁷	+7	42.5 ¹⁰⁷	0	4 54	5 19	5 40	15 24	42		3 02	42				
13	19	05.0		16.0	235	06.1 ¹⁵⁶	+7	53.2 ¹⁰⁷	10 S	41	5 06	28	30	46		2 58	39				
14	34	05.0		16.7	249	40.8 ¹⁵⁷	+8	03.9 ¹⁰⁷	20	25	4 53	16	37	49		53	36				
15	49	04.9		17.4	264	15.4 ¹⁵⁶		14.6 ¹⁰⁷	30	4 05	36	5 01	44	53		48	31				
16	64	04.9		18.2	278	49.9 ¹⁵⁵		25.2 ¹⁰⁶	35	3 52	25	4 52	48	56		45	29				
17	79	04.9	-16	18.9	293	24.5 ¹⁵⁶	+8	35.8 ¹⁰⁶	40	3 37	4 13	4 43	15 53	58		2 41	27				
18	94	04.8	-16	19.6	307	59.0 ¹⁵⁵	+8	46.4 ¹⁰⁶	45	3 17	3 58	4 31	15 59	61		2 37	24				
19	109	04.8		20.4	322	33.5 ¹⁵⁵	+8	56.9 ¹⁰⁵	50	2 52	40	17	16 06	65		33	20				
20	124	04.8		21.1	337	08.0 ¹⁵⁵	+9	07.4 ¹⁰⁵	52	39	31	10	09	67		30	19				
21	139	04.7		21.8	351	42.5 ¹⁵⁵		17.9 ¹⁰⁵	54	24	21	4 03	13	68		28	16				
22	154	04.7		22.6	6	16.9 ¹⁵⁴		28.3 ¹⁰⁴	56	2 05	3 09	3 55	17	70		25	15				
23	169	04.7		23.3	20	51.3 ¹⁵⁴		38.6 ¹⁰³	58	1 41	2 56	46	21	73		23	12				
24	184	04.6	-16	24.0	35	25.7 ¹⁵⁴	+9	49.0 ¹⁰⁴	60 S	1 08	2 40	3 35	16 26	76		2 19	10				
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO								
	PMG: 20 ^h 53 ^m 2			Mag: -3.8 PMG: 13 ^h 12 ^m			Mag: +1.0 PMG: 6 ^h 59 ^m			Mag: -2.9 PMG: 23 ^h 02 ^m			Mag: +0.7 PMG: 10 ^h 24 ^m								
	hG ♈		Dec	hG ♀		Dec	hG ♂		Dec	hG ♃		Dec	hG ♄		Dec						
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m			
0	45	51.2	162	05.7	-21	46.4	255	11.8	+13	49.5	13	30.8	+11	30.0	203	38.8	-6	51.9			
1	60	53.7	177	04.9		47.1	270	13.0		49.1	28	33.6		29.9	218	41.0		52.0			
2	75	56.1	192	04.1		47.7	285	14.2		48.7	43	36.3		29.8	233	43.2		52.1			
3	90	58.6	207	03.3		48.4	300	15.4		48.3	58	39.1		29.7	248	45.4		52.2			
4	106	01.1	222	02.5		49.0	315	16.6		47.9	73	41.9		29.6	263	47.5		52.3			
5	121	03.5	237	01.7	-21	49.7	330	17.8	+13	47.4	88	44.7	+11	29.5	278	49.7	-6	52.4			
6	136	06.0	252	00.8	-21	50.3	345	19.0	+13	47.0	103	47.5	+11	29.4	293	51.9	-6	52.5			
7	151	08.5	267	00.0		51.0	0	20.2		46.6	118	50.2		29.3	308	54.1		52.6			
8	166	10.9	281	59.2		51.6	15	21.4		46.2	133	53.0		29.2	323	56.3		52.7			
9	181	13.4	296	58.4		52.3	30	22.6		45.8	148	55.8		29.1	338	58.5		52.8			
10	196	15.9	311	57.6		52.9	45	23.8		45.4	163	58.6		29.0	354	00.7		52.9			
11	211	18.3	326	56.8	-21	53.5	60	25.0	+13	45.0	179	01.4	+11	28.9	9	02.9	-6	53.0			
12	226	20.8	341	56.0	-21	54.2	75	26.2	+13	44.6	194	04.1	+11	28.8	24	05.1	-6	53.1			
13	241	23.2	356	55.2		54.8	90	27.4		44.2	209	06.9		28.7	39	07.3		53.2			
14	256	25.7	11	54.3		55.5	105	28.7		43.8	224	09.7		28.6	54	09.4		53.3			
15	271	28.2	26	53.5		56.1	120	29.9		43.4	239	12.5		28.5	69	11.6		53.4			
16	286	30.6	41	52.7		56.7	135	31.1		43.0	254	15.3		28.3	84	13.8		53.5			
17	301	33.1	56	51.9	-21	57.4	150	32.3	+13	42.6	269	18.0	+11	28.2	99	16.0	-6	53.6			
18	316	35.6	71	51.1	-21	58.0	165	33.5	+13	42.2	284	20.8	+11	28.1	114	18.2	-6	53.8			
19	331	38.0	86	50.3		58.6	180	34.7		41.8	299	23.6		28.0	129	20.4		53.9			
20	346	40.5	101	49.4		59.3	195	35.9		41.4	314	26.4		27.9	144	22.6		54.0			
21	1	43.0	116	48.6	-21	59.9	210	37.1		41.0	329	29.2		27.8	159	24.8		54.1			
22	16	45.4	131	47.8	-22	00.5	225	38.3		40.6	344	31.9		27.7	174	27.0		54.2			
23	31	47.9	146	47.0		01.2	240	39.5		40.2	359	34.7		27.6	189	29.2		54.3			
24	46	50.3	161	46.2	-22	01.8	255	40.7	+13	39.8	14	37.5	+11	27.5	204	31.4	-6	54.4			
Dif	—			-8			-6			+12			-4			+28			-1		

UT	SOL				LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna		
	SD: 16 ^h 1 PMG: 11 ^h 43 ^m 7				Edad: 12 ^d 2 PHE { 4 ^h : 54 ⁰ 12 ^h : 54 ⁰ 20 ^h : 54 ⁰ PMG: 22 ^h 17 ^m R°: 44 ^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	184	04.6	-16	24.0	35	25.7	+9	49.0	60 N	15 47	16 34	17 25	14 36 13		5 02 76			
1	199	04.6		24.8	50	00.0 ¹⁵³	+9	59.3 ¹⁰³	58	15 57		41	43 16		4 56 73			
2	214	04.5		25.5	64	34.3 ¹⁵³	+10	09.6 ¹⁰³	56	16 06		47	49 19		51 70			
3	229	04.5		26.2	79	08.6 ¹⁵³		19.8 ¹⁰²	54	13	52	34	14 55 20		46 68			
4	244	04.5		27.0	93	42.8 ¹⁵²		30.0 ¹⁰²	52	20	16 57	37	15 00 22		41 67			
5	259	04.4	-16	27.7	108	17.1 ¹⁵³	+10	40.1 ¹⁰¹	50	16 26	17 01	17 40	15 04 24		4 37 65			
6	274	04.4	-16	28.4	122	51.3 ¹⁵²	+10	50.2 ¹⁰¹	45	16 39	17 11	17 46	15 14 28		4 29 60			
7	289	04.4		29.2	137	25.4 ¹⁵¹	+11	00.3 ¹⁰¹	40	16 50		19	23 30		21 58			
8	304	04.3		29.9	151	59.5 ¹⁵¹		10.3 ¹⁰⁰	35	17 00	26	17 57	30 33		15 55			
9	319	04.3		30.6	166	33.6 ¹⁵¹		20.2 ⁹⁹	30	08	33	18 02	36 35		10 53			
10	334	04.2		31.3	181	07.7 ¹⁵¹		30.2 ¹⁰⁰	20	23	45	12	48 38		4 00 50			
11	349	04.2	-16	32.1	195	41.7 ¹⁵⁰	+11	40.0 ⁹⁸	10 N	17 35	17 57	18 22	15 57 41		3 52 46			
12	4	04.2	-16	32.8	210	15.7 ¹⁵⁰	+11	49.9 ⁹⁹	0	17 47	18 09	18 34	16 06 45		3 44 44			
13	19	04.1		33.5	224	49.6 ¹⁴⁹	+11	59.7 ⁹⁸	10 S	17 59		21	18 47		37 40			
14	34	04.1		34.2	239	23.5 ¹⁴⁹	+12	09.4 ⁹⁷	20	18 12		36	19 03		26 50			
15	49	04.0		35.0	253	57.4 ¹⁴⁹		19.1 ⁹⁷	30	28	18 53	24	37 54		19 34			
16	64	04.0		35.7	268	31.2 ¹⁴⁸		28.7 ⁹⁶	35	36	19 04	37	44 55		14 31			
17	79	03.9	-16	36.4	283	05.0 ¹⁴⁸	+12	38.3 ⁹⁶	40	18 47	19 16	19 53	16 51 58		3 08 29			
18	94	03.9	-16	37.1	297	38.8 ¹⁴⁸	+12	47.8 ⁹⁵	45	18 58	19 32	20 13	17 00 61		3 01 26			
19	109	03.9		37.9	312	12.5 ¹⁴⁷	+12	57.3 ⁹⁵	50	19 13	19 51	40	11 64		2 53 22			
20	124	03.8		38.6	326	46.2 ¹⁴⁷	+13	06.8 ⁹⁵	52	20	20 00	20 53	16 66		49 20			
21	139	03.8		39.3	341	19.8 ¹⁴⁶		16.1 ⁹³	54	27	10	21 09	21 68		44 19			
22	154	03.7		40.0	355	53.4 ¹⁴⁶		25.5 ⁹⁴	56	36	22	29	27 71		40 16			
23	169	03.7		40.8	10	27.0 ¹⁴⁶		34.8 ⁹³	58	46	37	21 55	34 73		35 14			
24	184	03.6	-16	41.5	25	00.5 ¹⁴⁵	+13	44.0 ⁹²	60 S	19 57	20 53	22 33	17 42 76		2 29 11			
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 20 ^h 49 ^m 2		Mag: -3.8 PMG: 13 ^h 14 ^m				Mag: +1.0 PMG: 6 ^h 57 ^m				Mag: -2.9 PMG: 22 ^h 57 ^m				Mag: +0.7 PMG: 10 ^h 20 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	46	50.3	161	46.2	-22	01.8	255	40.7	+13	39.8	14	37.5	+11	27.5	204	31.4	-6	54.4
1	61	52.8	176	45.3		02.4	270	42.0		39.3	29	40.3		27.4	219	33.5		54.5
2	76	55.3	191	44.5		03.0	285	43.2		38.9	44	43.1		27.3	234	35.7		54.6
3	91	57.7	206	43.7		03.7	300	44.4		38.5	59	45.8		27.2	249	37.9		54.7
4	107	00.2	221	42.9		04.3	315	45.6		38.1	74	48.6		27.1	264	40.1		54.8
5	122	02.7	236	42.1	-22	04.9	330	46.8	+13	37.7	89	51.4	+11	27.0	279	42.3	-6	54.9
6	137	05.1	251	41.2	-22	05.5	345	48.0	+13	37.3	104	54.2	+11	26.9	294	44.5	-6	55.0
7	152	07.6	266	40.4		06.1	0	49.2		36.9	119	56.9		26.8	309	46.7		55.1
8	167	10.1	281	39.6		06.8	15	50.4		36.5	134	59.7		26.7	324	48.9		55.2
9	182	12.5	296	38.8		07.4	30	51.7		36.1	150	02.5		26.6	339	51.1		55.3
10	197	15.0	311	37.9		08.0	45	52.9		35.7	165	05.3		26.5	354	53.3		55.4
11	212	17.5	326	37.1	-22	08.6	60	54.1	+13	35.3	180	08.1	+11	26.4	9	55.5	-6	55.5
12	227	19.9	341	36.3	-22	09.2	75	55.3	+13	34.9	195	10.8	+11	26.3	24	57.6	-6	55.6
13	242	22.4	356	35.5		09.8	90	56.5		34.5	210	13.6		26.2	39	59.8		55.7
14	257	24.8	11	34.6		10.4	105	57.7		34.1	225	16.4		26.1	55	02.0		55.8
15	272	27.3	26	33.8		11.0	120	58.9		33.7	240	19.2		26.0	70	04.2		55.9
16	287	29.8	41	33.0		11.7	136	00.2		33.3	255	21.9		25.9	85	06.4		56.0
17	302	32.2	56	32.2	-22	12.3	151	01.4	+13	32.9	270	24.7	+11	25.7	100	08.6	-6	56.1
18	317	34.7	71	31.3	-22	12.9	166	02.6	+13	32.5	285	27.5	+11	25.6	115	10.8	-6	56.2
19	332	37.2	86	30.5		13.5	181	03.8		32.1	300	30.3		25.5	130	13.0		56.3
20	347	39.6	101	29.7		14.1	196	05.0		31.7	315	33.1		25.4	145	15.2		56.4
21	2	42.1	116	28.8		14.7	211	06.2		31.3	330	35.8		25.3	160	17.4		56.5
22	17	44.6	131	28.0		15.3	226	07.5		30.8	345	38.6		25.2	175	19.6		56.6
23	32	47.0	146	27.2		15.9	241	08.7		30.4	0	41.4		25.1	190	21.7		56.7
24	47	49.5	161	26.4	-22	16.5	256	09.9	+13	30.0	15	44.2	+11	25.0	205	23.9	-6	56.9
Dif	—		-8		-6		+12		-4		+28		-1		+22		-1	

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16'1			Edad: 13 ^d 2 PHE { 4 ^h : 54'0 12 ^h : 54'0 20 ^h : 54'1 Rº: 47 ^m														
	PMG: 11 ^h 43 ^m 8			SD: 14'7 PMG: 23 ^h 01 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	Rº	Hora	Rº			
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m		
0	184	03.6	-16	41.5	25	00.5	+13	44.0	60 N	6 04	6 55	7 42	14 49	18	6 18	76		
1	199	03.6		42.2	39	34.0 ¹⁴⁵	+13	53.1	58	6 00	48	32	14 59	21	09	73		
2	214	03.5		42.9	54	07.4 ¹⁴⁴	+14	02.2	56	5 57	42	23	15 08	23	6 01	70		
3	229	03.5		43.6	68	40.8 ¹⁴⁴		11.3	54	54	37	15	15 25		5 54	68		
4	244	03.5		44.4	83	14.2 ¹⁴⁴		20.3	52	51	32	08	22 27		48	65		
5	259	03.4	-16	45.1	97	47.5 ¹⁴³	+14	29.2	50	5 49	6 27	7 02	15 28	29	5 42	64		
6	274	03.4	-16	45.8	112	20.7 ¹⁴²	+14	38.1	45	5 42	6 18	6 49	15 42	31	5 29	61		
7	289	03.3		46.5	126	54.0 ¹⁴³		46.9	40	37	09	38	15 53	34	19	58		
8	304	03.3		47.2	141	27.1 ¹⁴¹	+14	55.7	35	31	6 02	28	16 03	36	10	56		
9	319	03.2		47.9	156	00.3 ¹⁴²	+15	04.4	30	26	5 55	20	11 38		5 03	54		
10	334	03.2		48.7	170	33.3 ¹⁴⁰		13.0	20	16	42	6 05	26 41		4 50	50		
11	349	03.1	-16	49.4	185	06.4 ¹⁴¹	+15	21.6	10 N	5 05	5 31	5 52	16 38	44	4 38	48		
12	4	03.1	-16	50.1	199	39.4 ¹⁴⁰	+15	30.1	0	4 54	5 19	5 40	16 51	46	4 28	44		
13	19	03.0		50.8	214	12.3 ¹³⁹		38.6	10 S	40	5 06	28	17 03	48	17	42		
14	34	03.0		51.5	228	45.2 ¹³⁹		46.9	20	24	4 52	15	16 51		4 05	40		
15	49	02.9		52.2	243	18.1 ¹³⁹	+15	55.3	30	4 03	34	5 00	31 54		3 53	36		
16	64	02.9		53.0	257	50.9 ¹³⁸	+16	03.5	35	3 50	23	4 51	39 56		45	34		
17	79	02.8	-16	53.7	272	23.7 ¹³⁸	+16	11.7	40	3 34	4 11	4 41	17 49	58	3 37	31		
18	94	02.8	-16	54.4	286	56.4 ¹³⁷	+16	19.8	45	3 14	3 55	4 29	18 01	60	3 27	29		
19	109	02.7		55.1	301	29.0 ¹³⁶		27.9	50	2 47	36	14	15 64		15	26		
20	124	02.7		55.8	316	01.7 ¹³⁷		35.8	52	34	27	4 07	22 65		09	25		
21	139	02.6		56.5	330	34.2 ¹³⁵		43.7	54	2 18	16	3 59	29 67		3 03	23		
22	154	02.6		57.2	345	06.8 ¹³⁶		51.6	56	1 58	3 04	51	38 69		2 56	21		
23	169	02.5		57.9	359	39.2 ¹³⁴	+16	59.4	58	1 32	2 50	41	47 72		49	18		
24	184	02.4	-16	58.6	14	11.7 ¹³⁵	+17	07.1	60 S	0 54	2 33	3 30	18 58	75	2 40	15		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG 20 ^h 45 ^m 3		Mag: -3.8 PMG: 13 ^h 15 ^m			Mag: +1.0 PMG: 6 ^h 55 ^m			Mag: -2.9 PMG: 22 ^h 53 ^m			Mag: +0.7 PMG: 10 ^h 17 ^m						
	hG ♈		hG ♀			hG ♂			hG ♃			hG ♄						
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°	°	'	
0	47	49.5	161	26.4	-22	16.5	256	09.9	+13	30.0	15	44.2	+11	25.0	205	23.9	-6	56.9
1	62	51.9	176	25.5		17.1	271	11.1		29.6	30	46.9		24.9	220	26.1		57.0
2	77	54.4	191	24.7		17.7	286	12.3		29.2	45	49.7		24.8	235	28.3		57.1
3	92	56.9	206	23.9		18.3	301	13.6		28.8	60	52.5		24.7	250	30.5		57.2
4	107	59.3	221	23.0		18.9	316	14.8		28.4	75	55.3		24.6	265	32.7		57.3
5	123	01.8	236	22.2	-22	19.5	331	16.0	+13	28.0	90	58.0	+11	24.5	280	34.9	-6	57.4
6	138	04.3	251	21.4	-22	20.1	346	17.2	+13	27.6	106	00.8	+11	24.4	295	37.1	-6	57.5
7	153	06.7	266	20.5		20.7	1	18.4		27.2	121	03.6		24.3	310	39.3		57.6
8	168	09.2	281	19.7		21.3	16	19.7		26.8	136	06.4		24.2	325	41.5		57.7
9	183	11.7	296	18.9		21.8	31	20.9		26.4	151	09.1		24.1	340	43.7		57.8
10	198	14.1	311	18.0		22.4	46	22.1		26.0	166	11.9		24.0	355	45.9		57.9
11	213	16.6	326	17.2	-22	23.0	61	23.3	+13	25.6	181	14.7	+11	23.9	10	48.1	-6	58.0
12	228	19.1	341	16.4	-22	23.6	76	24.6	+13	25.2	196	17.5	+11	23.8	25	50.2	-6	58.1
13	243	21.5	356	15.5		24.2	91	25.8		24.8	211	20.2		23.7	40	52.4		58.2
14	258	24.0	11	14.7		24.8	106	27.0		24.4	226	23.0		23.6	55	54.6		58.3
15	273	26.4	26	13.8		25.4	121	28.2		24.0	241	25.8		23.5	70	56.8		58.4
16	288	28.9	41	13.0		25.9	136	29.4		23.6	256	28.6		23.4	85	59.0		58.5
17	303	31.4	56	12.2	-22	26.5	151	30.7	+13	23.2	271	31.3	+11	23.3	101	01.2	-6	58.6
18	318	33.8	71	11.3	-22	27.1	166	31.9	+13	22.8	286	34.1	+11	23.2	116	03.4	-6	58.7
19	333	36.3	86	10.5		27.7	181	33.1		22.4	301	36.9		23.1	131	05.6		58.8
20	348	38.8	101	09.6		28.3	196	34.3		22.0	316	39.7		23.0	146	07.8		58.9
21	3	41.2	116	08.8		28.8	211	35.6		21.5	331	42.4		22.9	161	10.0		59.0
22	18	43.7	131	08.0		29.4	226	36.8		21.1	346	45.2		22.8	176	12.2		59.1
23	33	46.2	146	07.1		30.0	241	38.0		20.7	1	48.0		22.7	191	14.4		59.2
24	48	48.6	161	06.3	-22	30.6	256	39.3	+13	20.3	16	50.8	+11	22.6	206	16.6	-6	59.3
Dif	—		-8			-6	+12		-4		+28		-1		+22		-	

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16 ^h 1			Edad: 14 ^d 2 PHE { 4 ^h : 54 ^m 1 12 ^h : 54 ^m 2 20 ^h : 54 ^m 2										
	PMG: 11 ^h 43 ^m 9			SD: 14 ^h 7 PMG: 23 ^h 48 ^m R°: 48 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m
0	184	02.4	-16 58.6	14	11.7	+17 07.1	76	60 N	15 43	16 30	17 21	15 07 25	7 34 73	
1	199	02.4	-16 59.3	28	44.0 ¹³³	14.7	76	58	15 53	37	25	20 27	22 69	
2	214	02.3	-17 00.1	43	16.4 ¹³⁴	22.2	75	56	16 02	43	28	31 29	11 68	
3	229	02.3	00.8	57	48.7 ¹³³	29.7	75	54	10	49	31	40 32	7 02 65	
4	244	02.2	01.5	72	20.9 ¹³²	37.1	74	52	17	54	34	49 33	6 53 64	
5	259	02.2	-17 02.2	86	53.1 ¹³²	+17 44.4	73	50	16 23	16 58	17 37	15 57 34	6 46 63	
6	274	02.1	-17 02.9	101	25.2 ¹³¹	+17 51.7	73	45	16 37	17 08	17 44	16 13 37	6 30 60	
7	289	02.1	03.6	115	57.3 ¹³¹	+17 58.9	72	40	48	17	50	27 39	17 58	
8	304	02.0	04.3	130	29.3 ¹³⁰	+18 06.0	71	35	16 58	25	17 55	39 40	6 06 56	
9	319	01.9	05.0	145	01.3 ¹³⁰	13.0	70	30	17 07	32	18 01	16 49 42	5 57 54	
10	334	01.9	05.7	159	33.3 ¹³⁰	19.9	69	20	22	45	11	17 07 44	40 52	
11	349	01.8	-17 06.4	174	05.2 ¹²⁹	+18 26.8	69	10 N	17 35	17 57	18 22	17 22 46	5 26 49	
12	4	01.8	-17 07.1	188	37.0 ¹²⁸	+18 33.6	68	0	17 47	18 09	18 34	17 37 48	5 12 47	
13	19	01.7	07.8	203	08.8 ¹²⁸	40.3	67	10 S	18 00	22	18 48	17 51 50	4 59 45	
14	34	01.7	08.5	217	40.6 ¹²⁸	46.9	66	20	14	37	19 04	18 07 51	45 42	
15	49	01.6	09.2	232	12.2 ¹²⁶	53.4	65	30	29	18 55	26	25 54	29 39	
16	64	01.5	09.9	246	43.9 ¹²⁷	+18 59.9	65	35	38	19 06	39	35 55	19 38	
17	79	01.5	-17 10.6	261	15.5 ¹²⁶	+19 06.3	64	40	18 49	19 19	19 56	18 47 57	4 08 37	
18	94	01.4	-17 11.3	275	47.0 ¹²⁵	+19 12.6	63	45	19 01	19 35	20 17	19 01 59	3 56 34	
19	109	01.4	12.0	290	18.5 ¹²⁵	18.8	62	50	16	19 54	44	19 61	41 31	
20	124	01.3	12.7	304	50.0 ¹²⁵	24.9	61	52	24	20 04	20 58	27 63	34 29	
21	139	01.2	13.4	319	21.4 ¹²⁴	30.9	60	54	31	15	21 15	36 64	26 28	
22	154	01.2	14.1	333	52.8 ¹²⁴	36.9	60	56	40	28	21 36	47 65	17 26	
23	169	01.1	14.8	348	24.1 ¹²³	42.7	58	58	19 50	20 42	22 04	19 59 68	3 07 23	
24	184	01.0	-17 15.5	2	55.3 ¹²²	+19 48.5	58	60 S	20 02	21 00	22 51	20 13 70	2 55 21	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 20 ^h 41 ^m 4		Mag: -3.8 PMG: 13 ^h 16 ^m			Mag: +1.0 PMG: 6 ^h 53 ^m			Mag: -2.9 PMG: 22 ^h 48 ^m			Mag: +0.8 PMG: 10 ^h 13 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	'	°	°	'	°	°	'	°	'	°	'
0	48	48.6	161	06.3	-22 30.6	256	39.3	+13 20.3	16	50.8	+11 22.6	206	16.6	-6 59.3
1	63	51.1	176	05.4	31.1	271	40.5	19.9	31	53.5	22.5	221	18.7	59.4
2	78	53.6	191	04.6	31.7	286	41.7	19.5	46	56.3	22.4	236	20.9	59.5
3	93	56.0	206	03.8	32.3	301	42.9	19.1	61	59.1	22.3	251	23.1	59.6
4	108	58.5	221	02.9	32.8	316	44.2	18.7	77	01.9	22.2	266	25.3	59.7
5	124	00.9	236	02.1	-22 33.4	331	45.4	+13 18.3	92	04.6	+11 22.1	281	27.5	-6 59.8
6	139	03.4	251	01.2	-22 34.0	346	46.6	+13 17.9	107	07.4	+11 22.0	296	29.7	-6 59.9
7	154	05.9	266	00.4	34.5	1	47.9	17.5	122	10.2	21.9	311	31.9	-7 00.0
8	169	08.3	280	59.5	35.1	16	49.1	17.1	137	12.9	21.7	326	34.1	-7 00.1
9	184	10.8	295	58.7	35.7	31	50.3	16.7	152	15.7	21.6	341	36.3	00.2
10	199	13.3	310	57.8	36.2	46	51.5	16.3	167	18.5	21.5	356	38.5	00.3
11	214	15.7	325	57.0	-22 36.8	61	52.8	+13 15.9	182	21.3	+11 21.4	11	40.7	-7 00.4
12	229	18.2	340	56.1	-22 37.4	76	54.0	+13 15.5	197	24.0	+11 21.3	26	42.9	-7 00.5
13	244	20.7	355	55.3	37.9	91	55.2	15.1	212	26.8	21.2	41	45.1	00.6
14	259	23.1	10	54.5	38.5	106	56.5	14.7	227	29.6	21.1	56	47.3	00.7
15	274	25.6	25	53.6	39.0	121	57.7	14.3	242	32.3	21.0	71	49.5	00.8
16	289	28.0	40	52.8	39.6	136	58.9	13.9	257	35.1	20.9	86	51.6	00.9
17	304	30.5	55	51.9	-22 40.1	152	00.2	+13 13.5	272	37.9	+11 20.8	101	53.8	-7 01.0
18	319	33.0	70	51.1	-22 40.7	167	01.4	+13 13.1	287	40.7	+11 20.7	116	56.0	-7 01.1
19	334	35.4	85	50.2	41.3	182	02.6	12.7	302	43.4	20.6	131	58.2	01.2
20	349	37.9	100	49.4	41.8	197	03.9	12.3	317	46.2	20.5	147	00.4	01.4
21	4	40.4	115	48.5	42.4	212	05.1	11.9	332	49.0	20.4	162	02.6	01.5
22	19	42.8	130	47.7	42.9	227	06.3	11.5	347	51.7	20.3	177	04.8	01.6
23	34	45.3	145	46.8	43.4	242	07.6	11.1	2	54.5	20.2	192	07.0	01.7
24	49	47.8	160	46.0	-22 44.0	257	08.8	+13 10.7	17	57.3	+11 20.1	207	09.2	-7 01.8
Dif	—		-8		-6	+12		-4	+28		-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: 15 ^d 2 SD: 14'8 PMG: **h **m	PHE { 4 ^h : 54'3 12 ^h : 54'4 20 ^h : 54'5 R°: **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	184	01.0	-17	15.5	2	55.3	+19 48.5	60 N	6 08	6 59	7 47	15 32	35	8 47	66		
1	199	01.0		16.2	17	26.5 ¹²²	54.2 ⁵⁷	58	04	52	36	15 47	38	31	65		
2	214	00.9		16.9	31	57.7 ¹²²	+19 59.8 ⁵⁶	56	6 01	46	27	16 00	39	19	62		
3	229	00.9		17.6	46	28.8 ¹²¹	+20 05.3 ⁵⁵	54	5 57	40	19	12 40		8 07	62		
4	244	00.8		18.3	60	59.9 ¹²¹	10.7 ⁵⁴	52	54	35	12	22 41		7 57	60		
5	259	00.7	-17	19.0	75	30.9 ¹²⁰	+20 16.0 ⁵³	50	5 52	6 30	7 06	16 31	42	7 49	59		
6	274	00.7	-17	19.7	90	01.9 ¹²⁰	+20 21.2 ⁵²	45	5 45	6 20	6 52	16 50	44	7 30	57		
7	289	00.6		20.4	104	32.8 ¹¹⁹	26.4 ⁵⁰	40	39	11	40	17 06	45	15	55		
8	304	00.5		21.1	119	03.7 ¹¹⁹	31.4 ⁵²	35	33	6 03	30	19 46		7 02	54		
9	319	00.5		21.8	133	34.6 ¹¹⁹	36.3 ⁴⁹	30	28	5 56	21	31 46		6 51	53		
10	334	00.4		22.5	148	05.4 ¹¹⁸	41.2 ⁴⁹	20	17	43	6 06	17 51	48	32	51		
11	349	00.3	-17	23.1	162	36.1 ¹¹⁷	+20 46.0 ⁴⁸	10 N	5 06	5 31	5 53	18 08	49	6 15	50		
12	4	00.3	-17	23.8	177	06.8 ¹¹⁷	+20 50.6 ⁴⁶	0	4 54	5 19	5 40	18 25	49	5 59	49		
13	19	00.2		24.5	191	37.5 ¹¹⁷	55.2 ⁴⁶	10 S	40	5 06	28	41 51		44	47		
14	34	00.1		25.2	206	08.1 ¹¹⁶	+20 59.7 ⁴⁵	20	23	4 51	5 14	18 58	52	27	46		
15	49	00.1		25.9	220	38.7 ¹¹⁶	+21 04.0 ⁴³	30	4 02	33	4 58	19 19	52	5 08	45		
16	64	00.0		26.6	235	09.2 ¹¹⁵	08.3 ⁴³	35	3 48	22	49	30 54		4 57	43		
17	78	59.9	-17	27.3	249	39.7 ¹¹⁵	+21 12.5 ⁴²	40	3 32	4 09	4 39	19 44	54	4 45	41		
18	93	59.9	-17	28.0	264	10.2 ¹¹⁵	+21 16.5 ⁴⁰	45	3 11	3 53	4 26	20 00	56	4 30	40		
19	108	59.8		28.7	278	40.6 ¹¹⁴	20.5 ⁴⁰	50	2 43	33	11	20 57		12	38		
20	123	59.7		29.3	293	10.9 ¹¹³	24.4 ³⁹	52	29	23	4 04	30 57		4 03	37		
21	138	59.6		30.0	307	41.3 ¹¹⁴	28.2 ³⁸	54	2 12	12	3 56	40 58		3 54	35		
22	153	59.6		30.7	322	11.5 ¹¹²	31.9 ³⁷	56	1 51	3 00	47	20 52	59	43	34		
23	168	59.5		31.4	336	41.8 ¹¹³	35.4 ³⁵	58	1 23	2 45	37	21 07	60	30	32		
24	183	59.4	-17	32.1	351	12.0 ¹¹²	+21 38.9 ³⁵	60 S	0 37	2 27	3 25	21 23	62	3 16	30		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 20 ^h 37 ^m 4		Mag: -3.8 PMG: 13 ^h 18 ^m		Mag: +1.0 PMG: 6 ^h 51 ^m		Mag: -2.9 PMG: 22 ^h 44 ^m		Mag: +0.8 PMG: 10 ^h 10 ^m									
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	49	47.8	160	46.0	257	08.8	+13 10.7	17 57.3	+11 20.1	207 09.2								
1	64	50.2	175	45.1	272	10.0	10.3	33 00.1	20.0	222 11.4								
2	79	52.7	190	44.2	287	11.3	09.9	48 02.8	19.9	237 13.6								
3	94	55.2	205	43.4	302	12.5	09.4	63 05.6	19.8	252 15.8								
4	109	57.6	220	42.5	317	13.8	09.0	78 08.4	19.7	267 18.0								
5	125	00.1	235	41.7	332	15.0	+13 08.6	93 11.1	+11 19.6	282 20.2								
6	140	02.5	250	40.8	347	16.2	+13 08.2	108 13.9	+11 19.5	297 22.4								
7	155	05.0	265	40.0	2	17.5	07.8	123 16.7	19.4	312 24.6								
8	170	07.5	280	39.1	17	18.7	07.4	138 19.4	19.3	327 26.8								
9	185	09.9	295	38.3	32	19.9	07.0	153 22.2	19.2	342 28.9								
10	200	12.4	310	37.4	47	21.2	06.6	168 25.0	19.1	357 31.1								
11	215	14.9	325	36.6	62	22.4	+13 06.2	183 27.7	+11 19.0	12 33.3								
12	230	17.3	340	35.7	77	23.7	+13 05.8	198 30.5	+11 18.9	27 35.5								
13	245	19.8	355	34.8	92	24.9	05.4	213 33.3	18.8	42 37.7								
14	260	22.3	10	34.0	107	26.1	05.0	228 36.1	18.7	57 39.9								
15	275	24.7	25	33.1	122	27.4	04.6	243 38.8	18.6	72 42.1								
16	290	27.2	40	32.3	137	28.6	04.2	258 41.6	18.5	87 44.3								
17	305	29.7	55	31.4	152	29.9	+13 03.8	273 44.4	+11 18.4	102 46.5								
18	320	32.1	70	30.5	167	31.1	+13 03.4	288 47.1	+11 18.3	117 48.7								
19	335	34.6	85	29.7	182	32.4	03.0	303 49.9	18.2	132 50.9								
20	350	37.0	100	28.8	197	33.6	02.6	318 52.7	18.1	147 53.1								
21	5	39.5	115	28.0	212	34.8	02.2	333 55.4	18.0	162 55.3								
22	20	42.0	130	27.1	227	36.1	01.8	348 58.2	17.9	177 57.5								
23	35	44.4	145	26.2	242	37.3	01.4	4 01.0	17.8	192 59.7								
24	50	46.9	160	25.4	257	38.6	+13 01.0	19 03.7	+11 17.7	208 01.9								
Dif	—		-9		-5		+12		-4		+28		-1		+22		-	

UT	SOL		☉ LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16 ^d 2 PMG: 11 ^h 44 ^m 1		Edad: 16 ^d 2 PHE { 4 ^h : 54 ^m 6 12 ^h : 54 ^m 7 20 ^h : 54 ^m 8 PMG: 0 ^h 36 ^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	h m	h m	
0	183	59.4	-17 32.1		351	12.0	+21 38.9	60 N	15 38	16 26	17 17	16 07 49	9 53 55	
1	198	59.4		32.8	5	42.2 ¹¹²	42.3 ³⁴	58	49	33	21	25 49	36 54	
2	213	59.3		33.5	20	12.3 ¹¹¹	45.5 ³²	56	15 58	40	25	39 50	21 54	
3	228	59.2		34.1	34	42.4 ¹¹¹	48.7 ³²	54	16 06	45	28	16 52 50	9 09 54	
4	243	59.1		34.8	49	12.5 ¹¹¹	51.7 ³⁰	52	14	51	32	17 03 50	8 57 54	
5	258	59.1	-17 35.5		63	42.5 ¹¹⁰	+21 54.7 ³⁰	50	16 20	16 56	17 35	17 13 50	8 48 53	
6	273	59.0	-17 36.2		78	12.5 ¹¹⁰	+21 57.5 ²⁸	45	16 35	17 06	17 42	17 34 50	8 27 53	
7	288	58.9		36.9	92	42.4 ¹⁰⁹	+22 00.3 ²⁸	40	47	15	48	17 51 50	8 10 53	
8	303	58.8		37.5	107	12.3 ¹⁰⁹	02.9 ²⁶	35	16 57	23	17 54	18 05 51	7 56 53	
9	318	58.8		38.2	121	42.2 ¹⁰⁹	05.4 ²⁵	30	17 06	31	18 00	17 51	44 52	
10	333	58.7		38.9	136	12.1 ¹⁰⁹	07.9 ²⁵	20	21	44	11	39 50	23 52	
11	348	58.6	-17 39.6		150	41.9 ¹⁰⁸	+22 10.2 ²³	10 N	17 35	17 57	18 22	18 57 51	7 05 51	
12	3	58.5	-17 40.3		165	11.7 ¹⁰⁸	+22 12.4 ²²	0	17 48	18 09	18 35	19 14 51	6 48 51	
13	18	58.5		40.9	179	41.4 ¹⁰⁷	14.5 ²¹	10 S	18 01	23	18 49	32 50	31 50	
14	33	58.4		41.6	194	11.2 ¹⁰⁸	16.5 ²⁰	20	15	38	19 06	19 50 51	6 13 50	
15	48	58.3		42.3	208	40.8 ¹⁰⁶	18.4 ¹⁹	30	31	18 57	28	20 11 51	5 53 48	
16	63	58.2		43.0	223	10.5 ¹⁰⁷	20.1 ¹⁷	35	40	19 08	42	24 51	40 49	
17	78	58.2	-17 43.6		237	40.2 ¹⁰⁷	+22 21.8 ¹⁷	40	18 51	19 21	19 59	20 38 51	5 26 48	
18	93	58.1	-17 44.3		252	09.8 ¹⁰⁶	+22 23.4 ¹⁶	45	19 04	19 38	20 20	20 56 50	5 10 47	
19	108	58.0		45.0	266	39.3 ¹⁰⁵	24.8 ¹⁴	50	20	19 58	20 49	21 17 50	4 50 46	
20	123	57.9		45.7	281	08.9 ¹⁰⁶	26.1 ¹³	52	27	20 08	21 04	27 50	40 45	
21	138	57.8		46.3	295	38.4 ¹⁰⁵	27.4 ¹³	54	35	20	22	38 50	29 45	
22	153	57.8		47.0	310	07.9 ¹⁰⁵	28.5 ¹¹	56	45	33	21 44	21 51 50	17 44	
23	168	57.7		47.7	324	37.4 ¹⁰⁵	29.5 ¹⁰	58	19 55	20 48	22 15	22 07 49	4 02 44	
24	183	57.6	-17 48.4		339	06.9 ¹⁰⁵	+22 30.4 ⁹	60 S	20 07	21 07	23 17	22 25 49	3 46 41	
UT	ARIES		VENUS			MARTE			JÚPITER		SATURNO			
	PMG: 20 ^h 33 ^m 5		Mag: -3.8 PMG: 13 ^h 19 ^m			Mag: +1.0 PMG: 6 ^h 49 ^m			Mag: -2.9 PMG: 22 ^h 40 ^m		Mag: +0.8 PMG: 10 ^h 06 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	50	46.9	160	25.4	-22 56.8		257 38.6	+13 01.0	19 03.7	+11 17.7		208 01.9	-7 04.2	
1	65	49.4	175	24.5		57.3	272 39.8	00.6	34 06.5		17.6	223 04.1	04.3	
2	80	51.8	190	23.7		57.8	287 41.1	+13 00.2	49 09.3		17.5	238 06.3	04.4	
3	95	54.3	205	22.8		58.3	302 42.3	+12 59.8	64 12.0		17.4	253 08.5	04.5	
4	110	56.8	220	21.9		58.8	317 43.5	59.4	79 14.8		17.3	268 10.6	04.6	
5	125	59.2	235	21.1	-22 59.3		332 44.8	+12 59.0	94 17.6	+11 17.2		283 12.8	-7 04.7	
6	141	01.7	250	20.2	-22 59.9		347 46.0	+12 58.6	109 20.3	+11 17.1		298 15.0	-7 04.8	
7	156	04.2	265	19.3	-23 00.4		2 47.3	58.2	124 23.1		17.0	313 17.2	04.9	
8	171	06.6	280	18.5		00.9	17 48.5	57.8	139 25.9		16.9	328 19.4	05.0	
9	186	09.1	295	17.6		01.4	32 49.8	57.4	154 28.6		16.8	343 21.6	05.1	
10	201	11.5	310	16.7		01.9	47 51.0	57.0	169 31.4		16.7	358 23.8	05.2	
11	216	14.0	325	15.9	-23 02.4		62 52.3	+12 56.6	184 34.2	+11 16.6		13 26.0	-7 05.3	
12	231	16.5	340	15.0	-23 02.9		77 53.5	+12 56.2	199 36.9	+11 16.5		28 28.2	-7 05.4	
13	246	18.9	355	14.1		03.4	92 54.8	55.8	214 39.7		16.4	43 30.4	05.5	
14	261	21.4	10	13.3		03.9	107 56.0	55.4	229 42.5		16.3	58 32.6	05.6	
15	276	23.9	25	12.4		04.4	122 57.3	55.0	244 45.2		16.2	73 34.8	05.7	
16	291	26.3	40	11.5		04.9	137 58.5	54.6	259 48.0		16.1	88 37.0	05.8	
17	306	28.8	55	10.7	-23 05.4		152 59.8	+12 54.2	274 50.7	+11 16.0		103 39.2	-7 05.9	
18	321	31.3	70	09.8	-23 05.9		168 01.0	+12 53.8	289 53.5	+11 15.9		118 41.4	-7 06.0	
19	336	33.7	85	08.9		06.4	183 02.3	53.4	304 56.3		15.8	133 43.6	06.1	
20	351	36.2	100	08.1		06.9	198 03.5	53.0	319 59.0		15.8	148 45.8	06.2	
21	6	38.6	115	07.2		07.4	213 04.8	52.6	335 01.8		15.7	163 48.0	06.3	
22	21	41.1	130	06.3		07.9	228 06.0	52.2	350 04.6		15.6	178 50.2	06.4	
23	36	43.6	145	05.4		08.4	243 07.3	51.8	5 07.3		15.5	193 52.4	06.5	
24	51	46.0	160	04.6	-23 08.9		258 08.5	+12 51.4	20 10.1	+11 15.4		208 54.6	-7 06.6	
Dif	—		-9		-5	+12		-4	+28		-1	+22		-

UT	SOL			LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna			Puesta de Luna	
	SD: 16'2			Edad: 17 ^d 2 PHE { 4 ^h : 54'9 12 ^h : 55'0 20 ^h : 55'2														
	PMG: 11 ^h 44 ^m 2			SD: 14'9 PMG: 1 ^h 26 ^m R°: 51 ^m														
	hG ☉		Dec	hG ☾		Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	°	'	°	°	'	°	h m	h m	h m	h m m		h m m			
0	183	57.6	-17 48.4	339	06.9	+22 30.4			60 N	6 12	7 04	7 52	16 56 64	10 48 43				
1	198	57.5	49.0	353	36.3 ¹⁰⁴	31.1	7		58	08	6 56	41	17 14 62	30 44				
2	213	57.4	49.7	8	05.7 ¹⁰⁴	31.8	7		56	04	50	31	29 61	15 45				
3	228	57.4	50.4	22	35.1 ¹⁰⁴	32.3	5		54	6 01	44	23	42 60	10 03 45				
4	243	57.3	51.0	37	04.5 ¹⁰⁴	32.8	5		52	5 57	38	16	17 53 59	9 51 46				
5	258	57.2	-17 51.7	51	33.9 ¹⁰⁴	+22 33.1	3		50	5 54	6 34	7 09	18 03 59	9 41 47				
6	273	57.1	-17 52.4	66	03.2 ¹⁰³	+22 33.3	2		45	5 47	6 23	6 54	18 24 57	9 20 48				
7	288	57.0	53.0	80	32.5 ¹⁰³	33.4	1		40	41	13	42	41 56	9 03 48				
8	303	56.9	53.7	95	01.8 ¹⁰³	33.4	0		35	35	6 05	32	18 56 55	8 49 48				
9	318	56.9	54.4	109	31.1 ¹⁰³	33.3	1		30	29	5 58	23	19 08 55	36 49				
10	333	56.8	55.0	124	00.4 ¹⁰³	33.0	3		20	18	44	6 07	29 54	8 15 50				
11	348	56.7	-17 55.7	138	29.6 ¹⁰²	+22 32.7	3		10 N	5 06	5 32	5 54	19 48 52	7 56 51				
12	3	56.6	-17 56.4	152	58.9 ¹⁰³	+22 32.2	5		0	4 54	5 19	5 41	20 05 51	7 39 51				
13	18	56.5	57.0	167	28.1 ¹⁰²	31.6	6		10 S	39	5 05	28	22 51	21 52				
14	33	56.4	57.7	181	57.3 ¹⁰²	30.9	7		20	22	4 50	5 13	20 41 49	7 03 52				
15	48	56.3	58.4	196	26.5 ¹⁰²	30.1	8		30	4 00	31	4 57	21 02 48	6 41 53				
16	63	56.3	59.0	210	55.7 ¹⁰²	29.2	9		35	3 46	20	48	15 46	29 53				
17	78	56.2	-17 59.7	225	24.9 ¹⁰²	+22 28.2	10		40	3 29	4 06	4 37	21 29 46	6 14 53				
18	93	56.1	-18 00.4	239	54.1 ¹⁰²	+22 27.0	12		45	3 08	3 50	4 24	21 46 45	5 57 54				
19	108	56.0	01.0	254	23.2 ¹⁰¹	25.7	13		50	2 39	29	08	22 07 43	36 54				
20	123	55.9	01.7	268	52.4 ¹⁰²	24.3	14		52	24	19	4 01	17 42	25 55				
21	138	55.8	02.3	283	21.5 ¹⁰¹	22.8	15		54	2 06	3 08	3 52	28 41	14 55				
22	153	55.7	03.0	297	50.7 ¹⁰²	21.2	16		56	1 44	2 55	43	41 40	5 01 55				
23	168	55.6	03.7	312	19.8 ¹⁰¹	19.5	17		58	1 13	39	32	22 56 38	4 46 55				
24	183	55.6	-18 04.3	326	49.0 ¹⁰²	+22 17.7	18		60 S	0 11	2 20	3 20	23 14 36	4 27 57				
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO					
	PMG 20 ^h 29 ^m 6			Mag: -3.8 PMG: 13 ^h 20 ^m			Mag: +1.0 PMG: 6 ^h 47 ^m			Mag: -2.9 PMG: 22 ^h 35 ^m			Mag: +0.8 PMG: 10 ^h 03 ^m					
	hG ♈		Dec	hG ♀		Dec	hG ♂		Dec	hG ♃		Dec	hG ♄		Dec			
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°	°	'	
0	51	46.0	160 04.6	-23 08.9	258 08.5	+12 51.4	20	10.1	+11 15.4	208 54.6	-7 06.6							
1	66	48.5	175 03.7	09.4	273 09.8	51.0	35	12.9	15.3	223 56.8	06.7							
2	81	51.0	190 02.8	09.9	288 11.0	50.6	50	15.6	15.2	238 59.0	06.8							
3	96	53.4	205 02.0	10.3	303 12.3	50.2	65	18.4	15.1	254 01.2	06.9							
4	111	55.9	220 01.1	10.8	318 13.5	49.8	80	21.1	15.0	269 03.3	07.0							
5	126	58.4	235 00.2	-23 11.3	333 14.8	+12 49.4	95	23.9	+11 14.9	284 05.5	-7 07.1							
6	142	00.8	249 59.3	-23 11.8	348 16.0	+12 49.0	110	26.7	+11 14.8	299 07.7	-7 07.2							
7	157	03.3	264 58.5	12.3	3	17.3	125	29.4	14.7	314 09.9	07.3							
8	172	05.8	279 57.6	12.8	18	18.6	140	32.2	14.6	329 12.1	07.4							
9	187	08.2	294 56.7	13.2	33	19.8	155	35.0	14.5	344 14.3	07.5							
10	202	10.7	309 55.8	13.7	48	21.1	170	37.7	14.4	359 16.5	07.6							
11	217	13.1	324 55.0	-23 14.2	63	22.3	+12 47.0	185	40.5	+11 14.3	14 18.7	-7 07.7						
12	232	15.6	339 54.1	-23 14.7	78	23.6	+12 46.6	200	43.2	+11 14.2	29 20.9	-7 07.8						
13	247	18.1	354 53.2	15.2	93	24.8	46.1	215	46.0	14.1	44 23.1	07.9						
14	262	20.5	9 52.3	15.6	108	26.1	45.7	230	48.8	14.0	59 25.3	08.0						
15	277	23.0	24 51.4	16.1	123	27.4	45.3	245	51.5	13.9	74 27.5	08.1						
16	292	25.5	39 50.6	16.6	138	28.6	44.9	260	54.3	13.8	89 29.7	08.2						
17	307	27.9	54 49.7	-23 17.0	153	29.9	+12 44.5	275	57.0	+11 13.7	104 31.9	-7 08.3						
18	322	30.4	69 48.8	-23 17.5	168	31.1	+12 44.1	290	59.8	+11 13.6	119 34.1	-7 08.4						
19	337	32.9	84 47.9	18.0	183	32.4	43.7	306	02.6	13.5	134 36.3	08.5						
20	352	35.3	99 47.1	18.5	198	33.7	43.3	321	05.3	13.4	149 38.5	08.6						
21	7	37.8	114 46.2	18.9	213	34.9	42.9	336	08.1	13.3	164 40.7	08.7						
22	22	40.3	129 45.3	19.4	228	36.2	42.5	351	10.8	13.2	179 42.9	08.8						
23	37	42.7	144 44.4	19.8	243	37.4	42.1	6	13.6	13.1	194 45.1	08.9						
24	52	45.2	159 43.5	-23 20.3	258	38.7	+12 41.7	21	16.4	+11 13.0	209 47.3	-7 09.0						
Dif	—		-9	-5	+13		-4	+28		-1	+22		-1					

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16:2			Edad: 18 ^d 2	PHE { 4 ^h : 55/3 12 ^h : 55/5 20 ^h : 55/6										
	PMG: 11 ^h 44 ^m 4					SD: 15:0			PMG: 2 ^h 17 ^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
0	183	55.6	-18 04.3	326	49.0	+22 17.7		60 N	15 34	16 22	17 14	18 00	74	11 31	30
1	198	55.5	05.0	341	18.1 ¹⁰¹	15.7 ²⁰		58	45	30	18	16	72	14	33
2	213	55.4	05.6	355	47.2 ¹⁰¹	13.6 ²¹		56	15 54	36	22	30	69	11 00	35
3	228	55.3	06.3	10	16.3 ¹⁰¹	11.4 ²²		54	16 03	43	26	42	68	10 48	37
4	243	55.2	07.0	24	45.5 ¹⁰²	09.1 ²³		52	11	48	29	18 52	67	37	38
5	258	55.1	-18 07.6	39	14.6 ¹⁰¹	+22 06.7 ²⁴		50	16 18	16 53	17 32	19 02	65	10 28	39
6	273	55.0	-18 08.3	53	43.7 ¹⁰¹	+22 04.2 ²⁵		45	16 33	17 04	17 40	19 21	63	10 08	41
7	288	54.9	08.9	68	12.8 ¹⁰¹	+22 01.5 ²⁷		40	45	14	46	37	61	9 51	43
8	303	54.8	09.6	82	41.9 ¹⁰¹	+21 58.8 ²⁷		35	16 55	22	53	19 51	58	37	45
9	318	54.7	10.2	97	11.1 ¹⁰²	55.9 ²⁹		30	17 05	30	17 59	20 03	57	25	46
10	333	54.6	10.9	111	40.2 ¹⁰¹	52.9 ³⁰		20	21	44	18 10	23	54	9 05	47
11	348	54.5	-18 11.5	126	09.3 ¹⁰¹	+21 49.8 ³¹		10 N	17 35	17 57	18 22	20 40	53	8 47	49
12	3	54.5	-18 12.2	140	38.5 ¹⁰²	+21 46.6 ³²		0	17 48	18 10	18 35	20 56	51	8 30	51
13	18	54.4	12.8	155	07.6 ¹⁰¹	43.3 ³³		10 S	18 01	24	18 50	21 13	48	8 13	52
14	33	54.3	13.5	169	36.7 ¹⁰¹	39.8 ³⁵		20	16	39	19 07	30	47	7 55	54
15	48	54.2	14.1	184	05.9 ¹⁰²	36.3 ³⁵		30	33	18 59	30	21 50	44	34	56
16	63	54.1	14.8	198	35.0 ¹⁰¹	32.6 ³⁷		35	42	19 10	19 44	22 01	43	22	57
17	78	54.0	-18 15.4	213	04.2 ¹⁰²	+21 28.8 ³⁸		40	18 54	19 24	20 02	22 15	41	7 07	59
18	93	53.9	-18 16.1	227	33.4 ¹⁰²	+21 24.9 ³⁹		45	19 07	19 41	20 24	22 31	38	6 51	59
19	108	53.8	16.7	242	02.6 ¹⁰²	20.9 ⁴⁰		50	23	20 02	20 54	50	36	30	62
20	123	53.7	17.4	256	31.7 ¹⁰¹	16.8 ⁴¹		52	31	12	21 09	22 59	35	20	63
21	138	53.6	18.0	271	00.9 ¹⁰²	12.6 ⁴²		54	39	24	28	23 09	33	6 09	64
22	153	53.5	18.7	285	30.2 ¹⁰³	08.2 ⁴⁴		56	19 49	38	21 52	21	31	5 56	66
23	168	53.4	19.3	299	59.4 ¹⁰²	+21 03.8 ⁴⁴		58	20 00	20 54	22 27	34	29	41	68
24	183	53.3	-18 20.0	314	28.6 ¹⁰²	+20 59.2 ⁴⁶		60 S	20 13	21 14	** **	23 50	25	5 24	69
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 20 ^h 25 ^m 6		Mag: -3.8 PMG: 13 ^h 22 ^m			Mag: +1.0 PMG: 6 ^h 45 ^m			Mag: -2.9 PMG: 22 ^h 31 ^m			Mag: +0.8 PMG: 9 ^h 59 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	'	°	'	'	°	'	'	°	'	'	°	'
0	52	45.2	159	43.5	-23	20.3		258	38.7	+12	41.7	21	16.4	+11	13.0
1	67	47.6	174	42.6		20.8		273	40.0		41.3	36	19.1		12.9
2	82	50.1	189	41.8		21.2		288	41.2		40.9	51	21.9		12.8
3	97	52.6	204	40.9		21.7		303	42.5		40.5	66	24.6		12.7
4	112	55.0	219	40.0		22.2		318	43.7		40.1	81	27.4		12.6
5	127	57.5	234	39.1	-23	22.6		333	45.0	+12	39.8	96	30.2	+11	12.5
6	143	00.0	249	38.2	-23	23.1		348	46.3	+12	39.4	111	32.9	+11	12.4
7	158	02.4	264	37.4		23.5		3	47.5		39.0	126	35.7		12.3
8	173	04.9	279	36.5		24.0		18	48.8		38.6	141	38.4		12.2
9	188	07.4	294	35.6		24.4		33	50.1		38.2	156	41.2		12.2
10	203	09.8	309	34.7		24.9		48	51.3		37.8	171	44.0		12.1
11	218	12.3	324	33.8	-23	25.3		63	52.6	+12	37.4	186	46.7	+11	12.0
12	233	14.8	339	32.9	-23	25.8		78	53.9	+12	37.0	201	49.5	+11	11.9
13	248	17.2	354	32.0		26.2		93	55.1		36.6	216	52.2		11.8
14	263	19.7	9	31.2		26.7		108	56.4		36.2	231	55.0		11.7
15	278	22.1	24	30.3		27.1		123	57.7		35.8	246	57.7		11.6
16	293	24.6	39	29.4		27.6		138	58.9		35.4	262	00.5		11.5
17	308	27.1	54	28.5	-23	28.0		154	00.2	+12	35.0	277	03.3	+11	11.4
18	323	29.5	69	27.6	-23	28.4		169	01.5	+12	34.6	292	06.0	+11	11.3
19	338	32.0	84	26.7		28.9		184	02.7		34.2	307	08.8		11.2
20	353	34.5	99	25.8		29.3		199	04.0		33.8	322	11.5		11.1
21	8	36.9	114	24.9		29.8		214	05.3		33.4	337	14.3		11.0
22	23	39.4	129	24.1		30.2		229	06.5		33.0	352	17.0		10.9
23	38	41.9	144	23.2		30.6		244	07.8		32.6	7	19.8		10.8
24	53	44.3	159	22.3	-23	31.1		259	09.1	+12	32.2	22	22.5	+11	10.7
Dif	—		-9		-4			+13		-4		+28		-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 5			Edad: 19 ^d 2 PHE { 4 ^h : 55/8 12 ^h : 56/0 20 ^h : 56/2 PMG: 3 ^h 09 ^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	183	53.3	-18	20.0	314	28.6	+20	59.2	60 N	6 16	7 08	7 57	19 14	82	12 01	22	
1	198	53.2		20.6	328	57.8		54.6	58	12	7 00	46	28	78	11 47	25	
2	213	53.1		21.3	343	27.1		49.8	56	08	6 53	36	39	76	35	28	
3	228	53.0		21.9	357	56.4		44.9	54	04	47	27	50	73	25	29	
4	243	52.9		22.6	12	25.6		39.9	52	6 01	42	19	19 59	71	15	32	
5	258	52.8	-18	23.2	26	54.9	+20	34.8	50	5 57	6 37	7 12	20 07	69	11 07	33	
6	273	52.7	-18	23.8	41	24.2	+20	29.5	45	5 50	6 25	6 57	20 24	66	10 49	36	
7	288	52.6		24.5	55	53.6		24.2	40	43	16	45	38	63	34	39	
8	303	52.5		25.1	70	22.9		18.8	35	37	6 07	34	20 49	61	22	41	
9	318	52.4		25.8	84	52.2		13.2	30	30	5 59	25	21 00	59	10 11	43	
10	333	52.3		26.4	99	21.6		07.6	20	19	45	6 09	17	56	9 52	46	
11	348	52.2	-18	27.0	113	51.0	+20	01.8	10 N	5 07	5 32	5 54	21 33	52	9 36	48	
12	3	52.1	-18	27.7	128	20.4	+19	55.9	0	4 54	5 19	5 41	21 47	50	9 21	50	
13	18	52.0		28.3	142	49.8		50.0	10 S	39	5 05	27	22 01	48	9 05	53	
14	33	51.9		29.0	157	19.2		43.9	20	4 22	4 49	5 13	17	44	8 49	55	
15	48	51.8		29.6	171	48.7		37.7	30	3 59	30	4 56	34	41	30	58	
16	63	51.7		30.2	186	18.2		31.4	35	44	18	46	44	39	19	59	
17	78	51.6	-18	30.9	200	47.6	+19	25.0	40	3 27	4 04	4 35	22 56	36	8 06	62	
18	93	51.5	-18	31.5	215	17.1	+19	18.5	45	3 05	3 48	4 22	23 09	34	7 50	65	
19	108	51.4		32.1	229	46.7		11.9	50	2 35	26	4 05	26	30	32	67	
20	123	51.3		32.8	244	16.2	+19	05.2	52	19	16	3 57	34	28	23	69	
21	138	51.1		33.4	258	45.8	+18	58.4	54	2 00	3 04	49	42	27	13	71	
22	153	51.0		34.0	273	15.3		51.5	56	1 36	2 50	39	23 52	24	7 02	73	
23	168	50.9		34.7	287	44.9		44.4	58	1 02	34	28	** ** *	**	6 49	75	
24	183	50.8	-18	35.3	302	14.6	+18	37.3	60 S	** ** *	2 14	3 15	** ** *	**	6 33	79	
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO				
	PMG: 20 ^h 21 ^m 7			Mag: -3.8 PMG: 13 ^h 23 ^m			Mag: +0.9 PMG: 6 ^h 43 ^m			Mag: -2.9 PMG: 22 ^h 26 ^m			Mag: +0.8 PMG: 9 ^h 56 ^m				
	hG ♈		Dec	hG ♀		Dec	hG ♂		Dec	hG ♃		Dec	hG ♄		Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	53	44.3	159	22.3	-23	31.1	259	09.1	+12	32.2	22	22.5	+11	10.7	210	40.0	
1	68	46.8	174	21.4		31.5	274	10.3		31.8	37	25.3		10.6	225	42.2	
2	83	49.3	189	20.5		31.9	289	11.6		31.4	52	28.1		10.5	240	44.4	
3	98	51.7	204	19.6		32.4	304	12.9		31.0	67	30.8		10.4	255	46.6	
4	113	54.2	219	18.7		32.8	319	14.2		30.6	82	33.6		10.3	270	48.8	
5	128	56.6	234	17.8	-23	33.2	334	15.4	+12	30.2	97	36.3	+11	10.2	285	51.0	
6	143	59.1	249	16.9	-23	33.6	349	16.7	+12	29.8	112	39.1	+11	10.2	300	53.2	
7	159	01.6	264	16.0		34.1	4	18.0		29.4	127	41.8		10.1	315	55.4	
8	174	04.0	279	15.1		34.5	19	19.2		29.0	142	44.6		10.0	330	57.6	
9	189	06.5	294	14.3		34.9	34	20.5		28.6	157	47.3		09.9	345	59.8	
10	204	09.0	309	13.4		35.3	49	21.8		28.2	172	50.1		09.8	1	02.0	
11	219	11.4	324	12.5	-23	35.8	64	23.1	+12	27.8	187	52.8	+11	09.7	16	04.2	
12	234	13.9	339	11.6	-23	36.2	79	24.3	+12	27.4	202	55.6	+11	09.6	31	06.4	
13	249	16.4	354	10.7		36.6	94	25.6		27.0	217	58.4		09.5	46	08.6	
14	264	18.8	9	09.8		37.0	109	26.9		26.6	233	01.1		09.4	61	10.8	
15	279	21.3	24	08.9		37.4	124	28.2		26.2	248	03.9		09.3	76	13.0	
16	294	23.7	39	08.0		37.8	139	29.4		25.8	263	06.6		09.2	91	15.2	
17	309	26.2	54	07.1	-23	38.3	154	30.7	+12	25.4	278	09.4	+11	09.1	106	17.4	
18	324	28.7	69	06.2	-23	38.7	169	32.0	+12	25.0	293	12.1	+11	09.0	121	19.6	
19	339	31.1	84	05.3		39.1	184	33.3		24.6	308	14.9		08.9	136	21.8	
20	354	33.6	99	04.4		39.5	199	34.5		24.2	323	17.6		08.8	151	24.0	
21	9	36.1	114	03.5		39.9	214	35.8		23.8	338	20.4		08.7	166	26.2	
22	24	38.5	129	02.6		40.3	229	37.1		23.4	353	23.1		08.6	181	28.4	
23	39	41.0	144	01.7		40.7	244	38.4		23.0	8	25.9		08.6	196	30.6	
24	54	43.5	159	00.8	-23	41.1	259	39.7	+12	22.6	23	28.6	+11	08.5	211	32.8	
Dif	—			-9 -4			+13 -4			+28 -1			+22 -1				

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna				
	SD: 16:2			Edad: 20 ^d 2	PHE { 4 ^h : 56/4 12 ^h : 56/6 20 ^h : 56/8													
	PMG: 11 ^h 44 ^m 7					SD: 15:3			PMG: 3 ^h 59 ^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	183	50.8	-18 35.3	302	14.6	+18 37.3		60 N	15 29	16 18	17 10	20 36 85		12 23 16				
1	198	50.7		316	44.2 ¹⁰⁶		30.1	72	58	41	26	15	46 82		12 19			
2	213	50.6	36.6	331	13.9 ¹⁰⁷		22.8	73	56	15 51	33	19	20 55 79		12 03 22			
3	228	50.5	37.2	345	43.5 ¹⁰⁶		15.4	74	54	16 00	40	23	21 03 77		11 54 24			
4	243	50.4	37.8	0	13.2 ¹⁰⁷		07.9	75	52	08	46	27	10 75		47 26			
5	258	50.3	-18 38.5	14	43.0 ¹⁰⁸	+18 00.2		77	50	16 15	16 51	17 30	21 16 73		11 40 28			
6	273	50.2	-18 39.1	29	12.7 ¹⁰⁷	+17 52.5		77	45	16 31	17 02	17 38	21 30 68		11 25 32			
7	288	50.1	39.7	43	42.5 ¹⁰⁸	44.7		78	40	43	12	45	41 65		13 35			
8	303	50.0	40.3	58	12.2 ¹⁰⁷	36.8		79	35	16 54	21	52	50 63		11 03 37			
9	318	49.8	41.0	72	42.0 ¹⁰⁸	28.8		80	30	17 04	29	17 58	21 59 60		10 54 39			
10	333	49.7	41.6	87	11.9 ¹⁰⁹	20.7		81	20	20	43	18 10	22 13 56		38 43			
11	348	49.6	-18 42.2	101	41.7 ¹⁰⁸	+17 12.5		82	10 N	17 35	17 57	18 22	22 25 53		10 24 47			
12	3	49.5	-18 42.9	116	11.6 ¹⁰⁹	+17 04.2		83	0	17 48	18 10	18 35	22 37 49		10 11 50			
13	18	49.4	43.5	130	41.4 ¹⁰⁸	+16 55.8		84	10 S	18 02	24	18 51	22 49 45		9 58 53			
14	33	49.3	44.1	145	11.3 ¹⁰⁹	47.4		84	20	17	18 41	19 09	23 01 42		44 56			
15	48	49.2	44.7	159	41.3 ¹¹⁰	38.8		86	30	34	19 00	32	15 38		28 59			
16	63	49.1	45.3	174	11.2 ¹⁰⁹	30.1		87	35	44	12	19 46	23 36		18 62			
17	78	48.9	-18 46.0	188	41.2 ¹¹⁰	+16 21.4		87	40	18 56	19 27	20 04	23 32 34		9 08 64			
18	93	48.8	-18 46.6	203	11.1 ¹⁰⁹	+16 12.5		89	45	19 10	19 44	20 27	23 43 30		8 55 67			
19	108	48.7	47.2	217	41.1 ¹¹⁰	+16 03.6		89	50	26	20 06	20 58	23 56 26		39 71			
20	123	48.6	47.8	232	11.2 ¹¹¹	+15 54.6		90	52	34	17	21 15	*** ** *		32 73			
21	138	48.5	48.5	246	41.2 ¹¹⁰	45.5		91	54	43	29	21 34	*** ** *		24 75			
22	153	48.4	49.1	261	11.3 ¹¹¹	36.3		92	56	19 53	20 43	22 00	*** ** *		15 77			
23	168	48.3	49.7	275	41.3 ¹¹⁰	27.0		93	58	20 05	21 00	22 40	0 03 21		8 04 81			
24	183	48.1	-18 50.3	290	11.4 ¹¹¹	+15 17.6		94	60 S	20 18	21 22	** ** *	0 15 19		7 52 84			
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG 20 ^h 17 ^m 8		Mag: -3.8 PMG: 13 ^h 25 ^m		Mag: +0.9 PMG: 6 ^h 41 ^m		Mag: -2.9 PMG: 22 ^h 22 ^m		Mag: +0.8 PMG: 9 ^h 52 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	54	43.5	159	00.8	259	39.7	+12 22.6	23 28.6	+11 08.5	211 32.8	-7 13.7							
1	69	45.9	173	59.9		41.5	22.2	38 31.4	08.4	226 35.0	13.8							
2	84	48.4	188	59.0		41.9	21.8	53 34.1	08.3	241 37.2	13.9							
3	99	50.9	203	58.1		42.3	21.4	68 36.9	08.2	256 39.4	14.0							
4	114	53.3	218	57.2		42.7	21.0	83 39.6	08.1	271 41.6	14.1							
5	129	55.8	233	56.3	-23 43.1	334 46.1	+12 20.6	98 42.4	+11 08.0	286 43.8	-7 14.2							
6	144	58.2	248	55.4	-23 43.5	349 47.3	+12 20.2	113 45.1	+11 07.9	301 46.0	-7 14.3							
7	160	00.7	263	54.5	43.9	4 48.6	19.8	128 47.9	07.8	316 48.2	14.4							
8	175	03.2	278	53.6	44.3	19 49.9	19.4	143 50.6	07.7	331 50.4	14.5							
9	190	05.6	293	52.7	44.7	34 51.2	19.0	158 53.4	07.6	346 52.6	14.6							
10	205	08.1	308	51.8	45.1	49 52.5	18.7	173 56.1	07.5	1 54.8	14.7							
11	220	10.6	323	50.9	-23 45.5	64 53.7	+12 18.3	188 58.9	+11 07.4	16 57.0	-7 14.8							
12	235	13.0	338	50.0	-23 45.9	79 55.0	+12 17.9	204 01.6	+11 07.3	31 59.2	-7 14.9							
13	250	15.5	353	49.1	46.3	94 56.3	17.5	219 04.4	07.2	47 01.4	15.0							
14	265	18.0	8 48.2	46.7	109 57.6	17.1	17.1	234 07.1	07.2	62 03.6	15.1							
15	280	20.4	23 47.3	47.1	124 58.9	16.7	16.7	249 09.9	07.1	77 05.8	15.2							
16	295	22.9	38 46.4	47.4	140 00.2	16.3	16.3	264 12.6	07.0	92 08.0	15.3							
17	310	25.4	53 45.5	-23 47.8	155 01.4	+12 15.9	15.9	279 15.4	+11 06.9	107 10.2	-7 15.4							
18	325	27.8	68 44.6	-23 48.2	170 02.7	+12 15.5	15.5	294 18.1	+11 06.8	122 12.4	-7 15.5							
19	340	30.3	83 43.7	48.6	185 04.0	15.1	15.1	309 20.9	06.7	137 14.6	15.6							
20	355	32.7	98 42.8	49.0	200 05.3	14.7	14.7	324 23.6	06.6	152 16.8	15.7							
21	10	35.2	113 41.9	49.4	215 06.6	14.3	14.3	339 26.4	06.5	167 19.0	15.8							
22	25	37.7	128 41.0	49.7	230 07.9	13.9	13.9	354 29.1	06.4	182 21.3	15.9							
23	40	40.1	143 40.1	50.1	245 09.2	13.5	13.5	9 31.9	06.3	197 23.5	16.0							
24	55	42.6	158 39.2	-23 50.5	260 10.5	+12 13.1	13.1	24 34.6	+11 06.2	212 25.7	-7 16.1							
Dif	—		-9		-4		+13		-4		+27		-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 9			Edad: 21 ^d 2 PHE { 4 ^h : 57'0 12 ^h : 57'2 20 ^h : 57'5 SD: 15'5 PMG: 4 ^h 49 ^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	48.1	-18	50.3	290	11.4	+15	17.6	60 N	6 20	7 12	8 02	22 01	88	12 39	13
1	198	48.0		50.9	304	41.5 ¹¹¹	+15	08.1 ⁹⁵	58	15	7 04	7 50	08 85		31	16
2	213	47.9		51.5	319	11.7 ¹¹²	+14	58.6 ⁹⁵	56	11	6 57	40	14 82		25	18
3	228	47.8		52.2	333	41.8 ¹¹¹		49.0 ⁹⁶	54	07	51	31	20 79		18	20
4	243	47.7		52.8	348	12.0 ¹¹²		39.2 ⁹⁸	52	03	45	23	25 76		13	23
5	258	47.6	-18	53.4	2	42.2 ¹¹²	+14	29.4 ⁹⁸	50	6 00	6 40	7 15	22 29	75	12 08	25
6	273	47.4	-18	54.0	17	12.4 ¹¹²	+14	19.6 ⁹⁸	45	5 52	6 28	7 00	22 38	71	11 57	29
7	288	47.3		54.6	31	42.6 ¹¹²	+14	09.6 ¹⁰⁰	40	45	18	6 47	46 67		48	32
8	303	47.2		55.2	46	12.8 ¹¹²	+13	59.5 ¹⁰¹	35	38	09	36	53 64		40	35
9	318	47.1		55.9	60	43.1 ¹¹³		49.4 ¹⁰¹	30	32	6 01	26	22 59	61	33	38
10	333	47.0		56.5	75	13.3 ¹¹²		39.2 ¹⁰²	20	20	5 46	6 10	23 09	57	21	42
11	348	46.8	-18	57.1	89	43.6 ¹¹³	+13	28.9 ¹⁰³	10 N	5 07	5 33	5 55	23 18	52	11 11	45
12	3	46.7	-18	57.7	104	13.9 ¹¹³	+13	18.6 ¹⁰³	0	4 54	5 19	5 41	23 26	49	11 01	48
13	18	46.6		58.3	118	44.2 ¹¹³	+13	08.1 ¹⁰⁵	10 S	39	5 05	5 27	34 46		10 51	52
14	33	46.5		58.9	133	14.5 ¹¹³	+12	57.6 ¹⁰⁵	20	4 21	4 49	5 12	43 42		40	56
15	48	46.4	-18	59.5	147	44.9 ¹¹⁴		47.0 ¹⁰⁶	30	3 58	29	4 55	53 37		27	61
16	63	46.2	-19	00.1	162	15.2 ¹¹³		36.3 ¹⁰⁷	35	43	17	45	23 59	34	20	63
17	78	46.1	-19	00.7	176	45.6 ¹¹⁴	+12	25.6 ¹⁰⁷	40	3 25	4 03	4 33	** ** *	**	10 12	66
18	93	46.0	-19	01.3	191	16.0 ¹¹⁴	+12	14.8 ¹⁰⁸	45	3 02	3 45	4 19	** ** *	**	10 02	70
19	108	45.9		02.0	205	46.4 ¹¹⁴	+12	03.9 ¹⁰⁹	50	2 31	23	4 03	** ** *	**	9 50	74
20	123	45.7		02.6	220	16.7 ¹¹³	+11	52.9 ¹¹⁰	52	2 15	12	3 55	0 02	24	45	76
21	138	45.6		03.2	234	47.2 ¹¹⁵		41.9 ¹¹⁰	54	1 55	3 00	46	09 22		39	78
22	153	45.5		03.8	249	17.6 ¹¹⁴		30.7 ¹¹²	56	1 29	2 46	36	16 20		32	81
23	168	45.4		04.4	263	48.0 ¹¹⁴		19.6 ¹¹¹	58	0 49	29	24	24 18		25	83
24	183	45.2	-19	05.0	278	18.4 ¹¹⁴	+11	08.3 ¹¹³	60 S	** **	2 07	3 11	0 34	14	9 16	87

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 20 ^h 13 ^m 8		Mag: -3.9 PMG: 13 ^h 26 ^m		Mag: +0.9 PMG: 6 ^h 39 ^m		Mag: -2.9 PMG: 22 ^h 18 ^m		Mag: +0.8 PMG: 9 ^h 49 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	55	42.6	158	39.2	-23	50.5	260	10.5	+12	13.1	24	34.6	+11	06.2	212	25.7	-7	16.1
1	70	45.1	173	38.3		50.9	275	11.7		12.7	39	37.4		06.1	227	27.9		16.2
2	85	47.5	188	37.4		51.2	290	13.0		12.3	54	40.1		06.0	242	30.1		16.3
3	100	50.0	203	36.4		51.6	305	14.3		11.9	69	42.9		06.0	257	32.3		16.4
4	115	52.5	218	35.5		52.0	320	15.6		11.5	84	45.6		05.9	272	34.5		16.5
5	130	54.9	233	34.6	-23	52.3	335	16.9	+12	11.1	99	48.3	+11	05.8	287	36.7	-7	16.6
6	145	57.4	248	33.7	-23	52.7	350	18.2	+12	10.7	114	51.1	+11	05.7	302	38.9	-7	16.7
7	160	59.9	263	32.8		53.1	5	19.5		10.3	129	53.8		05.6	317	41.1		16.8
8	176	02.3	278	31.9		53.4	20	20.8		09.9	144	56.6		05.5	332	43.3		16.9
9	191	04.8	293	31.0		53.8	35	22.1		09.6	159	59.3		05.4	347	45.5		16.9
10	206	07.2	308	30.1		54.2	50	23.3		09.2	175	02.1		05.3	2	47.7		17.0
11	221	09.7	323	29.2	-23	54.5	65	24.6	+12	08.8	190	04.8	+11	05.2	17	49.9	-7	17.1
12	236	12.2	338	28.3	-23	54.9	80	25.9	+12	08.4	205	07.6	+11	05.1	32	52.1	-7	17.2
13	251	14.6	353	27.4		55.3	95	27.2		08.0	220	10.3		05.0	47	54.3		17.3
14	266	17.1	8	26.5		55.6	110	28.5		07.6	235	13.0		05.0	62	56.5		17.4
15	281	19.6	23	25.5		56.0	125	29.8		07.2	250	15.8		04.9	77	58.7		17.5
16	296	22.0	38	24.6		56.3	140	31.1		06.8	265	18.5		04.8	93	00.9		17.6
17	311	24.5	53	23.7	-23	56.7	155	32.4	+12	06.4	280	21.3	+11	04.7	108	03.1	-7	17.7
18	326	27.0	68	22.8	-23	57.0	170	33.7	+12	06.0	295	24.0	+11	04.6	123	05.3	-7	17.8
19	341	29.4	83	21.9		57.4	185	35.0		05.6	310	26.8		04.5	138	07.5		17.9
20	356	31.9	98	21.0		57.7	200	36.3		05.2	325	29.5		04.4	153	09.7		18.0
21	11	34.3	113	20.1		58.1	215	37.6		04.8	340	32.3		04.3	168	11.9		18.1
22	26	36.8	128	19.2		58.4	230	38.9		04.4	355	35.0		04.2	183	14.1		18.2
23	41	39.3	143	18.2		58.8	245	40.2		04.0	10	37.7		04.1	198	16.3		18.3
24	56	41.7	158	17.3	-23	59.1	260	41.5	+12	03.6	25	40.5	+11	04.1	213	18.5	-7	18.4
Dif	—		-9		-4		+13		-4		+27		-1		+22		-1	

UT	SOL		 LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna				
	SD: 16:2		Edad: 22 ^d 2		PHE {	4 ^h : 57:7 12 ^h : 58:0 20 ^h : 58:2			Civil			Náutico		Hora R°				
	PMG: 11 ^h 45 ^m 1		SD: 15:7			PMG: 5 ^h 38 ^m			R°: 49 ^m									
	hG ☉	Dec	hG ☾	Dif	Dec	Dif												
h	°	'	°	'	°	'	°	h m	h m	h m	h m	h m	m	h m	m			
0	183	45.2	-19	05.0	278	18.4	+11 08.3	60 N	15 25	16 15	17 07	23 29	90	12 52	11			
1	198	45.1		05.6	292	48.9 ¹¹⁵	+10 57.0 ¹¹³	58	37	23	12	33	86	47	14			
2	213	45.0		06.2	307	19.3 ¹¹⁴	45.6 ¹¹⁴	56	48	31	17	36	84	43	17			
3	228	44.9		06.8	321	49.8 ¹¹⁵	34.2 ¹¹⁴	54	15 57	37	21	39	81	39	19			
4	243	44.7		07.4	336	20.2 ¹¹⁴	22.7 ¹¹⁵	52	16 05	43	25	41	79	36	21			
5	258	44.6	-19	08.0	350	50.7 ¹¹⁵	+10 11.1 ¹¹⁶	50	16 13	16 49	17 28	23 44	77	12 33	23			
6	273	44.5	-19	08.6	5	21.2 ¹¹⁵	+9 59.4 ¹¹⁷	45	16 29	17 01	17 36	23 49	72	12 26	27			
7	288	44.4		09.2	19	51.7 ¹¹⁵	47.7 ¹¹⁷	40	42	11	44	53	69	20	31			
8	303	44.2		09.8	34	22.1 ¹¹⁴	35.9 ¹¹⁸	35	16 53	20	51	23 57	65	15	34			
9	318	44.1		10.4	48	52.6 ¹¹⁵	24.1 ¹¹⁸	30	17 03	28	17 57	** ** *	**	11	36			
10	333	44.0		11.0	63	23.1 ¹¹⁵	12.2 ¹¹⁹	20	20	43	18 10	** ** *	**	12 03	41			
11	348	43.8	-19	11.6	77	53.6 ¹¹⁵	+9 00.3 ¹¹⁹	10 N	17 35	17 57	18 22	** ** *	**	11 56	45			
12	3	43.7	-19	12.2	92	24.1 ¹¹⁵	+8 48.3 ¹²⁰	0	17 49	18 11	18 36	** ** *	**	11 49	49			
13	18	43.6		12.8	106	54.6 ¹¹⁵	36.2 ¹²¹	10 S	18 03	25	18 51	** ** *	**	43	53			
14	33	43.4		13.4	121	25.1 ¹¹⁵	24.1 ¹²¹	20	18	18 42	19 10	** ** *	**	36	57			
15	48	43.3		14.0	135	55.5 ¹¹⁴	+8 11.9 ¹²²	30	36	19 02	34	** ** *	**	28	62			
16	63	43.2		14.6	150	26.0 ¹¹⁵	+7 59.6 ¹²³	35	46	15	19 49	** ** *	**	23	65			
17	78	43.1	-19	15.2	164	56.5 ¹¹⁵	+7 47.3 ¹²³	40	18 58	19 29	20 07	0 06	31	11 18	68			
18	93	42.9	-19	15.8	179	27.0 ¹¹⁵	+7 35.0 ¹²³	45	19 12	19 47	20 31	0 13	28	11 12	71			
19	108	42.8		16.4	193	57.5 ¹¹⁵	22.6 ¹²⁴	50	30	20 10	21 03	22	24	04	76			
20	123	42.7		16.9	208	27.9 ¹¹⁴	+7 10.1 ¹²⁵	52	38	21	20	26	22	11 01	78			
21	138	42.5		17.5	222	58.4 ¹¹⁵	+6 57.6 ¹²⁵	54	47	33	21 41	31	20	10 57	80			
22	153	42.4		18.1	237	28.8 ¹¹⁴	45.1 ¹²⁵	56	19 58	20 48	22 09	36	18	53	82			
23	168	42.3		18.7	251	59.3 ¹¹⁵	32.5 ¹²⁶	58	20 10	21 06	22 55	42	15	48	85			
24	183	42.1	-19	19.3	266	29.7 ¹¹⁴	+6 19.8 ¹²⁷	60 S	20 23	21 29	** ** *	0 48	12	10 43	88			
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 20 ^h 09 ^m 9		Mag: -3.9 PMG: 13 ^h 28 ^m			Mag: +0.9 PMG: 6 ^h 37 ^m			Mag: -2.9 PMG: 22 ^h 13 ^m			Mag: +0.8 PMG: 9 ^h 45 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°			
0	56	41.7	158	17.3	-23	59.1	260	41.5	+12	03.6	25	40.5	+11	04.1	213	18.5	-7	18.4
1	71	44.2	173	16.4		59.5	275	42.8		03.2	40	43.2		04.0	228	20.7		18.5
2	86	46.7	188	15.5	-23	59.8	290	44.1		02.9	55	46.0		03.9	243	22.9		18.6
3	101	49.1	203	14.6	-24	00.2	305	45.4		02.5	70	48.7		03.8	258	25.1		18.7
4	116	51.6	218	13.7		00.5	320	46.7		02.1	85	51.5		03.7	273	27.3		18.8
5	131	54.1	233	12.8	-24	00.8	335	48.0	+12	01.7	100	54.2	+11	03.6	288	29.5	-7	18.9
6	146	56.5	248	11.9	-24	01.2	350	49.3	+12	01.3	115	56.9	+11	03.5	303	31.7	-7	19.0
7	161	59.0	263	10.9		01.5	5	50.6		00.9	130	59.7		03.4	318	33.9		19.1
8	177	01.5	278	10.0		01.9	20	51.9		00.5	146	02.4		03.3	333	36.1		19.2
9	192	03.9	293	09.1		02.2	35	53.2	+12	00.1	161	05.2		03.2	348	38.3		19.3
10	207	06.4	308	08.2		02.5	50	54.5	+11	59.7	176	07.9		03.2	3	40.5		19.4
11	222	08.8	323	07.3	-24	02.9	65	55.8	+11	59.3	191	10.6	+11	03.1	18	42.7	-7	19.5
12	237	11.3	338	06.4	-24	03.2	80	57.1	+11	58.9	206	13.4	+11	03.0	33	44.9	-7	19.6
13	252	13.8	353	05.4		03.5	95	58.4		58.5	221	16.1		02.9	48	47.2		19.6
14	267	16.2	8	04.5		03.9	110	59.7		58.1	236	18.9		02.8	63	49.4		19.7
15	282	18.7	23	03.6		04.2	126	01.0		57.7	251	21.6		02.7	78	51.6		19.8
16	297	21.2	38	02.7		04.5	141	02.3		57.3	266	24.3		02.6	93	53.8		19.9
17	312	23.6	53	01.8	-24	04.8	156	03.6	+11	57.0	281	27.1	+11	02.5	108	56.0	-7	20.0
18	327	26.1	68	00.9	-24	05.2	171	04.9	+11	56.6	296	29.8	+11	02.4	123	58.2	-7	20.1
19	342	28.6	82	59.9		05.5	186	06.2		56.2	311	32.6		02.4	139	00.4		20.2
20	357	31.0	97	59.0		05.8	201	07.5		55.8	326	35.3		02.3	154	02.6		20.3
21	12	33.5	112	58.1		06.1	216	08.8		55.4	341	38.0		02.2	169	04.8		20.4
22	27	36.0	127	57.2		06.4	231	10.1		55.0	356	40.8		02.1	184	07.0		20.5
23	42	38.4	142	56.3		06.8	246	11.4		54.6	11	43.5		02.0	199	09.2		20.6
24	57	40.9	157	55.3	-24	07.1	261	12.7	+11	54.2	26	46.2	+11	01.9	214	11.4	-7	20.7
Dif	—		-9		-3		+13		-4		+27		-1		+22		-	

UT	SOL			 LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'2			Edad: 23 ^d 2	PHE { 4 ^h : 58'5 12 ^h : 58'7 20 ^h : 59'0										
	PMG: 11 ^h 45 ^m 3					PMG: 6 ^h 27 ^m		R ^o : 49 ^m							
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R ^o	Hora	R ^o
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m		h m m	
0	183	42.1	-19	266	29.7	+6	19.8	60 N	6 24	7 17	8 07	** ** *		13 03	11
1	198	42.0		281	00.1 ¹¹⁴	+6	07.2 ¹²⁶	58	19	08	7 54	** ** *		01	14
2	213	41.9		295	30.6 ¹¹⁵	+5	54.4 ¹²⁸	56	15	7 01	44	** ** *		13 00	16
3	228	41.7		310	01.0 ¹¹⁴		41.6 ¹²⁸	54	10	6 54	34	** ** *		12 58	19
4	243	41.6		324	31.4 ¹¹⁴		28.8 ¹²⁸	52	06	48	26	** ** *		57	21
5	258	41.4	-19	339	01.8 ¹¹⁴	+5	15.9 ¹²⁹	50	6 03	6 42	7 18	** ** *		12 56	22
6	273	41.3	-19	353	32.1 ¹¹³	+5	03.0 ¹²⁹	45	5 54	6 30	7 02	** ** *		12 53	27
7	288	41.2		8	02.5 ¹¹⁴	+4	50.1 ¹²⁹	40	47	20	6 49	** ** *		51	30
8	303	41.0		22	32.8 ¹¹³		37.1 ¹³⁰	35	40	11	38	** ** *		49	33
9	318	40.9		37	03.1 ¹¹³		24.0 ¹³¹	30	33	6 02	28	0 00	62	47	36
10	333	40.8		51	33.4 ¹¹³	+4	11.0 ¹³⁰	20	21	5 48	6 11	06	57	44	41
11	348	40.6	-19	66	03.7 ¹¹³	+3	57.9 ¹³¹	10 N	5 08	5 34	5 56	0 10	54	12	41
12	3	40.5	-19	80	34.0 ¹¹³	+3	44.7 ¹³²	0	4 54	5 20	5 42	0 15	49	12	38
13	18	40.3		95	04.3 ¹¹³		31.5 ¹³²	10 S	39	5 05	27	20	45	36	54
14	33	40.2		109	34.5 ¹¹²		18.3 ¹³²	20	4 20	4 48	5 12	25	41	33	58
15	48	40.1		124	04.7 ¹¹²	+3	05.1 ¹³²	30	3 56	28	4 54	30	36	30	63
16	63	39.9		138	34.9 ¹¹²	+2	51.8 ¹³³	35	41	16	44	33	34	28	66
17	78	39.8	-19	153	05.0 ¹¹¹	+2	38.5 ¹³³	40	3 23	4 01	4 32	0 37	30	12	26
18	93	39.7	-19	167	35.2 ¹¹²	+2	25.2 ¹³³	45	2 59	3 43	4 18	0 41	27	12	23
19	108	39.5		182	05.3 ¹¹¹	+2	11.8 ¹³⁴	50	27	20	4 00	46	23	20	78
20	123	39.4		196	35.4 ¹¹¹	+1	58.4 ¹³⁴	52	2 10	3 09	3 52	48	21	19	79
21	138	39.2		211	05.4 ¹¹⁰		45.0 ¹³⁴	54	1 49	2 56	43	51	18	17	82
22	153	39.1		225	35.5 ¹¹¹		31.6 ¹³⁴	56	1 21	41	32	54	16	15	85
23	168	38.9		240	05.5 ¹¹⁰		18.1 ¹³⁵	58	0 34	23	20	0 57	13	13	88
24	183	38.8	-19	254	35.4 ¹⁰⁹	+1	04.7 ¹³⁴	60 S	** ** *	2 01	3 06	1 00	11	12	11

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 20 ^h 06 ^m 0		Mag: -3.9 PMG: 13 ^h 29 ^m		Mag: +0.9 PMG: 6 ^h 35 ^m		Mag: -2.9 PMG: 22 ^h 09 ^m		Mag: +0.8 PMG: 9 ^h 42 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	57	40.9	157	55.3	-24	261	12.7	+11	26	46.2
1	72	43.3	172	54.4		276	14.0		41	49.0
2	87	45.8	187	53.5		291	15.3		56	51.7
3	102	48.3	202	52.6		306	16.6		71	54.5
4	117	50.7	217	51.7		321	17.9		86	57.2
5	132	53.2	232	50.7	-24	336	19.2	+11	101	59.9
6	147	55.7	247	49.8	-24	351	20.5	+11	117	02.7
7	162	58.1	262	48.9		6	21.8		132	05.4
8	178	00.6	277	48.0		21	23.2		147	08.1
9	193	03.1	292	47.0		36	24.5		162	10.9
10	208	05.5	307	46.1		51	25.8		177	13.6
11	223	08.0	322	45.2	-24	66	27.1	+11	192	16.3
12	238	10.4	337	44.3	-24	81	28.4	+11	207	19.1
13	253	12.9	352	43.4		96	29.7		222	21.8
14	268	15.4	7	42.4		111	31.0		237	24.5
15	283	17.8	22	41.5		126	32.3		252	27.3
16	298	20.3	37	40.6		141	33.6		267	30.0
17	313	22.8	52	39.7	-24	156	35.0	+11	282	32.7
18	328	25.2	67	38.7	-24	171	36.3	+11	297	35.5
19	343	27.7	82	37.8		186	37.6		312	38.2
20	358	30.2	97	36.9		201	38.9		327	40.9
21	13	32.6	112	36.0		216	40.2		342	43.7
22	28	35.1	127	35.0		231	41.5		357	46.4
23	43	37.6	142	34.1		246	42.8		12	49.1
24	58	40.0	157	33.2	-24	261	44.2	+11	27	51.9
Dif	—		-9	-3		+13	-4		+27	-1

UT	SOL		☾ LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16:2		Edad: 24 ^d 2 PHE { 4 ^h : 59/2 12 ^h : 59/5 20 ^h : 59/7						Civil		R°		R°	
	PMG: 11 ^h 45 ^m 5	PMG: 7 ^h 16 ^m	R°: 51 ^m											
	hG ☉	Dec	hG ☾	Dif	Dec	Dif								
h	°	'	°	'	°	'	°	h m	h m	h m	h m	h m	h m	h m
0	183	38.8	-19	33.3	254	35.4	+1 04.7	60 N	15 21	16 12	17 04	0 59 92	13 14 11	
1	198	38.7		33.9	269	05.4 ¹¹⁰	+0 51.2 ¹³⁵	58	34	20	10	0 59 90	15 14	
2	213	38.5		34.4	283	35.3 ¹⁰⁹	37.6 ¹³⁶	56	45	28	14	1 00 86	16 17	
3	228	38.4		35.0	298	05.1 ¹⁰⁸	24.1 ¹³⁵	54	15 54	35	19	00 84	17 20	
4	243	38.2		35.6	312	35.0 ¹⁰⁹	+0 10.6 ¹³⁵	52	16 03	41	23	00 82	18 22	
5	258	38.1	-19	36.2	327	04.8 ¹⁰⁸	-0 03.0 ¹³⁶	50	16 11	16 47	17 26	1 01 79	13 18 24	
6	273	37.9	-19	36.7	341	34.6 ¹⁰⁸	-0 16.6 ¹³⁶	45	16 27	16 59	17 35	1 01 75	13 20 28	
7	288	37.8		37.3	356	04.3 ¹⁰⁷	30.2 ¹³⁶	40	40	17 10	43	02 70	21 32	
8	303	37.6		37.9	10	34.0 ¹⁰⁷	43.8 ¹³⁶	35	16 52	19	50	02 67	22 36	
9	318	37.5		38.4	25	03.6 ¹⁰⁶	-0 57.4 ¹³⁶	30	17 02	28	17 57	02 65	23 39	
10	333	37.4		39.0	39	33.3 ¹⁰⁷	-1 11.1 ¹³⁷	20	19	43	18 10	03 59	25 43	
11	348	37.2	-19	39.6	54	02.8 ¹⁰⁵	-1 24.7 ¹³⁶	10 N	17 35	17 57	18 23	1 04 55	13 27 47	
12	3	37.1	-19	40.2	68	32.4 ¹⁰⁶	-1 38.3 ¹³⁶	0	17 49	18 11	18 37	1 04 51	13 28 52	
13	18	36.9		40.7	83	01.9 ¹⁰⁵	-1 52.0 ¹³⁷	10 S	18 04	26	18 52	05 47	30 55	
14	33	36.8		41.3	97	31.3 ¹⁰⁴	-2 05.6 ¹³⁶	20	19	18 43	19 11	06 42	31 60	
15	48	36.6		41.9	112	00.7 ¹⁰⁴	19.3 ¹³⁷	30	38	19 04	36	06 38	33 65	
16	63	36.5		42.4	126	30.1 ¹⁰⁴	33.0 ¹³⁷	35	18 48	17	19 51	07 34	34 68	
17	78	36.3	-19	43.0	140	59.4 ¹⁰³	-2 46.6 ¹³⁶	40	19 01	19 32	20 10	1 07 32	13 35 72	
18	93	36.2	-19	43.6	155	28.6 ¹⁰²	-3 00.3 ¹³⁷	45	19 15	19 50	20 34	1 08 28	13 36 76	
19	108	36.0		44.1	169	57.9 ¹⁰³	13.9 ¹³⁶	50	33	20 13	21 08	09 23	38 80	
20	123	35.9		44.7	184	27.0 ¹⁰¹	27.6 ¹³⁷	52	42	25	25	09 21	38 83	
21	138	35.7		45.2	198	56.1 ¹⁰¹	41.2 ¹³⁶	54	19 51	38	21 48	09 20	39 85	
22	153	35.6		45.8	213	25.2 ¹⁰¹	-3 54.9 ¹³⁷	56	20 02	20 54	22 18	10 17	40 88	
23	168	35.4		46.4	227	54.2 ¹⁰⁰	-4 08.5 ¹³⁶	58	14	21 12	23 17	10 14	41 91	
24	183	35.3	-19	46.9	242	23.2 ¹⁰⁰	-4 22.1 ¹³⁶	60 S	20 29	21 36	** **	1 11 11	13 42 94	
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 20 ^h 02 ^m 0	Mag: -3.9 PMG: 13 ^h 31 ^m			Mag: +0.9 PMG: 6 ^h 32 ^m			Mag: -2.9 PMG: 22 ^h 05 ^m		Mag: +0.8 PMG: 9 ^h 38 ^m				
	hG ♈	hG ♀	Dec		hG ♂	Dec		hG ♃	Dec	hG ♄	Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'		
0	58	40.0	157	33.2	261	44.2	+11 44.8	27	51.9	+10 59.8	215	04.3		
1	73	42.5	172	32.3		14.6	44.4	42	54.6	59.7	230	06.5		
2	88	44.9	187	31.3		14.9	44.0	57	57.3	59.6	245	08.7		
3	103	47.4	202	30.4		15.1	43.7	73	00.1	59.6	260	10.9		
4	118	49.9	217	29.5		15.4	43.3	88	02.8	59.5	275	13.1		
5	133	52.3	232	28.5	-24	15.7	42.9	103	05.5	+10 59.4	290	15.4		
6	148	54.8	247	27.6	-24	16.0	42.5	118	08.3	+10 59.3	305	17.6		
7	163	57.3	262	26.7		16.3	42.1	133	11.0	59.2	320	19.8		
8	178	59.7	277	25.8		16.5	41.7	148	13.7	59.1	335	22.0		
9	194	02.2	292	24.8		16.8	41.3	163	16.5	59.0	350	24.2		
10	209	04.7	307	23.9		17.1	40.9	178	19.2	59.0	5	26.4		
11	224	07.1	322	23.0	-24	17.4	40.5	193	21.9	+10 58.9	20	28.6		
12	239	09.6	337	22.1	-24	17.6	40.2	208	24.7	+10 58.8	35	30.8		
13	254	12.0	352	21.1		17.9	39.8	223	27.4	58.7	50	33.0		
14	269	14.5	7	20.2		18.2	39.4	238	30.1	58.6	65	35.2		
15	284	17.0	22	19.3		18.4	39.0	253	32.8	58.5	80	37.4		
16	299	19.4	37	18.3		18.7	38.6	268	35.6	58.4	95	39.6		
17	314	21.9	52	17.4	-24	19.0	38.2	283	38.3	+10 58.4	110	41.8		
18	329	24.4	67	16.5	-24	19.2	37.8	298	41.0	+10 58.3	125	44.0		
19	344	26.8	82	15.5		19.5	37.4	313	43.8	58.2	140	46.2		
20	359	29.3	97	14.6		19.8	37.0	328	46.5	58.1	155	48.5		
21	14	31.8	112	13.7		20.0	36.7	343	49.2	58.0	170	50.7		
22	29	34.2	127	12.8		20.3	36.3	358	51.9	57.9	185	52.9		
23	44	36.7	142	11.8		20.5	35.9	13	54.7	57.9	200	55.1		
24	59	39.2	157	10.9	-24	20.8	35.5	28	57.4	+10 57.8	215	57.3		
Dif	—		-9	-3		+13	-4	+27		-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 45 ^m 8			Edad: 25 ^d 2 SD: 16'3 PMG: 8 ^h 07 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°	
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m
0	183	35.3	-19	242	23.2	-4	22.1	60 N	6 28	7 21	8 12	2 31	96	13 25	14	
1	198	35.1		256	52.1	99	35.7	58	23	12	7 59	29	92	29	18	
2	213	35.0		271	20.9	98	-4 49.3	56	18	7 04	48	26	89	33	20	
3	228	34.8		285	49.7	98	-5 02.9	54	13	6 57	38	24	86	37	22	
4	243	34.7		300	18.5	98	16.5	52	09	51	29	22	84	40	25	
5	258	34.5	-19	314	47.2	97	-5 30.0	50	6 05	6 45	7 22	2 20	81	13 42	27	
6	273	34.3	-19	329	15.8	96	-5 43.5	45	5 57	6 33	7 05	2 16	77	13 48	32	
7	288	34.2		343	44.3	95	-5 57.0	40	49	22	6 51	12	73	53	36	
8	303	34.0		358	12.8	95	-6 10.5	35	42	13	40	09	70	13 58	38	
9	318	33.9		372	12.8	95	24.0	30	35	6 04	30	07	66	14 02	41	
10	333	33.7		386	27.0	94	37.4	20	22	5 49	6 12	2 02	62	08	47	
11	348	33.6	-19	400	38.0	93	-6 50.8	10 N	5 09	5 34	5 57	1 59	57	14 14	51	
12	3	33.4	-19	414	6.3	93	-7 04.2	0	4 55	5 20	5 42	1 55	53	14 20	54	
13	18	33.3		428	34.4	91	17.6	10 S	39	5 05	28	52	49	25	59	
14	33	33.1		442	8.5	92	30.9	20	4 20	4 48	5 12	48	44	31	63	
15	48	32.9		456	30.6	90	44.2	30	3 55	27	4 53	44	39	38	68	
16	63	32.8		470	58.6	90	-7 57.5	35	40	4 14	43	41	37	42	71	
17	78	32.6	-19	484	26.6	90	-8 10.7	40	3 21	3 59	4 30	1 39	33	14 47	74	
18	93	32.5	-19	498	54.4	88	-8 23.9	45	2 57	3 41	4 16	1 36	30	14 52	78	
19	108	32.3		512	22.2	88	37.0	50	23	18	3 58	32	26	14 58	83	
20	123	32.2		526	50.0	88	-8 50.1	52	2 05	3 06	49	30	24	15 01	85	
21	138	32.0		540	17.6	86	-9 03.2	54	1 43	2 53	40	29	21	04	87	
22	153	31.8		554	45.2	86	16.2	56	1 13	37	29	27	18	08	90	
23	168	31.7	-19	568	12.7	85	29.1	58	0 14	2 18	17	24	16	12	93	
24	183	31.5	-20	582	40.1	84	-9 42.1	60 S	** **	1 55	3 02	1 22	13	15 16	97	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO								
	PMG: 19 ^h 58 ^m 1		Mag: -3.9 PMG: 13 ^h 32 ^m		Mag: +0.9 PMG: 6 ^h 30 ^m		Mag: -2.9 PMG: 22 ^h 00 ^m		Mag: +0.8 PMG: 9 ^h 35 ^m								
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec							
h	°	'	°	'	°	'	°	'	°	'							
0	59	39.2	157	10.9	-24	20.8	262	15.8	+11	35.5							
1	74	41.6	172	10.0		21.0	277	17.2		35.1							
2	89	44.1	187	09.0		21.3	292	18.5		34.7							
3	104	46.5	202	08.1		21.6	307	19.8		34.3							
4	119	49.0	217	07.2		21.8	322	21.1		33.9							
5	134	51.5	232	06.2	-24	22.1	337	22.5	+11	33.6							
6	149	53.9	247	05.3	-24	22.3	352	23.8	+11	33.2							
7	164	56.4	262	04.4		22.5	7	25.1		32.8							
8	179	58.9	277	03.4		22.8	22	26.4		32.4							
9	195	01.3	292	02.5		23.0	37	27.8		32.0							
10	210	03.8	307	01.6		23.3	52	29.1		31.6							
11	225	06.3	322	00.6	-24	23.5	67	30.4	+11	31.2							
12	240	08.7	336	59.7	-24	23.8	82	31.8	+11	30.8							
13	255	11.2	351	58.8		24.0	97	33.1		30.5							
14	270	13.7	6	57.8		24.2	112	34.4		30.1							
15	285	16.1	21	56.9		24.5	127	35.8		29.7							
16	300	18.6	36	56.0		24.7	142	37.1		29.3							
17	315	21.0	51	55.0	-24	24.9	157	38.4	+11	28.9							
18	330	23.5	66	54.1	-24	25.2	172	39.7	+11	28.5							
19	345	26.0	81	53.2		25.4	187	41.1		28.1							
20	0	28.4	96	52.2		25.6	202	42.4		27.8							
21	15	30.9	111	51.3		25.9	217	43.7		27.4							
22	30	33.4	126	50.3		26.1	232	45.1		27.0							
23	45	35.8	141	49.4		26.3	247	46.4		26.6							
24	60	38.3	156	48.5	-24	26.6	262	47.7	+11	26.2							
Dif	—		-9		-2		+13		-4		+27		-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 46 ^m 0				Edad: 26 ^d 2 PHE { SD: 16:5 PMG: 9 ^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			
0	183	31.5	-20	00.2	229	40.1	-9	42.1	60 N	15 17	16 09	17 02	4 07 99		13 39 19			
1	198	31.4		00.7	244	07.5 84	-9	54.9 ¹²⁸	58	30	17	07	4 01 94		47 22			
2	213	31.2		01.3	258	34.8 83	-10	07.8 ¹²⁹	56	42	25	12	3 55 91		53 26			
3	228	31.0		01.8	273	02.0 82		20.5 ¹²⁷	54	15 52	32	17	50 88		13 59 28			
4	243	30.9		02.4	287	29.2 82		33.2 ¹²⁷	52	16 01	39	21	46 85		14 05 30			
5	258	30.7	-20	02.9	301	56.3 81	-10	45.9 ¹²⁷	50	16 08	16 45	17 25	3 41 84		14 09 33			
6	273	30.6	-20	03.5	316	23.3 80	-10	58.5 ¹²⁶	45	16 25	16 58	17 34	3 33 78		14 20 37			
7	288	30.4		04.0	330	50.2 79	-11	11.0 ¹²⁵	40	39	17 09	42	25 75		29 40			
8	303	30.2		04.5	345	17.0 78		23.5 ¹²⁵	35	16 51	18	49	19 72		36 44			
9	318	30.1		05.1	359	43.8 78		35.9 ¹²⁴	30	17 01	27	17 56	13 69		43 46			
10	333	29.9		05.6	14	10.5 77	-11	48.3 ¹²⁴	20	19	43	18 10	3 04 64		14 55 50			
11	348	29.7	-20	06.2	28	37.1 76	-12	00.6 ¹²³	10 N	17 35	17 57	18 23	2 56 60		15 05 54			
12	3	29.6	-20	06.7	43	03.7 76	-12	12.8 ¹²²	0	17 50	18 12	18 37	2 48 56		15 14 58			
13	18	29.4		07.2	57	30.1 74		24.9 ¹²¹	10 S	18 05	27	18 53	41 52		24 61			
14	33	29.2		07.8	71	56.5 74		37.0 ¹²¹	20	21	18 45	19 13	32 49		34 65			
15	48	29.1		08.3	86	22.8 73	-12	49.0 ¹²⁰	30	39	19 06	38	23 44		46 70			
16	63	28.9		08.8	100	49.1 73	-13	00.9 ¹¹⁹	35	18 50	19	19 54	18 41		15 53 72			
17	78	28.7	-20	09.4	115	15.2 71	-13	12.7 ¹¹⁸	40	19 03	19 34	20 13	2 12 38		16 01 75			
18	93	28.6	-20	09.9	129	41.3 71	-13	24.5 ¹¹⁸	45	19 18	19 53	20 38	2 06 34		16 10 79			
19	108	28.4		10.4	144	07.3 70		36.2 ¹¹⁷	50	36	20 17	21 12	1 58 29		21 83			
20	123	28.2		11.0	158	33.2 69		47.8 ¹¹⁶	52	45	29	31	54 27		26 85			
21	138	28.1		11.5	172	59.0 68	-13	59.3 ¹¹⁵	54	19 55	42	21 54	50 25		31 89			
22	153	27.9		12.0	187	24.8 68	-14	10.7 ¹¹⁴	56	20 06	20 59	22 28	45 23		38 91			
23	168	27.7		12.6	201	50.5 67		22.1 ¹¹⁴	58	19	21 18	** **	40 20		45 94			
24	183	27.6	-20	13.1	216	16.1 66	-14	33.3 ¹¹²	60 S	20 34	21 43	** **	1 35 16		16 53 98			
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 19 ^h 54 ^m 2		Mag: -3.9 PMG: 13 ^h 34 ^m				Mag: +0.9 PMG: 6 ^h 28 ^m				Mag: -2.9 PMG: 21 ^h 56 ^m				Mag: +0.8 PMG: 9 ^h 31 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	60	38.3	156	48.5	-24	26.6	262	47.7	+11	26.2	30	02.8	+10	55.8	216	50.3	-7	27.5
1	75	40.8	171	47.5		26.8	277	49.1		25.8	45	05.5		55.7	231	52.5		27.6
2	90	43.2	186	46.6		27.0	292	50.4		25.4	60	08.2		55.6	246	54.7		27.7
3	105	45.7	201	45.7		27.2	307	51.7		25.1	75	11.0		55.5	261	56.9		27.8
4	120	48.1	216	44.7		27.4	322	53.1		24.7	90	13.7		55.4	276	59.1		27.9
5	135	50.6	231	43.8	-24	27.7	337	54.4	+11	24.3	105	16.4	+10	55.4	292	01.3	-7	28.0
6	150	53.1	246	42.8	-24	27.9	352	55.8	+11	23.9	120	19.1	+10	55.3	307	03.5	-7	28.0
7	165	55.5	261	41.9		28.1	7	57.1		23.5	135	21.8		55.2	322	05.7		28.1
8	180	58.0	276	41.0		28.3	22	58.4		23.1	150	24.6		55.1	337	08.0		28.2
9	196	00.5	291	40.0		28.5	37	59.8		22.8	165	27.3		55.0	352	10.2		28.3
10	211	02.9	306	39.1		28.7	53	01.1		22.4	180	30.0		54.9	7	12.4		28.4
11	226	05.4	321	38.2	-24	28.9	68	02.4	+11	22.0	195	32.7	+10	54.9	22	14.6	-7	28.5
12	241	07.9	336	37.2	-24	29.2	83	03.8	+11	21.6	210	35.4	+10	54.8	37	16.8	-7	28.6
13	256	10.3	351	36.3		29.4	98	05.1		21.2	225	38.1		54.7	52	19.0		28.7
14	271	12.8	6	35.3		29.6	113	06.5		20.8	240	40.9		54.6	67	21.2		28.8
15	286	15.3	21	34.4		29.8	128	07.8		20.4	255	43.6		54.5	82	23.4		28.9
16	301	17.7	36	33.5		30.0	143	09.1		20.1	270	46.3		54.5	97	25.6		29.0
17	316	20.2	51	32.5	-24	30.2	158	10.5	+11	19.7	285	49.0	+10	54.4	112	27.8	-7	29.1
18	331	22.6	66	31.6	-24	30.4	173	11.8	+11	19.3	300	51.7	+10	54.3	127	30.1	-7	29.2
19	346	25.1	81	30.6		30.6	188	13.2		18.9	315	54.5		54.2	142	32.3		29.2
20	1	27.6	96	29.7		30.8	203	14.5		18.5	330	57.2		54.1	157	34.5		29.3
21	16	30.0	111	28.8		31.0	218	15.9		18.1	345	59.9		54.1	172	36.7		29.4
22	31	32.5	126	27.8		31.2	233	17.2		17.8	1	02.6		54.0	187	38.9		29.5
23	46	35.0	141	26.9		31.4	248	18.5		17.4	16	05.3		53.9	202	41.1		29.6
24	61	37.4	156	25.9	-24	31.6	263	19.9	+11	17.0	31	08.0	+10	53.8	217	43.3	-7	29.7
Dif	—		-9		-2		+13		-4		+27		-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 46 ^m 3			Edad: 27 ^d 2 PHE { 4 ^h : 60'9 12 ^h : 60'9 20 ^h : 61'0 PMG: 9 ^h 58 ^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	27.6	-20	13.1	216	16.1	-14	33.3	60 N	6 32	7 25	8 16	5 46	97	13 58	27	
1	198	27.4		13.6	230	41.6		44.5	58	26	16	8 03	35	94	14 09	31	
2	213	27.2		14.2	245	07.0		55.6	56	21	08	7 52	26	90	19	33	
3	228	27.1		14.7	259	32.4		06.5	54	16	7 01	42	18	88	27	33	
4	243	26.9		15.2	273	57.7		17.4	52	12	6 54	33	11	85	35	38	
5	258	26.7	-20	15.7	288	22.9	-15	28.2	50	6 08	6 48	7 25	5 05	83	14 42	40	
6	273	26.6	-20	16.3	302	48.0	-15	38.9	45	5 59	6 35	7 08	4 51	79	14 57	44	
7	288	26.4		16.8	317	13.1		49.5	40	51	24	6 54	40	75	15 09	47	
8	303	26.2		17.3	331	38.0	-15	59.9	35	43	14	42	31	72	20	49	
9	318	26.0		17.8	346	02.9	-16	10.3	30	36	6 06	31	22	70	29	52	
10	333	25.9		18.4	0	27.8		20.6	20	23	5 50	6 13	4 08	66	45	55	
11	348	25.7	-20	18.9	14	52.5	-16	30.7	10 N	5 09	5 35	5 58	3 56	62	15 59	58	
12	3	25.5	-20	19.4	29	17.2	-16	40.8	0	4 55	5 21	5 43	3 44	60	16 12	61	
13	18	25.3		19.9	43	41.8	-16	50.7	10 S	39	5 05	28	33	56	25	64	
14	33	25.2		20.5	58	06.3	-17	00.5	20	4 19	4 48	5 12	21	53	39	67	
15	48	25.0		21.0	72	30.7		10.2	30	3 54	26	4 53	3 07	49	16 56	69	
16	63	24.8		21.5	86	55.1		19.8	35	38	4 13	42	2 59	47	17 05	72	
17	78	24.7	-20	22.0	101	19.4	-17	29.2	40	3 19	3 58	4 29	2 50	44	17 16	74	
18	93	24.5	-20	22.5	115	43.6	-17	38.6	45	2 54	3 39	4 14	2 40	40	17 29	77	
19	108	24.3		23.1	130	07.8		47.8	50	20	15	3 56	27	36	44	81	
20	123	24.1		23.6	144	31.8	-17	56.9	52	2 01	3 03	47	21	35	17 51	83	
21	138	24.0		24.1	158	55.9	-18	05.9	54	1 38	2 49	37	15	32	18 00	84	
22	153	23.8		24.6	173	19.8		14.7	56	1 04	33	26	08	29	09	87	
23	168	23.6		25.1	187	43.7		23.4	58	** **	2 14	3 13	2 00	26	19	90	
24	183	23.4	-20	25.6	202	07.5	-18	32.0	60 S	** **	1 48	2 58	1 51	23	18 31	94	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO					
	PMG: 19 ^h 50 ^m 2		Mag: -3.9 PMG: 13 ^h 35 ^m			Mag: +0.9 PMG: 6 ^h 26 ^m			Mag: -2.9 PMG: 21 ^h 52 ^m			Mag: +0.8 PMG: 9 ^h 28 ^m					
	hG ♈		hG ♀ Dec			hG ♂ Dec			hG ♃ Dec			hG ♄ Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	61	37.4	156	25.9	-24	31.6	263	19.9	+11	17.0	31	08.0	+10	53.8	217	43.3	
1	76	39.9	171	25.0		31.8	278	21.2		16.6	46	10.8		53.7	232	45.5	
2	91	42.4	186	24.1		32.0	293	22.6		16.2	61	13.5		53.7	247	47.7	
3	106	44.8	201	23.1		32.2	308	23.9		15.8	76	16.2		53.6	262	50.0	
4	121	47.3	216	22.2		32.3	323	25.3		15.5	91	18.9		53.5	277	52.2	
5	136	49.8	231	21.2	-24	32.5	338	26.6	+11	15.1	106	21.6	+10	53.4	292	54.4	
6	151	52.2	246	20.3	-24	32.7	353	28.0	+11	14.7	121	24.3	+10	53.3	307	56.6	
7	166	54.7	261	19.4		32.9	8	29.3		14.3	136	27.1		53.3	322	58.8	
8	181	57.1	276	18.4		33.1	23	30.7		13.9	151	29.8		53.2	338	01.0	
9	196	59.6	291	17.5		33.3	38	32.0		13.5	166	32.5		53.1	353	03.2	
10	212	02.1	306	16.5		33.5	53	33.4		13.2	181	35.2		53.0	8	05.4	
11	227	04.5	321	15.6	-24	33.6	68	34.7	+11	12.8	196	37.9	+10	52.9	23	07.6	
12	242	07.0	336	14.6	-24	33.8	83	36.0	+11	12.4	211	40.6	+10	52.9	38	09.9	
13	257	09.5	351	13.7		34.0	98	37.4		12.0	226	43.3		52.8	53	12.1	
14	272	11.9	6	12.8		34.2	113	38.7		11.6	241	46.0		52.7	68	14.3	
15	287	14.4	21	11.8		34.3	128	40.1		11.3	256	48.8		52.6	83	16.5	
16	302	16.9	36	10.9		34.5	143	41.4		10.9	271	51.5		52.5	98	18.7	
17	317	19.3	51	09.9	-24	34.7	158	42.8	+11	10.5	286	54.2	+10	52.5	113	20.9	
18	332	21.8	66	09.0	-24	34.9	173	44.2	+11	10.1	301	56.9	+10	52.4	128	23.1	
19	347	24.2	81	08.0		35.0	188	45.5		09.7	316	59.6		52.3	143	25.3	
20	2	26.7	96	07.1		35.2	203	46.9		09.4	332	02.3		52.2	158	27.5	
21	17	29.2	111	06.2		35.4	218	48.2		09.0	347	05.0		52.1	173	29.8	
22	32	31.6	126	05.2		35.5	233	49.6		08.6	2	07.7		52.1	188	32.0	
23	47	34.1	141	04.3		35.7	248	50.9		08.2	17	10.5		52.0	203	34.2	
24	62	36.6	156	03.3	-24	35.9	263	52.3	+11	07.8	32	13.2	+10	51.9	218	36.4	
Dif	—		-9			-2	+13			-4	+27		-1		+22		

UT	SOL				● LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna		
	SD: 16'2 PMG: 11 ^h 46 ^m 6				Edad: 28 ^d 2 PHE { 4 ^h : 61'0 12 ^h : 60'9 20 ^h : 60'9 R°: 63 ^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	183	23.4	-20	25.6	202	07.5	-18	32.0	60 N	15 14	16 06	16 59	7 23	88	14 25	41		
1	198	23.2		26.1	216	31.2	47	40.5	58	27	15	17 05	7 09	85	40	44		
2	213	23.1		26.7	230	54.9	47	48.8	56	39	23	10	6 56	83	14 52	47		
3	228	22.9		27.2	245	18.5	46	-18 57.0	54	49	30	15	46	80	15 04	48		
4	243	22.7		27.7	259	42.1	46	-19 05.1	52	15 58	37	19	36	79	13	50		
5	258	22.5	-20	28.2	274	05.6	45	-19 13.0	50	16 07	16 43	17 23	6 28	77	15 22	51		
6	273	22.4	-20	28.7	288	29.0	44	-19 20.8	45	16 24	16 56	17 33	6 10	75	15 41	53		
7	288	22.2		29.2	302	52.4	44	28.4	40	38	17 08	41	5 55	73	15 56	55		
8	303	22.0		29.7	317	15.7	43	35.9	35	16 50	18	49	43	71	16 09	57		
9	318	21.8		30.2	331	39.0	43	43.3	30	17 01	27	17 56	32	69	21	57		
10	333	21.6		30.7	346	02.2	42	50.5	20	19	43	18 10	5 14	67	40	60		
11	348	21.5	-20	31.3	0	25.4	42	-19 57.6	10 N	17 35	17 57	18 23	4 58	64	16 57	61		
12	3	21.3	-20	31.8	14	48.5	41	-20 04.5	0	17 50	18 12	18 38	4 44	62	17 13	62		
13	18	21.1		32.3	29	11.5	40	11.3	10 S	18 05	28	18 55	29	60	29	64		
14	33	20.9		32.8	43	34.5	40	17.9	20	22	18 46	19 14	4 14	57	17 46	65		
15	48	20.7		33.3	57	57.5	40	24.4	30	41	19 08	40	3 56	55	18 05	68		
16	63	20.5		33.8	72	20.4	39	30.7	35	18 52	21	19 56	46	53	17	68		
17	78	20.4	-20	34.3	86	43.3	39	-20 36.9	40	19 05	19 36	20 16	3 34	51	18 30	70		
18	93	20.2	-20	34.8	101	06.1	38	-20 42.9	45	19 20	19 56	20 41	3 20	49	18 46	71		
19	108	20.0		35.3	115	28.9	38	48.8	50	39	20 20	21 17	3 03	46	19 05	73		
20	123	19.8		35.8	129	51.6	37	-20 54.5	52	48	33	21 36	2 56	44	14	74		
21	138	19.6		36.3	144	14.4	38	-21 00.1	54	19 58	20 47	22 01	47	42	24	75		
22	153	19.4		36.8	158	37.0	36	05.5	56	20 10	21 04	22 38	37	40	36	76		
23	168	19.3		37.3	172	59.7	37	10.7	58	23	24	** **	26	38	19 49	78		
24	183	19.1	-20	37.8	187	22.3	36	-21 15.8	60 S	20 39	21 51	** **	2 14	34	20 05	80		
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 19 ^h 46 ^m 3		Mag: -3.9 PMG: 13 ^h 37 ^m		Mag: +0.8 PMG: 6 ^h 24 ^m		Mag: -2.9 PMG: 21 ^h 47 ^m		Mag: +0.8 PMG: 9 ^h 24 ^m									
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄									
h	°	'	°	'	°	'	°	'	°	'								
0	62	36.6	156	03.3	-24	35.9	263	52.3	+11	07.8								
1	77	39.0	171	02.4		36.0	278	53.6		07.4								
2	92	41.5	186	01.4		36.2	293	55.0		07.1								
3	107	44.0	201	00.5		36.3	308	56.3		06.7								
4	122	46.4	215	59.5		36.5	323	57.7		06.3								
5	137	48.9	230	58.6	-24	36.7	338	59.0	+11	05.9								
6	152	51.4	245	57.7	-24	36.8	354	00.4	+11	05.5								
7	167	53.8	260	56.7		37.0	9	01.8		05.2								
8	182	56.3	275	55.8		37.1	24	03.1		04.8								
9	197	58.7	290	54.8		37.3	39	04.5		04.4								
10	213	01.2	305	53.9		37.4	54	05.8		04.0								
11	228	03.7	320	52.9	-24	37.6	69	07.2	+11	03.7								
12	243	06.1	335	52.0	-24	37.7	84	08.5	+11	03.3								
13	258	08.6	350	51.0		37.9	99	09.9		02.9								
14	273	11.1	5	50.1		38.0	114	11.3		02.5								
15	288	13.5	20	49.1		38.2	129	12.6		02.1								
16	303	16.0	35	48.2		38.3	144	14.0		01.8								
17	318	18.5	50	47.3	-24	38.4	159	15.3	+11	01.4								
18	333	20.9	65	46.3	-24	38.6	174	16.7	+11	01.0								
19	348	23.4	80	45.4		38.7	189	18.1		00.6								
20	3	25.9	95	44.4		38.9	204	19.4	+11	00.2								
21	18	28.3	110	43.5		39.0	219	20.8	+10	59.9								
22	33	30.8	125	42.5		39.1	234	22.2		59.5								
23	48	33.2	140	41.6		39.3	249	23.5		59.1								
24	63	35.7	155	40.6	-24	39.4	264	24.9	+10	58.7								
Dif	—		-9		-1		+14		-4									
							+27		-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 46 ^m 9			Edad: 29 ^d 2 PHE { 4 ^h : 60'7 12 ^h : 60'6 20 ^h : 60'4 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	183	19.1	-20	37.8	187	22.3	-21	15.8	60 N	6 35	7 29	8 21	8 51	70	15 06	60
1	198	18.9		38.3	201	44.9		20.8	58	29	20	8 07	34	69	24	60
2	213	18.7		38.8	216	07.5		25.6	56	24	11	7 55	19	69	39	61
3	228	18.5		39.3	230	30.0		30.2	54	19	7 04	45	8 06	68	15 52	61
4	243	18.3		39.8	244	52.5		34.6	52	15	6 57	36	7 55	68	16 03	61
5	258	18.1	-20	40.3	259	15.0	-21	38.9	50	6 11	6 51	7 28	7 45	68	16 13	61
6	273	18.0	-20	40.8	273	37.5	-21	43.1	45	6 01	6 38	7 10	7 25	66	16 34	62
7	288	17.8		41.3	287	59.9		47.0	40	5 53	26	6 56	7 08	66	16 51	62
8	303	17.6		41.8	302	22.4		50.8	35	45	16	44	6 54	65	17 06	62
9	318	17.4		42.3	316	44.8		54.5	30	38	6 07	33	41	65	18 62	
10	333	17.2		42.7	331	07.2	-21	58.0	20	24	5 51	6 15	21	64	40	62
11	348	17.0	-20	43.2	345	29.7	-22	01.3	10 N	5 10	5 36	5 58	6 02	64	17 58	62
12	3	16.8	-20	43.7	359	52.1	-22	04.4	0	4 55	5 21	5 43	5 46	62	18 15	63
13	18	16.6		44.2	14	14.5		07.4	10 S	39	5 05	28	29	62	33	62
14	33	16.5		44.7	28	36.9		10.3	20	4 19	4 47	5 11	5 11	61	18 51	62
15	48	16.3		45.2	42	59.3		12.9	30	3 54	26	4 52	4 51	60	19 13	62
16	63	16.1		45.7	57	21.7		15.4	35	37	4 12	41	39	59	25	62
17	78	15.9	-20	46.2	71	44.1	-22	17.7	40	3 17	3 57	4 28	4 25	58	19 40	61
18	93	15.7	-20	46.7	86	06.5	-22	19.9	45	2 52	3 37	4 13	4 09	57	19 57	61
19	108	15.5		47.1	100	28.9		21.9	50	2 16	13	3 54	3 49	56	20 18	61
20	123	15.3		47.6	114	51.3		23.7	52	1 57	3 00	45	40	55	28	61
21	138	15.1		48.1	129	13.8		25.4	54	1 32	2 46	35	29	55	39	61
22	153	14.9		48.6	143	36.3		26.9	56	0 55	29	23	17	54	20 52	60
23	168	14.7		49.1	157	58.8		28.3	58	** **	2 09	3 10	3 04	52	21 07	60
24	183	14.5	-20	49.6	172	21.3	-22	29.4	60 S	** **	1 42	2 54	2 48	50	21 25	59

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 19 ^h 42 ^m 4		Mag: -3.9 PMG: 13 ^h 38 ^m		Mag: +0.8 PMG: 6 ^h 22 ^m		Mag: -2.9 PMG: 21 ^h 43 ^m		Mag: +0.8 PMG: 9 ^h 21 ^m									
	hG ♂	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	63	35.7	155	40.6	-24	39.4	264	24.9	+10	58.7	33	18.1	+10	50.1	219	29.5	-7	34.1
1	78	38.2	170	39.7		39.5	279	26.3		58.4	48	20.8		50.0	234	31.7		34.2
2	93	40.6	185	38.7		39.7	294	27.6		58.0	63	23.5		49.9	249	33.9		34.3
3	108	43.1	200	37.8		39.8	309	29.0		57.6	78	26.3		49.8	264	36.2		34.4
4	123	45.6	215	36.8		39.9	324	30.4		57.2	93	29.0		49.8	279	38.4		34.4
5	138	48.0	230	35.9	-24	40.0	339	31.7	+10	56.8	108	31.7	+10	49.7	294	40.6	-7	34.5
6	153	50.5	245	34.9	-24	40.2	354	33.1	+10	56.5	123	34.4	+10	49.6	309	42.8	-7	34.6
7	168	53.0	260	34.0		40.3	9	34.4		56.1	138	37.1		49.5	324	45.0		34.7
8	183	55.4	275	33.0		40.4	24	35.8		55.7	153	39.8		49.5	339	47.2		34.8
9	198	57.9	290	32.1		40.5	39	37.2		55.3	168	42.5		49.4	354	49.5		34.9
10	214	00.4	305	31.2		40.7	54	38.6		55.0	183	45.2		49.3	9	51.7		35.0
11	229	02.8	320	30.2	-24	40.8	69	39.9	+10	54.6	198	47.9	+10	49.2	24	53.9	-7	35.1
12	244	05.3	335	29.3	-24	40.9	84	41.3	+10	54.2	213	50.6	+10	49.2	39	56.1	-7	35.2
13	259	07.7	350	28.3		41.0	99	42.7		53.8	228	53.3		49.1	54	58.3		35.3
14	274	10.2	5	27.4		41.1	114	44.0		53.5	243	56.0		49.0	70	00.5		35.3
15	289	12.7	20	26.4		41.2	129	45.4		53.1	258	58.7		48.9	85	02.7		35.4
16	304	15.1	35	25.5		41.3	144	46.8		52.7	274	01.4		48.9	100	05.0		35.5
17	319	17.6	50	24.5	-24	41.5	159	48.1	+10	52.3	289	04.1	+10	48.8	115	07.2	-7	35.6
18	334	20.1	65	23.6	-24	41.6	174	49.5	+10	51.9	304	06.8	+10	48.7	130	09.4	-7	35.7
19	349	22.5	80	22.6		41.7	189	50.9		51.6	319	09.5		48.6	145	11.6		35.8
20	4	25.0	95	21.7		41.8	204	52.3		51.2	334	12.2		48.6	160	13.8		35.9
21	19	27.5	110	20.7		41.9	219	53.6		50.8	349	14.9		48.5	175	16.0		36.0
22	34	29.9	125	19.8		42.0	234	55.0		50.4	4	17.6		48.4	190	18.3		36.1
23	49	32.4	140	18.8		42.1	249	56.4		50.1	19	20.3		48.4	205	20.5		36.2
24	64	34.9	155	17.9	-24	42.2	264	57.8	+10	49.7	34	23.0	+10	48.3	220	22.7	-7	36.2
Dif	—		-9		-1		+14		-4		+27		-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 47 ^m 2			Edad: 30 ^d 2 PHE { SD: 16'4 PMG: 13 ^h 03 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	
0	183	14.5	-20 49.6	172	21.3	-22 29.4	10	60 N	15 10	16 03	16 57	10 01 49	16 06 77		
1	198	14.3	50.0	186	43.8	35 30.4	10	58	25	13	17 03	9 43 50	24 75		
2	213	14.2	50.5	201	06.3	35 31.3	9	56	37	21	08	28 51	40 73		
3	228	14.0	51.0	215	28.9	36 31.9	6	54	47	29	13	14 53	16 53 71		
4	243	13.8	51.5	229	51.5	36 32.5	6	52	15 56	35	18	9 03 54	17 04 71		
5	258	13.6	-20 52.0	244	14.2	37 -22 32.8	3	50	16 05	16 42	17 22	8 53 54	17 14 70		
6	273	13.4	-20 52.4	258	36.8	36 -22 33.0	2	45	16 23	16 55	17 32	8 31 56	17 36 68		
7	288	13.2	52.9	272	59.5	37 33.0	0	40	37	17 07	40	8 14 56	17 53 66		
8	303	13.0	53.4	287	22.3	38 32.9	1	35	16 50	17	48	7 59 58	18 08 65		
9	318	12.8	53.9	301	45.1	38 32.6	3	30	17 00	26	17 55	46 59	20 64		
10	333	12.6	54.4	316	07.9	38 32.1	5	20	19	43	18 10	25 59	18 42 62		
11	348	12.4	-20 54.8	330	30.8	39 -22 31.5	6	10 N	17 35	17 58	18 24	7 06 60	19 00 61		
12	3	12.2	-20 55.3	344	53.7	39 -22 30.7	8	0	17 51	18 13	18 39	6 48 61	19 18 59		
13	18	12.0	55.8	359	16.7	40 29.8	9	10 S	18 06	29	18 56	31 61	35 58		
14	33	11.8	56.3	13	39.7	40 28.6	12	20	23	18 47	19 16	6 12 63	19 53 57		
15	48	11.6	56.7	28	02.7	40 27.4	12	30	43	19 09	42	5 51 63	20 15 54		
16	63	11.4	57.2	42	25.9	42 26.0	14	35	18 54	23	19 58	38 64	27 54		
17	78	11.2	-20 57.7	56	49.0	41 -22 24.4	16	40	19 07	19 39	20 18	5 23 65	20 41 53		
18	93	11.0	-20 58.1	71	12.3	43 -22 22.6	18	45	19 23	19 59	20 45	5 06 65	20 58 51		
19	108	10.8	58.6	85	35.6	43 20.8	18	50	42	20 24	21 21	4 45 66	21 19 48		
20	123	10.6	59.1	99	58.9	43 18.7	21	52	19 52	36	21 41	35 66	29 47		
21	138	10.4	-20 59.5	114	22.3	44 16.5	22	54	20 02	20 51	22 08	24 66	40 46		
22	153	10.2	-21 00.0	128	45.8	45 14.2	23	56	14	21 08	22 49	4 11 67	21 52 45		
23	168	10.0	-21 00.5	143	09.4	46 11.7	25	58	27	30	** **	3 56 68	22 07 42		
24	183	09.8	-21 00.9	157	33.0	46 -22 09.0	27	60 S	20 44	21 58	** **	3 38 69	22 24 40		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG 19 ^h 38 ^m 5		Mag: -3.9 PMG: 13 ^h 40 ^m			Mag: +0.8 PMG: 6 ^h 20 ^m			Mag: -2.9 PMG: 21 ^h 39 ^m			Mag: +0.8 PMG: 9 ^h 17 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	
0	64	34.9	155 17.9	-24 42.2	264 57.8	+10 49.7	34 23.0	+10 48.3	220 22.7	-7 36.2					
1	79	37.3	170 16.9	42.3	279 59.1	49.3	49 25.7	48.2	235 24.9	36.3					
2	94	39.8	185 16.0	42.4	295 00.5	48.9	64 28.4	48.1	250 27.1	36.4					
3	109	42.2	200 15.0	42.5	310 01.9	48.6	79 31.1	48.1	265 29.3	36.5					
4	124	44.7	215 14.1	42.6	325 03.3	48.2	94 33.8	48.0	280 31.6	36.6					
5	139	47.2	230 13.1	-24 42.7	340 04.6	+10 47.8	109 36.5	+10 47.9	295 33.8	-7 36.7					
6	154	49.6	245 12.2	-24 42.8	355 06.0	+10 47.4	124 39.2	+10 47.8	310 36.0	-7 36.8					
7	169	52.1	260 11.2	42.9	10 07.4	47.1	139 41.9	47.8	325 38.2	36.9					
8	184	54.6	275 10.3	43.0	25 08.8	46.7	154 44.6	47.7	340 40.4	37.0					
9	199	57.0	290 09.3	43.1	40 10.1	46.3	169 47.2	47.6	355 42.6	37.0					
10	214	59.5	305 08.4	43.1	55 11.5	46.0	184 49.9	47.6	10 44.9	37.1					
11	230	02.0	320 07.4	-24 43.2	70 12.9	+10 45.6	199 52.6	+10 47.5	25 47.1	-7 37.2					
12	245	04.4	335 06.5	-24 43.3	85 14.3	+10 45.2	214 55.3	+10 47.4	40 49.3	-7 37.3					
13	260	06.9	350 05.5	43.4	100 15.7	44.8	229 58.0	47.3	55 51.5	37.4					
14	275	09.3	5 04.6	43.5	115 17.0	44.5	245 00.7	47.3	70 53.7	37.5					
15	290	11.8	20 03.6	43.6	130 18.4	44.1	260 03.4	47.2	85 55.9	37.6					
16	305	14.3	35 02.7	43.6	145 19.8	43.7	275 06.1	47.1	100 58.2	37.7					
17	320	16.7	50 01.7	-24 43.7	160 21.2	+10 43.3	290 08.8	+10 47.0	116 00.4	-7 37.8					
18	335	19.2	65 00.8	-24 43.8	175 22.6	+10 43.0	305 11.5	+10 47.0	131 02.6	-7 37.8					
19	350	21.7	79 59.8	43.9	190 23.9	42.6	320 14.2	46.9	146 04.8	37.9					
20	5	24.1	94 58.9	44.0	205 25.3	42.2	335 16.9	46.8	161 07.0	38.0					
21	20	26.6	109 57.9	44.0	220 26.7	41.8	350 19.6	46.8	176 09.2	38.1					
22	35	29.1	124 57.0	44.1	235 28.1	41.5	5 22.3	46.7	191 11.5	38.2					
23	50	31.5	139 56.0	44.2	250 29.5	41.1	20 25.0	46.6	206 13.7	38.3					
24	65	34.0	154 55.1	-24 44.2	265 30.9	+10 40.7	35 27.7	+10 46.5	221 15.9	-7 38.4					
Dif	—		-9	-1	+14	-4	+27	-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 47 ^m 5			Edad: 1 ^d 7 PHE { SD: 16:2 PMG: 14 ^h 03 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	Rº	Hora
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m	h m	m
0	183	09.8	-21	00.9	157	33.0	-22	09.0	6 39	7 33	8 26	10 50	31	17 23 85
1	198	09.6		01.4	171	56.7 47		06.2 28	33	23	8 11	33 35		39 82
2	213	09.4		01.9	186	20.4 47		03.2 30	27	15	7 59	19 37		17 53 79
3	228	09.2		02.3	200	44.3 49	-22	00.1 31	22	07	48	10 07 39		18 04 77
4	243	09.0		02.8	215	08.2 49	-21	56.9 32	18	7 00	39	9 57 40		15 75
5	258	08.8	-21	03.3	229	32.2 50	-21	53.5 34	6 13	6 54	7 31	9 47 42		18 24 73
6	273	08.6	-21	03.7	243	56.2 50	-21	50.0 35	6 03	6 40	7 13	9 27 45		18 44 70
7	288	08.4		04.2	258	20.4 52		46.3 37	5 55	28	6 58	9 10 48		18 59 68
8	303	08.2		04.7	272	44.6 52		42.5 38	47	18	46	8 57 49		19 13 65
9	318	08.0		05.1	287	08.9 53		38.5 40	39	6 09	35	45 50		24 64
10	333	07.8		05.6	301	33.3 54		34.4 41	25	5 52	6 16	24 53		19 44 61
11	348	07.6	-21	06.0	315	57.7 54	-21	30.1 43	5 11	5 37	5 59	8 06 56		20 01 58
12	3	07.4	-21	06.5	330	22.3 56	-21	25.8 43	4 56	5 22	5 44	7 49 58		20 17 56
13	18	07.2		07.0	344	46.9 56		21.2 46	39	5 06	28	32 60		33 53
14	33	07.0		07.4	359	11.7 58		16.6 46	4 19	4 47	5 11	7 15 61		20 50 51
15	48	06.8		07.9	13	36.5 58		11.8 48	3 53	25	4 52	6 54 64		21 09 48
16	63	06.6		08.3	28	01.4 59		06.9 49	36	4 12	40	42 65		21 45
17	78	06.4	-21	08.8	42	26.4 60	-21	01.8 51	3 16	3 55	4 27	6 28 67		21 34 43
18	93	06.2	-21	09.2	56	51.5 61	-20	56.7 51	2 50	3 36	4 11	6 11 70		21 49 41
19	108	06.0		09.7	71	16.7 62		51.3 54	2 13	3 10	3 52	5 51 72		22 07 38
20	123	05.7		10.1	85	42.0 63		45.9 54	1 53	2 58	43	41 73		16 36
21	138	05.5		10.6	100	07.3 63		40.3 56	1 26	43	32	30 75		26 34
22	153	05.3		11.0	114	32.8 65		34.7 56	0 45	26	20	18 76		37 31
23	168	05.1		11.5	128	58.4 66		28.9 58	** **	2 04	3 07	5 04 78		22 49 29
24	183	04.9	-21	11.9	143	24.0 66	-20	22.9 60	** **	1 36	2 51	4 47 81		23 04 26

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 19 ^h 34 ^m 5		Mag: -3.9 PMG: 13 ^h 41 ^m		Mag: +0.8 PMG: 6 ^h 17 ^m		Mag: -2.8 PMG: 21 ^h 34 ^m		Mag: +0.8 PMG: 9 ^h 14 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	65	34.0	154	55.1	-24	44.2	265	30.9	+10	40.7	35	27.7	+10	46.5	221	15.9	-7	38.4
1	80	36.5	169	54.1		44.3	280	32.3		40.4	50	30.3		46.5	236	18.1		38.5
2	95	38.9	184	53.2		44.4	295	33.6		40.0	65	33.0		46.4	251	20.3		38.6
3	110	41.4	199	52.2		44.4	310	35.0		39.6	80	35.7		46.3	266	22.5		38.6
4	125	43.8	214	51.3		44.5	325	36.4		39.2	95	38.4		46.3	281	24.8		38.7
5	140	46.3	229	50.3	-24	44.6	340	37.8	+10	38.9	110	41.1	+10	46.2	296	27.0	-7	38.8
6	155	48.8	244	49.4	-24	44.6	355	39.2	+10	38.5	125	43.8	+10	46.1	311	29.2	-7	38.9
7	170	51.2	259	48.4		44.7	10	40.6		38.1	140	46.5		46.1	326	31.4		39.0
8	185	53.7	274	47.5		44.8	25	42.0		37.8	155	49.2		46.0	341	33.6		39.1
9	200	56.2	289	46.5		44.8	40	43.3		37.4	170	51.9		45.9	356	35.9		39.2
10	215	58.6	304	45.6		44.9	55	44.7		37.0	185	54.6		45.8	11	38.1		39.3
11	231	01.1	319	44.6	-24	44.9	70	46.1	+10	36.6	200	57.3	+10	45.8	26	40.3	-7	39.3
12	246	03.6	334	43.7	-24	45.0	85	47.5	+10	36.3	215	59.9	+10	45.7	41	42.5	-7	39.4
13	261	06.0	349	42.7		45.0	100	48.9		35.9	231	02.6		45.6	56	44.7		39.5
14	276	08.5	4	41.8		45.1	115	50.3		35.5	246	05.3		45.6	71	47.0		39.6
15	291	11.0	19	40.8		45.1	130	51.7		35.2	261	08.0		45.5	86	49.2		39.7
16	306	13.4	34	39.9		45.2	145	53.1		34.8	276	10.7		45.4	101	51.4		39.8
17	321	15.9	49	38.9	-24	45.2	160	54.5	+10	34.4	291	13.4	+10	45.4	116	53.6	-7	39.9
18	336	18.3	64	38.0	-24	45.3	175	55.9	+10	34.1	306	16.1	+10	45.3	131	55.8	-7	40.0
19	351	20.8	79	37.0		45.3	190	57.3		33.7	321	18.8		45.2	146	58.1		40.1
20	6	23.3	94	36.1		45.4	205	58.7		33.3	336	21.4		45.1	162	00.3		40.1
21	21	25.7	109	35.1		45.4	221	00.0		32.9	351	24.1		45.1	177	02.5		40.2
22	36	28.2	124	34.2		45.5	236	01.4		32.6	6	26.8		45.0	192	04.7		40.3
23	51	30.7	139	33.2		45.5	251	02.8		32.2	21	29.5		44.9	207	06.9		40.4
24	66	33.1	154	32.3	-24	45.5	266	04.2	+10	31.8	36	32.2	+10	44.9	222	09.1	-7	40.5
Dif	—		-10		-1		+14		-4		+27		-1		+22		-	

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 16:2 PMG: 11 ^h 47 ^m 8			Edad: 2 ^d 7 PHE { 4 ^h : 58/7 12 ^h : 58/3 20 ^h : 58/0 PMG: 15 ^h 00 ^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
0	183	04.9	-21	11.9	143	24.0	-20	22.9	60 N	15 07	16 01	16 55	11 21	21	18 48 87
1	198	04.7		12.4	157	49.8		16.9	58	22	10	17 01	11 08	24	19 01 83
2	213	04.5		12.8	172	15.7		10.7	56	34	19	07	10 56	27	12 80
3	228	04.3		13.3	186	41.6		04.4	54	45	27	12	46	29	21 78
4	243	04.1		13.7	201	07.7		58.0	52	15 55	34	16	37	31	30 75
5	258	03.9	-21	14.2	215	33.8		51.5	50	16 03	16 40	17 21	10 29	33	19 37 74
6	273	03.7	-21	14.6	230	00.1		44.9	45	16 21	16 54	17 31	10 12	37	19 54 69
7	288	03.5		15.1	244	26.4		38.1	40	36	17 06	40	9 58	39	20 07 66
8	303	03.2		15.5	258	52.9		31.3	35	16 49	17	48	46	42	18 64
9	318	03.0		16.0	273	19.5		24.3	30	17 00	26	17 55	35	44	28 61
10	333	02.8		16.4	287	46.1		17.2	20	19	43	18 10	17	48	45 57
11	348	02.6	-21	16.8	302	12.9		10.1	10 N	17 36	17 58	18 24	9 02	50	20 59 55
12	3	02.4	-21	17.3	316	39.8		02.8	0	17 52	18 14	18 40	8 47	53	21 13 51
13	18	02.2		17.7	331	06.7		55.4	10 S	18 07	30	18 57	32	56	26 48
14	33	02.0		18.2	345	33.8		47.9	20	24	18 49	19 17	8 16	59	41 45
15	48	01.8		18.6	0	01.0		40.3	30	44	19 11	19 44	7 58	62	21 57 41
16	63	01.6		19.0	14	28.3		32.7	35	18 56	25	20 00	47	65	22 06 39
17	78	01.3	-21	19.5	28	55.6		24.9	40	19 09	19 41	20 21	7 35	67	22 17 36
18	93	01.1	-21	19.9	43	23.1		17.0	45	19 25	20 01	20 48	7 21	69	22 30 33
19	108	00.9		20.4	57	50.7		09.0	50	45	27	21 26	7 03	73	45 29
20	123	00.7		20.8	72	18.4		01.0	52	19 55	40	21 47	6 54	76	22 52 28
21	138	00.5		21.2	86	46.2		52.8	54	20 05	20 55	22 15	45	77	23 00 25
22	153	00.3		21.7	101	14.1		44.6	56	18	21 13	23 01	34	80	08 24
23	168	00.1		22.1	115	42.1		36.2	58	32	21 36	** **	22	83	18 21
24	182	59.8	-21	22.5	130	10.2		27.8	60 S	20 48	22 06	** **	6 08	86	23 30 17
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG: 19 ^h 30 ^m 6		Mag: -3.9 PMG: 13 ^h 43 ^m		Mag: +0.8 PMG: 6 ^h 15 ^m		Mag: -2.8 PMG: 21 ^h 30 ^m		Mag: +0.8 PMG: 9 ^h 10 ^m						
	hG ♈		hG ♀	Dec	hG ♂		hG ♃	Dec	hG ♄		hG ♅	Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'			
0	66	33.1	154	32.3	266	04.2	36	32.2	222	09.1	7	40.5			
1	81	35.6	169	31.3	281	05.6	51	34.9	237	11.4		40.6			
2	96	38.1	184	30.4	296	07.0	66	37.6	252	13.6		40.7			
3	111	40.5	199	29.4	311	08.4	81	40.2	267	15.8		40.8			
4	126	43.0	214	28.5	326	09.8	96	42.9	282	18.0		40.8			
5	141	45.5	229	27.5	341	11.2	111	45.6	297	20.3	-7	40.9			
6	156	47.9	244	26.5	356	12.6	126	48.3	312	22.5	-7	41.0			
7	171	50.4	259	25.6	11	14.0	141	51.0	327	24.7		41.1			
8	186	52.8	274	24.6	26	15.4	156	53.7	342	26.9		41.2			
9	201	55.3	289	23.7	41	16.8	171	56.3	357	29.1		41.3			
10	216	57.8	304	22.7	56	18.2	186	59.0	12	31.4		41.4			
11	232	00.2	319	21.8	71	19.6	202	01.7	27	33.6	-7	41.4			
12	247	02.7	334	20.8	86	21.0	217	04.4	42	35.8	-7	41.5			
13	262	05.2	349	19.9	101	22.4	232	07.1	57	38.0		41.6			
14	277	07.6	4	18.9	116	23.8	247	09.8	72	40.2		41.7			
15	292	10.1	19	18.0	131	25.2	262	12.4	87	42.5		41.8			
16	307	12.6	34	17.0	146	26.6	277	15.1	102	44.7		41.9			
17	322	15.0	49	16.1	161	28.0	292	17.8	117	46.9	-7	42.0			
18	337	17.5	64	15.1	176	29.4	307	20.5	132	49.1	-7	42.1			
19	352	20.0	79	14.2	191	30.8	322	23.2	147	51.3		42.1			
20	7	22.4	94	13.2	206	32.2	337	25.8	162	53.6		42.2			
21	22	24.9	109	12.3	221	33.6	352	28.5	177	55.8		42.3			
22	37	27.3	124	11.3	236	35.0	7	31.2	192	58.0		42.4			
23	52	29.8	139	10.4	251	36.4	22	33.9	208	00.2		42.5			
24	67	32.3	154	09.4	266	37.8	37	36.6	223	02.5	-7	42.6			
Dif	—		-10		0		+27		-1		+22		-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 48 ^m 5			Edad: 4 ^d 7 PHE { SD: 15:5 PMG: 16 ^h 40 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	Rº	Hora	Rº			
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m m	h m m	h m m				
0	182	54.6	-21	32.7	117	54.5	-13	43.1	60 N	15 05	15 58	16 53	11 56 11	21 38 81				
1	197	54.4		33.1	132	25.1 ¹¹⁶		32.9 ¹⁰²	58	19	16 08	16 59	49 14	44 78				
2	212	54.1		33.5	146	55.7 ¹¹⁶		22.7 ¹⁰²	56	32	17	17 05	43 17	49 75				
3	227	53.9		34.0	161	26.4 ¹¹⁷		12.4 ¹⁰³	54	43	25	10	38 18	54 73				
4	242	53.7		34.4	175	57.2 ¹¹⁸	-13	02.1 ¹⁰³	52	15 53	33	15	33 21	21 58 71				
5	257	53.5	-21	34.8	190	28.1 ¹¹⁹	-12	51.7 ¹⁰⁴	50	16 02	16 39	17 20	11 29 22	22 02 69				
6	272	53.3	-21	35.2	204	59.1 ¹²⁰	-12	41.3 ¹⁰⁴	45	16 21	16 54	17 30	11 19 26	22 10 65				
7	287	53.0		35.6	219	30.1 ¹²⁰		30.9 ¹⁰⁴	40	36	17 06	39	11 29	17 61				
8	302	52.8		36.0	234	01.3 ¹²²		20.3 ¹⁰⁶	35	16 49	16	47	11 04 32	23 58				
9	317	52.6		36.4	248	32.5 ¹²²	-12	09.8 ¹⁰⁵	30	17 00	26	17 55	10 58 34	28 56				
10	332	52.4		36.8	263	03.8 ¹²³	-11	59.2 ¹⁰⁶	20	19	43	18 10	47 39	37 51				
11	347	52.1	-21	37.2	277	35.2 ¹²⁴	-11	48.5 ¹⁰⁷	10 N	17 36	17 59	18 25	10 38 42	22 44 48				
12	2	51.9	-21	37.7	292	06.7 ¹²⁵	-11	37.8 ¹⁰⁷	0	17 52	18 14	18 40	10 29 46	22 51 45				
13	17	51.7		38.1	306	38.2 ¹²⁵		27.1 ¹⁰⁷	10 S	18 08	31	18 58	20 49	22 58 41				
14	32	51.5		38.5	321	09.9 ¹²⁷		16.3 ¹⁰⁸	20	26	18 50	19 19	11 53	23 06 37				
15	47	51.2		38.9	335	41.6 ¹²⁷	-11	05.5 ¹⁰⁸	30	46	19 13	19 45	10 00 57	14 33				
16	62	51.0		39.3	350	13.4 ¹²⁸	-10	54.7 ¹⁰⁸	35	18 58	27	20 03	9 54 59	19 31				
17	77	50.8	-21	39.7	4	45.3 ¹²⁹	-10	43.8 ¹⁰⁹	40	19 12	19 44	20 24	9 47 62	23 25 28				
18	92	50.5	-21	40.1	19	17.2 ¹²⁹	-10	32.9 ¹⁰⁹	45	19 28	20 04	20 51	9 38 66	23 31 25				
19	107	50.3		40.5	33	49.2 ¹³⁰		21.9 ¹¹⁰	50	48	31	21 30	28 70	39 21				
20	122	50.1		40.9	48	21.3 ¹³¹	-10	10.9 ¹¹⁰	52	19 58	44	21 52	24 71	42 19				
21	137	49.9		41.3	62	53.5 ¹³²	-9	59.9 ¹¹⁰	54	20 09	20 59	22 21	19 73	46 17				
22	152	49.6		41.7	77	25.7 ¹³²		48.9 ¹¹⁰	56	21	21 18	23 17	13 76	50 15				
23	167	49.4		42.1	91	58.0 ¹³³		37.8 ¹¹¹	58	36	21 41	** **	9 06 79	23 55 13				
24	182	49.2	-21	42.5	106	30.4 ¹³⁴	-9	26.7 ¹¹¹	60 S	20 53	22 13	** **	8 59 82	** ** *				
UT	ARIES		VENUS			MARTE			JÚPITER				SATURNO					
	PMG: 19 ^h 22 ^m 7		Mag: -3.9 PMG: 13 ^h 46 ^m			Mag: +0.8 PMG: 6 ^h 11 ^m			Mag: -2.8 PMG: 21 ^h 21 ^m				Mag: +0.8 PMG: 9 ^h 03 ^m					
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃		Dec		hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	68	31.4	153	46.6	-24	45.9	267	11.7	+10	14.3	38	40.8	+10	41.7	223	55.8	-7	44.6
1	83	33.9	168	45.7		45.8	282	13.1		13.9	53	43.4		41.6	238	58.0		44.7
2	98	36.3	183	44.7		45.8	297	14.6		13.6	68	46.1		41.6	254	00.2		44.8
3	113	38.8	198	43.8		45.8	312	16.0		13.2	83	48.8		41.5	269	02.5		44.9
4	128	41.3	213	42.8		45.8	327	17.4		12.8	98	51.5		41.4	284	04.7		45.0
5	143	43.7	228	41.9	-24	45.7	342	18.8	+10	12.5	113	54.1	+10	41.4	299	06.9	-7	45.1
6	158	46.2	243	40.9	-24	45.7	357	20.2	+10	12.1	128	56.8	+10	41.3	314	09.1	-7	45.2
7	173	48.7	258	40.0		45.7	12	21.7		11.8	143	59.5		41.3	329	11.4		45.2
8	188	51.1	273	39.0		45.6	27	23.1		11.4	159	02.1		41.2	344	13.6		45.3
9	203	53.6	288	38.1		45.6	42	24.5		11.0	174	04.8		41.1	359	15.8		45.4
10	218	56.1	303	37.1		45.6	57	25.9		10.7	189	07.5		41.1	14	18.0		45.5
11	233	58.5	318	36.2	-24	45.5	72	27.3	+10	10.3	204	10.1	+10	41.0	29	20.3	-7	45.6
12	249	01.0	333	35.2	-24	45.5	87	28.8	+10	09.9	219	12.8	+10	40.9	44	22.5	-7	45.7
13	264	03.4	348	34.3		45.4	102	30.2		09.6	234	15.5		40.9	59	24.7		45.7
14	279	05.9	3	33.3		45.4	117	31.6		09.2	249	18.1		40.8	74	26.9		45.8
15	294	08.4	18	32.4		45.3	132	33.0		08.9	264	20.8		40.8	89	29.2		45.9
16	309	10.8	33	31.4		45.3	147	34.5		08.5	279	23.5		40.7	104	31.4		46.0
17	324	13.3	48	30.5	-24	45.3	162	35.9	+10	08.1	294	26.2	+10	40.6	119	33.6	-7	46.1
18	339	15.8	63	29.5	-24	45.2	177	37.3	+10	07.8	309	28.8	+10	40.6	134	35.8	-7	46.2
19	354	18.2	78	28.6		45.2	192	38.7		07.4	324	31.5		40.5	149	38.1		46.3
20	9	20.7	93	27.6		45.1	207	40.2		07.1	339	34.2		40.5	164	40.3		46.3
21	24	23.2	108	26.7		45.1	222	41.6		06.7	354	36.8		40.4	179	42.5		46.4
22	39	25.6	123	25.7		45.0	237	43.0		06.4	9	39.5		40.3	194	44.7		46.5
23	54	28.1	138	24.8		45.0	252	44.4		06.0	24	42.1		40.3	209	47.0		46.6
24	69	30.6	153	23.8	-24	44.9	267	45.9	+10	05.6	39	44.8	+10	40.2	224	49.2	-7	46.7
Dif	—		-9		0		+14		-4		+27		-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 48 ^m 9			Edad: 5 ^d 7 SD: 15'3 PMG: 17 ^h 25 ^m	PHE { 4 ^h : 56'0 12 ^h : 55'7 20 ^h : 55'5 R°: 43 ^m												
	hG ☉	Dec				hG ☾		Dif	Dec		Dif	Náutico	Civil	Hora	R°	Hora	R°
h	°	'	°	°	'	°	°	h	m	h	m	h	m	m	h	m	m
0	182	49.2	-21	106	30.4	-9	26.7	60 N	6 45	7 40	8 34	12 07	9	22	59	78	
1	197	48.9		121	02.8 ¹³⁴		15.5 ¹¹²	58	39	30	19	03	12	23	02	75	
2	212	48.7		135	35.4 ¹³⁶	-9	04.3 ¹¹²	56	33	21	8 06	12 00	14	04	73		
3	227	48.5		150	07.9 ¹³⁵	-8	53.1 ¹¹²	54	28	13	7 55	11 56	17	07	7		
4	242	48.3		164	40.6 ¹³⁷		41.9 ¹¹²	52	23	7 05	45	54	18	09	68		
5	257	48.0	-21	179	13.3 ¹³⁷	-8	30.7 ¹¹²	50	6 18	6 59	7 36	11 51	20	23	11	66	
6	272	47.8	-21	193	46.1 ¹³⁸	-8	19.4 ¹¹³	45	6 08	6 44	7 17	11 45	24	23	15	62	
7	287	47.6		208	18.9 ¹³⁸	-8	08.1 ¹¹³	40	5 59	32	7 02	40	27	18	60		
8	302	47.3		222	51.8 ¹³⁹	-7	56.8 ¹¹³	35	50	21	6 49	36	30	21	57		
9	317	47.1		237	24.8 ¹⁴⁰		45.4 ¹¹⁴	30	42	6 12	38	32	32	24	54		
10	332	46.9		251	57.8 ¹⁴⁰		34.1 ¹¹³	20	27	5 55	18	26	36	28	50		
11	347	46.6	-21	266	30.9 ¹⁴¹	-7	22.7 ¹¹⁴	10 N	5 13	5 39	6 01	11 20	40	23	32	46	
12	2	46.4	-21	281	04.1 ¹⁴²	-7	11.3 ¹¹⁴	0	4 57	5 23	5 45	11 15	43	23	36	42	
13	17	46.2		295	37.3 ¹⁴²	-6	59.9 ¹¹⁴	10 S	40	5 06	29	09	47	39	39		
14	32	45.9		310	10.5 ¹⁴²		48.4 ¹¹⁵	20	4 19	4 47	5 12	11 04	50	43	36		
15	47	45.7		324	43.8 ¹⁴³		37.0 ¹¹⁴	30	3 52	24	4 51	10 57	55	47	32		
16	62	45.5		339	17.2 ¹⁴⁴		25.5 ¹¹⁵	35	35	4 10	39	53	58	50	29		
17	77	45.2	-21	353	50.6 ¹⁴⁴	-6	14.0 ¹¹⁵	40	3 14	3 54	4 26	10 49	60	23	53	26	
18	92	45.0	-21	8	24.1 ¹⁴⁵	-6	02.5 ¹¹⁵	45	2 46	3 33	4 09	10 44	63	23	56	23	
19	107	44.8		22	57.6 ¹⁴⁵	-5	51.0 ¹¹⁵	50	2 07	3 07	3 49	38	67	**	**	**	
20	122	44.5		37	31.2 ¹⁴⁶		39.5 ¹¹⁵	52	1 45	2 53	39	35	70	**	**	**	
21	137	44.3		52	04.8 ¹⁴⁶		28.0 ¹¹⁵	54	1 16	38	28	32	71	**	**	**	
22	152	44.1		66	38.5 ¹⁴⁷		16.4 ¹¹⁶	56	0 20	2 19	16	29	73	**	**	**	
23	167	43.8		81	12.2 ¹⁴⁷	-5	04.9 ¹¹⁵	58	** **	1 56	3 01	25	76	**	**	**	
24	182	43.6	-21	95	46.0 ¹⁴⁸	-4	53.3 ¹¹⁶	60 S	** **	1 24	2 44	10 21	79	0 00	10		

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 19 ^h 18 ^m 8		Mag: -3.9 PMG: 13 ^h 47 ^m			Mag: +0.7 PMG: 6 ^h 08 ^m			Mag: -2.8 PMG: 21 ^h 17 ^m			Mag: +0.8 PMG: 8 ^h 59 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'				
0	69	30.6	153	23.8	-24	44.9	267	45.9	+10	05.6	39	44.8	+10	40.2	224	49.2	-7	46.7
1	84	33.0	168	22.9		44.8	282	47.3		05.3	54	47.5		40.1	239	51.4		46.8
2	99	35.5	183	21.9		44.8	297	48.7		04.9	69	50.1		40.1	254	53.7		46.8
3	114	37.9	198	21.0		44.7	312	50.1		04.6	84	52.8		40.0	269	55.9		46.9
4	129	40.4	213	20.0		44.7	327	51.6		04.2	99	55.5		40.0	284	58.1		47.0
5	144	42.9	228	19.1	-24	44.6	342	53.0	+10	03.8	114	58.1	+10	39.9	300	00.3	-7	47.1
6	159	45.3	243	18.1	-24	44.5	357	54.4	+10	03.5	130	00.8	+10	39.8	315	02.6	-7	47.2
7	174	47.8	258	17.2		44.5	12	55.9		03.1	145	03.5		39.8	330	04.8		47.3
8	189	50.3	273	16.3		44.4	27	57.3		02.8	160	06.1		39.7	345	07.0		47.4
9	204	52.7	288	15.3		44.3	42	58.7		02.4	175	08.8		39.7	0	09.2		47.4
10	219	55.2	303	14.4		44.3	58	00.2		02.1	190	11.5		39.6	15	11.5		47.5
11	234	57.7	318	13.4	-24	44.2	73	01.6	+10	01.7	205	14.1	+10	39.5	30	13.7	-7	47.6
12	250	00.1	333	12.5	-24	44.1	88	03.0	+10	01.3	220	16.8	+10	39.5	45	15.9	-7	47.7
13	265	02.6	348	11.5		44.1	103	04.5		01.0	235	19.4		39.4	60	18.1		47.8
14	280	05.0	3	10.6		44.0	118	05.9		00.6	250	22.1		39.4	75	20.4		47.9
15	295	07.5	18	09.6		43.9	133	07.3	+10	00.3	265	24.8		39.3	90	22.6		47.9
16	310	10.0	33	08.7		43.8	148	08.8	+9	59.9	280	27.4		39.2	105	24.8		48.0
17	325	12.4	48	07.7	-24	43.8	163	10.2	+9	59.6	295	30.1	+10	39.2	120	27.1	-7	48.1
18	340	14.9	63	06.8	-24	43.7	178	11.6	+9	59.2	310	32.7	+10	39.1	135	29.3	-7	48.2
19	355	17.4	78	05.8		43.6	193	13.1		58.8	325	35.4		39.1	150	31.5		48.3
20	10	19.8	93	04.9		43.5	208	14.5		58.5	340	38.1		39.0	165	33.7		48.4
21	25	22.3	108	03.9		43.4	223	15.9		58.1	355	40.7		38.9	180	36.0		48.4
22	40	24.8	123	03.0		43.4	238	17.4		57.8	10	43.4		38.9	195	38.2		48.5
23	55	27.2	138	02.1		43.3	253	18.8		57.4	25	46.0		38.8	210	40.4		48.6
24	70	29.7	153	01.1	-24	43.2	268	20.3	+9	57.1	40	48.7	+10	38.8	225	42.7	-7	48.7
Dif	—		-9	+1			+14	-4			+27	-1			+22	-		

UT	SOL				 LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16:2 PMG: 11 ^h 49 ^m 3				Edad: 6 ^d 7 PHE { 4 ^h : 55:3 12 ^h : 55:1 20 ^h : 54:9 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	182	43.6	-21	51.9	95	46.0	-4	53.3	60 N	15 02	15 56	16 51	12 16 9	** ** *	** ** *	** ** *
1	197	43.4		52.2	110	19.8 ¹⁴⁸		41.7 ¹¹⁶	58	17	16 07	16 58	15 11	** ** *	** ** *	** ** *
2	212	43.1		52.6	124	53.6 ¹⁴⁸		30.1 ¹¹⁶	56	30	16	17 04	14 13	** ** *	** ** *	** ** *
3	227	42.9		53.0	139	27.5 ¹⁴⁹		18.6 ¹¹⁵	54	42	24	09	13 15	** ** *	** ** *	** ** *
4	242	42.7		53.4	154	01.5 ¹⁵⁰		-4 07.0 ¹¹⁶	52	15 52	32	14	12 17	** ** *	** ** *	** ** *
5	257	42.4	-21	53.8	168	35.4 ¹⁴⁹		-3 55.4 ¹¹⁶	50	16 01	16 38	17 19	12 11 19	** ** *	** ** *	** ** *
6	272	42.2	-21	54.1	183	09.4 ¹⁵⁰		-3 43.7 ¹¹⁷	45	16 20	16 53	17 30	12 09 22	** ** *	** ** *	** ** *
7	287	41.9		54.5	197	43.5 ¹⁵¹		32.1 ¹¹⁶	40	35	17 05	39	07 26	** ** *	** ** *	** ** *
8	302	41.7		54.9	212	17.6 ¹⁵¹		20.5 ¹¹⁶	35	16 48	16	47	06 28	** ** *	** ** *	** ** *
9	317	41.5		55.3	226	51.7 ¹⁵¹		-3 08.9 ¹¹⁶	30	17 00	26	17 55	04 31	** ** *	** ** *	** ** *
10	332	41.2		55.6	241	25.9 ¹⁵²		-2 57.3 ¹¹⁶	20	19	43	18 10	02 35	** ** *	** ** *	** ** *
11	347	41.0	-21	56.0	256	00.1 ¹⁵²		-2 45.6 ¹¹⁷	10 N	17 37	17 59	18 25	12 00 38	** ** *	** ** *	** ** *
12	2	40.8	-21	56.4	270	34.3 ¹⁵²		-2 34.0 ¹¹⁶	0	17 53	18 15	18 41	11 58 42	** ** *	** ** *	** ** *
13	17	40.5		56.8	285	08.6 ¹⁵³		22.4 ¹¹⁶	10 S	18 09	32	18 59	56 46	** ** *	** ** *	** ** *
14	32	40.3		57.1	299	42.9 ¹⁵³		-2 10.8 ¹¹⁶	20	27	18 51	19 20	54 49	** ** *	** ** *	** ** *
15	47	40.0		57.5	314	17.2 ¹⁵³		-1 59.2 ¹¹⁶	30	18 48	19 15	19 47	52 53	** ** *	** ** *	** ** *
16	62	39.8		57.9	328	51.6 ¹⁵⁴		47.5 ¹¹⁷	35	19 00	29	20 05	51 55	** ** *	** ** *	** ** *
17	77	39.6	-21	58.2	343	26.0 ¹⁵⁴		-1 35.9 ¹¹⁶	40	19 14	19 46	20 26	11 49 59	** ** *	** ** *	** ** *
18	92	39.3	-21	58.6	358	00.4 ¹⁵⁴		-1 24.3 ¹¹⁶	45	19 30	20 07	20 54	11 47 62	** ** *	** ** *	** ** *
19	107	39.1		59.0	12	34.9 ¹⁵⁵		12.7 ¹¹⁶	50	19 51	34	21 34	45 66	0 00 19	** ** *	** ** *
20	122	38.8		59.3	27	09.3 ¹⁵⁴		-1 01.1 ¹¹⁶	52	20 01	20 47	21 57	45 67	01 18	** ** *	** ** *
21	137	38.6	-21	59.7	41	43.8 ¹⁵⁵		-0 49.5 ¹¹⁶	54	12	21 03	22 28	43 70	03 16	** ** *	** ** *
22	152	38.4	-22	00.1	56	18.3 ¹⁵⁵		37.9 ¹¹⁶	56	25	22	** ** *	42 72	05 14	** ** *	** ** *
23	167	38.1		00.4	70	52.9 ¹⁵⁶		26.3 ¹¹⁶	58	40	21 46	** ** *	41 74	08 11	** ** *	** ** *
24	182	37.9	-22	00.8	85	27.5 ¹⁵⁶		-0 14.7 ¹¹⁶	60 S	20 57	22 20	** ** *	11 40 76	0 10 9	** ** *	** ** *

UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 19 ^h 14 ^m 9		Mag: -3.9 PMG: 13 ^h 49 ^m				Mag: +0.7 PMG: 6 ^h 06 ^m				Mag: -2.8 PMG: 21 ^h 13 ^m				Mag: +0.8 PMG: 8 ^h 56 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	70	29.7	153	01.1	-24	43.2	268	20.3	+9	57.1	40	48.7	+10	38.8	225	42.7	-7	48.7
1	85	32.2	168	00.2		43.1	283	21.7		56.7	55	51.4		38.7	240	44.9		48.8
2	100	34.6	182	59.2		43.0	298	23.1		56.4	70	54.0		38.7	255	47.1		48.9
3	115	37.1	197	58.3		42.9	313	24.6		56.0	85	56.7		38.6	270	49.3		48.9
4	130	39.5	212	57.3		42.8	328	26.0		55.6	100	59.3		38.5	285	51.6		49.0
5	145	42.0	227	56.4	-24	42.7	343	27.5	+9	55.3	116	02.0	+10	38.5	300	53.8	-7	49.1
6	160	44.5	242	55.4	-24	42.6	358	28.9	+9	54.9	131	04.6	+10	38.4	315	56.0	-7	49.2
7	175	46.9	257	54.5		42.5	13	30.3		54.6	146	07.3		38.4	330	58.2		49.3
8	190	49.4	272	53.5		42.4	28	31.8		54.2	161	09.9		38.3	346	00.5		49.4
9	205	51.9	287	52.6		42.3	43	33.2		53.9	176	12.6		38.3	1	02.7		49.4
10	220	54.3	302	51.7		42.2	58	34.7		53.5	191	15.3		38.2	16	04.9		49.5
11	235	56.8	317	50.7	-24	42.1	73	36.1	+9	53.2	206	17.9	+10	38.1	31	07.2	-7	49.6
12	250	59.3	332	49.8	-24	42.0	88	37.6	+9	52.8	221	20.6	+10	38.1	46	09.4	-7	49.7
13	266	01.7	347	48.8		41.9	103	39.0		52.5	236	23.2		38.0	61	11.6		49.8
14	281	04.2	2	47.9		41.8	118	40.4		52.1	251	25.9		38.0	76	13.9		49.9
15	296	06.7	17	46.9		41.7	133	41.9		51.8	266	28.5		37.9	91	16.1		49.9
16	311	09.1	32	46.0		41.6	148	43.3		51.4	281	31.2		37.9	106	18.3		50.0
17	326	11.6	47	45.0	-24	41.5	163	44.8	+9	51.0	296	33.8	+10	37.8	121	20.5	-7	50.1
18	341	14.0	62	44.1	-24	41.4	178	46.2	+9	50.7	311	36.5	+10	37.7	136	22.8	-7	50.2
19	356	16.5	77	43.2		41.3	193	47.7		50.3	326	39.1		37.7	151	25.0		50.3
20	11	19.0	92	42.2		41.2	208	49.1		50.0	341	41.8		37.6	166	27.2		50.4
21	26	21.4	107	41.3		41.1	223	50.6		49.6	356	44.4		37.6	181	29.5		50.4
22	41	23.9	122	40.3		40.9	238	52.0		49.3	11	47.1		37.5	196	31.7		50.5
23	56	26.4	137	39.4		40.8	253	53.5		48.9	26	49.8		37.5	211	33.9		50.6
24	71	28.8	152	38.4	-24	40.7	268	54.9	+9	48.6	41	52.4	+10	37.4	226	36.2	-7	50.7
Dif	—		-9		+1		+14		-4		+27		-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 49 ^m 7			Edad: 7 ^d 7 PHE { SD: 14'9 PMG: 18 ^h 50 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	Rº	Hora	Rº			
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m		
0	182	37.9	-22	00.8	85	27.5	-0	14.7	60 N	6	48	7	43	8	38	12	25	
1	197	37.6		01.2	100	02.0 ¹⁵⁵	-0	03.1 ¹¹⁶	58	42		33		23	26	11		
2	212	37.4		01.5	114	36.7 ¹⁵⁷	+0	08.5 ¹¹⁶	56	36		24	8	09	27	14		
3	227	37.2		01.9	129	11.3 ¹⁵⁶		20.0 ¹¹⁵	54	30		15	7	58	28	16		
4	242	36.9		02.2	143	45.9 ¹⁵⁶		31.6 ¹¹⁶	52	25		08		48	29	17		
5	257	36.7	-22	02.6	158	20.6 ¹⁵⁷	+0	43.1 ¹¹⁵	50	6	20	7	01	7	39	12	30	
6	272	36.4	-22	03.0	172	55.3 ¹⁵⁷	+0	54.6 ¹¹⁵	45	6	10	6	46	7	20	12	31	
7	287	36.2		03.3	187	29.9 ¹⁵⁶	+1	06.2 ¹¹⁶	40	6	00		34	7	04	33	25	
8	302	35.9		03.7	202	04.7 ¹⁵⁸		17.7 ¹¹⁵	35	5	52		23	6	51	34	28	
9	317	35.7		04.0	216	39.4 ¹⁵⁷		29.2 ¹¹⁵	30		44	6	13		39	35	30	
10	332	35.4		04.4	231	14.1 ¹⁵⁷		40.7 ¹¹⁵	20		29	5	56		20	37	34	
11	347	35.2	-22	04.8	245	48.8 ¹⁵⁷	+1	52.1 ¹¹⁴	10 N	5	14	5	40	6	02	12	38	
12	2	35.0	-22	05.1	260	23.6 ¹⁵⁸	+2	03.6 ¹¹⁵	0	4	58	5	24	5	46	12	40	
13	17	34.7		05.5	274	58.4 ¹⁵⁸		15.0 ¹¹⁴	10 S		40	5	07		30	42	44	
14	32	34.5		05.8	289	33.1 ¹⁵⁷		26.5 ¹¹⁵	20	4	19	4	48	5	12	43	49	
15	47	34.2		06.2	304	07.9 ¹⁵⁸		37.9 ¹¹⁴	30	3	51		24	4	51	45	53	
16	62	34.0		06.5	318	42.7 ¹⁵⁸	+2	49.3 ¹¹⁴	35		34	4	10		39	46	55	
17	77	33.7	-22	06.9	333	17.5 ¹⁵⁸	+3	00.6 ¹¹³	40	3	13	3	53	4	25	12	48	
18	92	33.5	-22	07.2	347	52.3 ¹⁵⁸	+3	12.0 ¹¹⁴	45	2	45	3	32	4	08	12	49	
19	107	33.2		07.6	2	27.1 ¹⁵⁸		23.3 ¹¹³	50	2	05	3	05		3	48	51	
20	122	33.0		07.9	17	01.9 ¹⁵⁸		34.7 ¹¹⁴	52	1	42	2	51		38	52	66	
21	137	32.7		08.3	31	36.7 ¹⁵⁸		46.0 ¹¹³	54	1	10		36		27	53	68	
22	152	32.5		08.6	46	11.5 ¹⁵⁸	+3	57.2 ¹¹²	56	** ** *	2	16	3	14		54	70	
23	167	32.2		09.0	60	46.3 ¹⁵⁸	+4	08.5 ¹¹³	58	** ** *	1	52	2	59		55	73	
24	182	32.0	-22	09.3	75	21.1 ¹⁵⁸	+4	19.8 ¹¹³	60 S	** ** *	1	18	2	41		12	56	
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO					
	PMG: 19 ^h 10 ^m 9			Mag: -3.9 PMG: 13 ^h 50 ^m			Mag: +0.7 PMG: 6 ^h 04 ^m			Mag: -2.8 PMG: 21 ^h 09 ^m			Mag: +0.8 PMG: 8 ^h 52 ^m					
	hG ♈		Dec	hG ♀		Dec	hG ♂		Dec	hG ♃		Dec	hG ♄		Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	71	28.8	152	38.4	-24	40.7	268	54.9	+9	48.6	41	52.4	+10	37.4	226	36.2		
1	86	31.3	167	37.5		40.6	283	56.4		48.2	56	55.1		37.3	241	38.4		
2	101	33.8	182	36.6		40.5	298	57.8		47.9	71	57.7		37.3	256	40.6		
3	116	36.2	197	35.6		40.3	313	59.3		47.5	87	00.4		37.2	271	42.8		
4	131	38.7	212	34.7		40.2	329	00.7		47.2	102	03.0		37.2	286	45.1		
5	146	41.1	227	33.7	-24	40.1	344	02.2	+9	46.8	117	05.7	+10	37.1	301	47.3		
6	161	43.6	242	32.8	-24	40.0	359	03.6	+9	46.5	132	08.3	+10	37.1	316	49.5		
7	176	46.1	257	31.8		39.8	14	05.1		46.1	147	11.0		37.0	331	51.8		
8	191	48.5	272	30.9		39.7	29	06.5		45.8	162	13.6		37.0	346	54.0		
9	206	51.0	287	30.0		39.6	44	08.0		45.4	177	16.2		36.9	1	56.2		
10	221	53.5	302	29.0		39.5	59	09.4		45.1	192	18.9		36.9	16	58.5		
11	236	55.9	317	28.1	-24	39.3	74	10.9	+9	44.7	207	21.5	+10	36.8	32	00.7		
12	251	58.4	332	27.1	-24	39.2	89	12.4	+9	44.4	222	24.2	+10	36.7	47	02.9		
13	267	00.9	347	26.2		39.1	104	13.8		44.0	237	26.8		36.7	62	05.2		
14	282	03.3	2	25.3		38.9	119	15.3		43.7	252	29.5		36.6	77	07.4		
15	297	05.8	17	24.3		38.8	134	16.7		43.3	267	32.1		36.6	92	09.6		
16	312	08.3	32	23.4		38.6	149	18.2		43.0	282	34.8		36.5	107	11.8		
17	327	10.7	47	22.4	-24	38.5	164	19.6	+9	42.6	297	37.4	+10	36.5	122	14.1		
18	342	13.2	62	21.5	-24	38.4	179	21.1	+9	42.3	312	40.1	+10	36.4	137	16.3		
19	357	15.6	77	20.6		38.2	194	22.6		41.9	327	42.7		36.4	152	18.5		
20	12	18.1	92	19.6		38.1	209	24.0		41.6	342	45.4		36.3	167	20.8		
21	27	20.6	107	18.7		37.9	224	25.5		41.2	357	48.0		36.3	182	23.0		
22	42	23.0	122	17.7		37.8	239	26.9		40.9	12	50.7		36.2	197	25.2		
23	57	25.5	137	16.8		37.6	254	28.4		40.5	27	53.3		36.2	212	27.5		
24	72	28.0	152	15.9	-24	37.5	269	29.9	+9	40.2	42	55.9	+10	36.1	227	29.7		
Dif	—			-9			+1			+15			-3			+26		

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna		
	SD: 16'2 PMG: 11 ^h 50 ^m 1			Edad: 8 ^d 7 PHE { 4 ^h : 54'4 12 ^h : 54'3 20 ^h : 54'2 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	182	32.0	-22 09.3	75	21.1	+4 19.8		60 N	15 00	15 55	16 50	12 34 10	1 33 75			
1	197	31.8	09.7	89	55.9 ¹⁵⁸	31.0 ¹¹²		58	15	16 05	16 57	37 13	30 73			
2	212	31.5	10.0	104	30.7 ¹⁵⁸	42.2 ¹¹²		56	29	15	17 03	41 14	28 70			
3	227	31.3	10.3	119	05.5 ¹⁵⁸	+4 53.3 ¹¹¹		54	40	23	08	44 16	26 68			
4	242	31.0	10.7	133	40.3 ¹⁵⁸	+5 04.5 ¹¹²		52	15 51	31	14	46 19	24 66			
5	257	30.8	-22 11.0	148	15.1 ¹⁵⁸	+5 15.6 ¹¹¹		50	16 00	16 37	17 18	12 49 20	1 22 65			
6	272	30.5	-22 11.4	162	49.9 ¹⁵⁸	+5 26.7 ¹¹¹		45	16 19	16 52	17 29	12 54 24	1 19 60			
7	287	30.3	11.7	177	24.6 ¹⁵⁷	37.8 ¹¹¹		40	35	17 05	39	12 58 27	16 57			
8	302	30.0	12.1	191	59.4 ¹⁵⁸	48.9 ¹¹¹		35	16 48	16	47	13 02 29	13 55			
9	317	29.8	12.4	206	34.2 ¹⁵⁸	+5 59.9 ¹¹⁰		30	17 00	26	17 55	05 32	11 52			
10	332	29.5	12.7	221	08.9 ¹⁵⁷	+6 10.9 ¹¹⁰		20	20	17 44	18 11	11 36	07 48			
11	347	29.3	-22 13.1	235	43.7 ¹⁵⁸	+6 21.9 ¹¹⁰		10 N	17 37	18 00	18 26	13 16 39	1 03 45			
12	2	29.0	-22 13.4	250	18.4 ¹⁵⁷	+6 32.8 ¹⁰⁹		0	17 54	18 16	18 42	13 21 42	1 00 42			
13	17	28.8	13.8	264	53.1 ¹⁵⁷	43.7 ¹⁰⁹		10 S	18 10	33	19 00	26 46	0 57 38			
14	32	28.5	14.1	279	27.8 ¹⁵⁷	+6 54.6 ¹⁰⁹		20	28	18 53	22	32 48	53 35			
15	47	28.3	14.4	294	02.5 ¹⁵⁷	+7 05.5 ¹⁰⁹		30	18 49	19 16	19 49	38 53	49 31			
16	62	28.0	14.8	308	37.2 ¹⁵⁷	16.3 ¹⁰⁸		35	19 01	31	20 07	41 55	47 29			
17	77	27.8	-22 15.1	323	11.8 ¹⁵⁶	+7 27.1 ¹⁰⁸		40	19 16	19 48	20 28	13 45 58	0 44 26			
18	92	27.5	-22 15.4	337	46.5 ¹⁵⁷	+7 37.8 ¹⁰⁷		45	19 32	20 09	20 57	13 50 61	0 41 23			
19	107	27.2	15.8	352	21.1 ¹⁵⁶	48.6 ¹⁰⁸		50	19 54	37	21 38	56 64	38 19			
20	122	27.0	16.1	6	55.7 ¹⁵⁶	+7 59.3 ¹⁰⁷		52	20 04	20 50	22 01	13 58 67	36 18			
21	137	26.7	16.4	21	30.3 ¹⁵⁶	+8 09.9 ¹⁰⁶		54	15	21 07	22 35	14 01 68	34 16			
22	152	26.5	16.7	36	04.9 ¹⁵⁶	20.6 ¹⁰⁷		56	28	26	** **	04 71	32 14			
23	167	26.2	17.1	50	39.4 ¹⁵⁵	31.2 ¹⁰⁶		58	20 43	21 52	** **	08 73	30 12			
24	182	26.0	-22 17.4	65	14.0 ¹⁵⁶	+8 41.7 ¹⁰⁵		60 S	21 01	22 28	** **	14 12 76	0 28 9			
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 19 ^h 07 ^m 0			Mag: -3.9 PMG: 13 ^h 52 ^m			Mag: +0.7 PMG: 6 ^h 01 ^m			Mag: -2.8 PMG: 21 ^h 05 ^m			Mag: +0.8 PMG: 8 ^h 49 ^m			
	hG ♈			hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°	
0	72	28.0	152 15.9	-24 37.5	269 29.9	+9 40.2	42	55.9	+10 36.1	227 29.7	-7 52.6					
1	87	30.4	167 14.9	37.3	284 31.3	39.8	57	58.6	36.0	242 31.9	52.7					
2	102	32.9	182 14.0	37.2	299 32.8	39.5	73	01.2	36.0	257 34.2	52.8					
3	117	35.4	197 13.0	37.0	314 34.2	39.1	88	03.9	35.9	272 36.4	52.9					
4	132	37.8	212 12.1	36.9	329 35.7	38.8	103	06.5	35.9	287 38.6	53.0					
5	147	40.3	227 11.2	-24 36.7	344 37.2	+9 38.5	118	09.2	+10 35.8	302 40.9	-7 53.1					
6	162	42.8	242 10.2	-24 36.6	359 38.6	+9 38.1	133	11.8	+10 35.8	317 43.1	-7 53.1					
7	177	45.2	257 09.3	36.4	14 40.1	37.8	148	14.4	35.7	332 45.3	53.2					
8	192	47.7	272 08.3	36.2	29 41.6	37.4	163	17.1	35.7	347 47.6	53.3					
9	207	50.1	287 07.4	36.1	44 43.0	37.1	178	19.7	35.6	2 49.8	53.4					
10	222	52.6	302 06.5	35.9	59 44.5	36.7	193	22.4	35.6	17 52.0	53.5					
11	237	55.1	317 05.5	-24 35.8	74 46.0	+9 36.4	208	25.0	+10 35.5	32 54.3	-7 53.5					
12	252	57.5	332 04.6	-24 35.6	89 47.4	+9 36.0	223	27.6	+10 35.5	47 56.5	-7 53.6					
13	268	00.0	347 03.7	35.4	104 48.9	35.7	238	30.3	35.4	62 58.7	53.7					
14	283	02.5	2 02.7	35.3	119 50.4	35.3	253	32.9	35.4	78 01.0	53.8					
15	298	04.9	17 01.8	35.1	134 51.8	35.0	268	35.6	35.3	93 03.2	53.9					
16	313	07.4	32 00.9	34.9	149 53.3	34.7	283	38.2	35.3	108 05.4	53.9					
17	328	09.9	46 59.9	-24 34.8	164 54.8	+9 34.3	298	40.8	+10 35.2	123 07.7	-7 54.0					
18	343	12.3	61 59.0	-24 34.6	179 56.2	+9 34.0	313	43.5	+10 35.2	138 09.9	-7 54.1					
19	358	14.8	76 58.0	34.4	194 57.7	33.6	328	46.1	35.1	153 12.1	54.2					
20	13	17.2	91 57.1	34.2	209 59.2	33.3	343	48.8	35.1	168 14.4	54.3					
21	28	19.7	106 56.2	34.1	225 00.6	32.9	358	51.4	35.0	183 16.6	54.3					
22	43	22.2	121 55.2	33.9	240 02.1	32.6	13	54.0	35.0	198 18.8	54.4					
23	58	24.6	136 54.3	33.7	255 03.6	32.2	28	56.7	34.9	213 21.1	54.5					
24	73	27.1	151 53.4	-24 33.5	270 05.1	+9 31.9	43	59.3	+10 34.9	228 23.3	-7 54.6					
Dif	—			-9	+2	+15	-3	+26			-1	+22			-	

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'2 PMG: 11 ^h 50 ^m 5			Edad: 9 ^d 7 PHE { 4 ^h : 54'1 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
0	182	26.0	-22	17.4	65	14.0	+8	41.7	60 N	6	51	7	47	8	42	12	44
1	197	25.7		17.7	79	48.5 ¹⁵⁵	+8	52.2 ¹⁰⁵	58	44	36		26		50	15	
2	212	25.5		18.1	94	23.0 ¹⁵⁵	+9	02.7 ¹⁰⁵	56	38	26		12		12	55	
3	227	25.2		18.4	108	57.4 ¹⁵⁴		13.2 ¹⁰⁵	54	33	18	8	01		13	00	
4	242	25.0		18.7	123	31.9 ¹⁵⁵		23.6 ¹⁰⁴	52	27	10	7	50		05	21	
5	257	24.7	-22	19.0	138	06.3 ¹⁵⁴	+9	34.0 ¹⁰⁴	50	6	23	7	04	7	41	13	09
6	272	24.5	-22	19.4	152	40.7 ¹⁵⁴	+9	44.3 ¹⁰³	45	6	12	6	49	7	22	13	18
7	287	24.2		19.7	167	15.0 ¹⁵³	+9	54.6 ¹⁰³	40	6	02		36	7	06		25
8	302	23.9		20.0	181	49.4 ¹⁵⁴	+10	04.9 ¹⁰³	35	5	53		25	6	53		31
9	317	23.7		20.3	196	23.7 ¹⁵³		15.1 ¹⁰²	30	45	6	15	41		37	34	
10	332	23.4		20.6	210	58.0 ¹⁵³		25.3 ¹⁰²	20	30	5	57		21	47	37	
11	347	23.2	-22	21.0	225	32.2 ¹⁵²	+10	35.4 ¹⁰¹	10 N	5	14	5	41	6	03	13	55
12	2	22.9	-22	21.3	240	06.4 ¹⁵²	+10	45.5 ¹⁰¹	0	4	58	5	24	5	47	14	03
13	17	22.7		21.6	254	40.6 ¹⁵²	+10	55.6 ¹⁰¹	10 S	40	5	07		30		12	46
14	32	22.4		21.9	269	14.8 ¹⁵²	+11	05.6 ¹⁰⁰	20	4	19	4	48	5	12	20	50
15	47	22.1		22.2	283	48.9 ¹⁵¹		15.5 ⁹⁹	30	3	51		24	4	51		31
16	62	21.9		22.6	298	23.0 ¹⁵¹		25.4 ⁹⁹	35		34	4	10		39		36
17	77	21.6	-22	22.9	312	57.1 ¹⁵¹	+11	35.3 ⁹⁹	40	3	12	3	52	4	25	14	43
18	92	21.4	-22	23.2	327	31.1 ¹⁵⁰	+11	45.1 ⁹⁸	45	2	43	3	31	4	08	14	51
19	107	21.1		23.5	342	05.1 ¹⁵⁰	+11	54.9 ⁹⁸	50	2	02	3	04	3	47	15	00
20	122	20.9		23.8	356	39.1 ¹⁵⁰	+12	04.7 ⁹⁸	52	1	39		2	50		37	
21	137	20.6		24.1	11	13.0 ¹⁴⁹		14.3 ⁹⁶	54	1	05		34		25		09
22	152	20.3		24.4	25	46.9 ¹⁴⁹		24.0 ⁹⁷	56	** **	2	14		3	12		15
23	167	20.1		24.8	40	20.7 ¹⁴⁸		33.6 ⁹⁶	58	** **	1	49		2	57		21
24	182	19.8	-22	25.1	54	54.5 ¹⁴⁸	+12	43.1 ⁹⁵	60 S	** **	1	13		2	39	15	28

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 19 ^h 03 ^m 1		Mag: -3.9 PMG: 13 ^h 53 ^m			Mag: +0.7 PMG: 5 ^h 59 ^m			Mag: -2.8 PMG: 21 ^h 00 ^m			Mag: +0.7 PMG: 8 ^h 45 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	73	27.1	151	53.4	-24	33.5	270	05.1	+9	31.9	43	59.3	+10	34.9
1	88	29.6	166	52.4		33.3	285	06.5		31.6	59	01.9		34.8
2	103	32.0	181	51.5		33.2	300	08.0		31.2	74	04.6		34.8
3	118	34.5	196	50.6		33.0	315	09.5		30.9	89	07.2		34.7
4	133	37.0	211	49.6		32.8	330	11.0		30.5	104	09.8		34.7
5	148	39.4	226	48.7	-24	32.6	345	12.4	+9	30.2	119	12.5	+10	34.6
6	163	41.9	241	47.8	-24	32.4	0	13.9	+9	29.8	134	15.1	+10	34.6
7	178	44.4	256	46.8		32.2	15	15.4		29.5	149	17.8		34.5
8	193	46.8	271	45.9		32.0	30	16.9		29.2	164	20.4		34.5
9	208	49.3	286	45.0		31.8	45	18.3		28.8	179	23.0		34.4
10	223	51.7	301	44.0		31.6	60	19.8		28.5	194	25.7		34.4
11	238	54.2	316	43.1	-24	31.5	75	21.3	+9	28.1	209	28.3	+10	34.3
12	253	56.7	331	42.2	-24	31.3	90	22.8	+9	27.8	224	30.9	+10	34.3
13	268	59.1	346	41.2		31.1	105	24.3		27.4	239	33.6		34.2
14	284	01.6	1	40.3		30.9	120	25.7		27.1	254	36.2		34.2
15	299	04.1	16	39.4		30.7	135	27.2		26.8	269	38.8		34.1
16	314	06.5	31	38.4		30.5	150	28.7		26.4	284	41.4		34.1
17	329	09.0	46	37.5	-24	30.3	165	30.2	+9	26.1	299	44.1	+10	34.0
18	344	11.5	61	36.6	-24	30.1	180	31.7	+9	25.7	314	46.7	+10	34.0
19	359	13.9	76	35.7		29.8	195	33.1		25.4	329	49.3		33.9
20	14	16.4	91	34.7		29.6	210	34.6		25.1	344	52.0		33.9
21	29	18.9	106	33.8		29.4	225	36.1		24.7	359	54.6		33.8
22	44	21.3	121	32.9		29.2	240	37.6		24.4	14	57.2		33.8
23	59	23.8	136	31.9		29.0	255	39.1		24.0	29	59.9		33.7
24	74	26.2	151	31.0	-24	28.8	270	40.6	+9	23.7	45	02.5	+10	33.7
Dif	—		-9 +2		+15 -3		+26 0		+22 -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 9			Edad: 10 ^d 7 PHE { 4 ^h : 54:1 12 ^h : 54:1 20 ^h : 54:1 PMG: 20 ^h 58 ^m R°: 45 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m m	h m m	h m m				
0	182	19.8	-22	25.1	54	54.5	+12	43.1	60 N	14 58	15 53	16 49	12 56	16 4 04				
1	197	19.6		25.4	69	28.3 ¹⁴⁸	+12	52.6 ⁹⁵	58	15 14	16 04	16 56	13 05	19 3 56				
2	212	19.3		25.7	84	02.0 ¹⁴⁷	+13	02.0 ⁹⁴	56	28	14	17 02	13 21	49 70				
3	227	19.0		26.0	98	35.7 ¹⁴⁷		11.4 ⁹⁴	54	39	22	08	20 23	42 68				
4	242	18.8		26.3	113	09.4 ¹⁴⁷		20.7 ⁹³	52	50	30	13	26 25	36 66				
5	257	18.5	-22	26.6	127	43.0 ¹⁴⁶	+13	30.0 ⁹³	50	15 59	16 37	17 18	13 32	26 3 31				
6	272	18.3	-22	26.9	142	16.6 ¹⁴⁶	+13	39.2 ⁹²	45	16 19	16 52	17 29	13 44	30 3 20				
7	287	18.0		27.2	156	50.1 ¹⁴⁵		48.4 ⁹²	40	35	17 05	39	13 54	33 11				
8	302	17.7		27.5	171	23.6 ¹⁴⁵	+13	57.5 ⁹¹	35	16 48	16	47	14 03	35 3 03				
9	317	17.5		27.8	185	57.1 ¹⁴⁵	+14	06.6 ⁹¹	30	17 00	26	17 56	11 36	2 56 54				
10	332	17.2		28.1	200	30.5 ¹⁴⁴		15.6 ⁹⁰	20	20	17 44	18 11	24 40	44 50				
11	347	17.0	-22	28.4	215	03.8 ¹⁴³	+14	24.5 ⁸⁹	10 N	17 38	18 01	18 27	14 36	42 2 34				
12	2	16.7	-22	28.7	229	37.1 ¹⁴³	+14	33.4 ⁸⁹	0	17 55	18 17	18 43	14 47	45 2 24				
13	17	16.4		29.0	244	10.4 ¹⁴³		42.2 ⁸⁸	10 S	18 11	34	19 01	14 58	48 15				
14	32	16.2		29.3	258	43.7 ¹⁴³		51.0 ⁸⁸	20	30	18 54	23	15 10	51 2 04				
15	47	15.9		29.6	273	16.8 ¹⁴¹	+14	59.7 ⁸⁷	30	18 51	19 18	19 51	24 54	1 53 35				
16	62	15.6		29.9	287	50.0 ¹⁴²	+15	08.3 ⁸⁶	35	19 03	32	20 09	32 56	46 33				
17	77	15.4	-22	30.2	302	23.1 ¹⁴¹	+15	16.9 ⁸⁶	40	19 17	19 50	20 31	15 41	58 1 38				
18	92	15.1	-22	30.5	316	56.1 ¹⁴⁰	+15	25.5 ⁸⁶	45	19 35	20 11	21 00	15 52	60 1 29				
19	107	14.9		30.8	331	29.1 ¹⁴⁰		33.9 ⁸⁴	50	19 56	39	21 42	16 05	64 19				
20	122	14.6		31.1	346	02.1 ¹⁴⁰		42.3 ⁸⁴	52	20 06	20 53	22 06	11 66	14 22				
21	137	14.3		31.4	0	35.0 ¹³⁹		50.6 ⁸³	54	18	21 10	22 41	18 67	08 21				
22	152	14.1		31.7	15	07.8 ¹³⁸	+15	58.9 ⁸³	56	31	30	** **	25 70	1 02 19				
23	167	13.8		32.0	29	40.6 ¹³⁸	+16	07.1 ⁸²	58	20 47	21 56	** **	34 72	0 55 17				
24	182	13.5	-22	32.3	44	13.4 ¹³⁸	+16	15.3 ⁸²	60 S	21 05	22 35	** **	16 43	76 0 48				
UT	ARIES		VENUS			MARTE			JÚPITER				SATURNO					
	PMG: 18 ^h 59 ^m 1		Mag: -3.9 PMG: 13 ^h 55 ^m			Mag: +0.7 PMG: 5 ^h 57 ^m			Mag: -2.8 PMG: 20 ^h 56 ^m				Mag: +0.7 PMG: 8 ^h 42 ^m					
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♎		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	74	26.2	151	31.0	-24	28.8	270	40.6	+9	23.7	45	02.5	+10	33.7	229	17.0	-7	56.5
1	89	28.7	166	30.1		28.6	285	42.0		23.4	60	05.1		33.6	244	19.2		56.6
2	104	31.2	181	29.1		28.4	300	43.5		23.0	75	07.7		33.6	259	21.4		56.7
3	119	33.6	196	28.2		28.2	315	45.0		22.7	90	10.4		33.5	274	23.7		56.7
4	134	36.1	211	27.3		27.9	330	46.5		22.3	105	13.0		33.5	289	25.9		56.8
5	149	38.6	226	26.4	-24	27.7	345	48.0	+9	22.0	120	15.6	+10	33.5	304	28.2	-7	56.9
6	164	41.0	241	25.4	-24	27.5	0	49.5	+9	21.7	135	18.3	+10	33.4	319	30.4	-7	57.0
7	179	43.5	256	24.5		27.3	15	51.0		21.3	150	20.9		33.4	334	32.6		57.1
8	194	46.0	271	23.6		27.1	30	52.4		21.0	165	23.5		33.3	349	34.9		57.1
9	209	48.4	286	22.6		26.8	45	53.9		20.6	180	26.1		33.3	4	37.1		57.2
10	224	50.9	301	21.7		26.6	60	55.4		20.3	195	28.8		33.2	19	39.3		57.3
11	239	53.3	316	20.8	-24	26.4	75	56.9	+9	20.0	210	31.4	+10	33.2	34	41.6	-7	57.4
12	254	55.8	331	19.9	-24	26.2	90	58.4	+9	19.6	225	34.0	+10	33.1	49	43.8	-7	57.4
13	269	58.3	346	18.9		25.9	105	59.9		19.3	240	36.6		33.1	64	46.1		57.5
14	285	00.7	1	18.0		25.7	121	01.4		19.0	255	39.3		33.0	79	48.3		57.6
15	300	03.2	16	17.1		25.5	136	02.9		18.6	270	41.9		33.0	94	50.5		57.7
16	315	05.7	31	16.2		25.3	151	04.4		18.3	285	44.5		32.9	109	52.8		57.8
17	330	08.1	46	15.2	-24	25.0	166	05.9	+9	17.9	300	47.1	+10	32.9	124	55.0	-7	57.8
18	345	10.6	61	14.3	-24	24.8	181	07.3	+9	17.6	315	49.8	+10	32.9	139	57.3	-7	57.9
19	0	13.1	76	13.4		24.5	196	08.8		17.3	330	52.4		32.8	154	59.5		58.0
20	15	15.5	91	12.5		24.3	211	10.3		16.9	345	55.0		32.8	170	01.7		58.1
21	30	18.0	106	11.5		24.1	226	11.8		16.6	0	57.6		32.7	185	04.0		58.2
22	45	20.5	121	10.6		23.8	241	13.3		16.3	16	00.3		32.7	200	06.2		58.2
23	60	22.9	136	09.7		23.6	256	14.8		15.9	31	02.9		32.6	215	08.4		58.3
24	75	25.4	151	08.8	-24	23.4	271	16.3	+9	15.6	46	05.5	+10	32.6	230	10.7	-7	58.4
Dif	—		-9		+2		+15		-3		+26		0		+22		-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 3			Edad: 11 ^d 7 PHE { SD: 14'7 PMG: 21 ^h 43 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	Rº	Hora	Rº	
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m
0	182	13.5	-22	32.3	44	13.4	+16	15.3	80	60 N	6 54	7 50	8 45	13 12	22	5 19
1	197	13.3		32.6	58	46.1 ¹³⁷		23.3	80	58	47	39	29	24	25	5 08
2	212	13.0		32.9	73	18.8 ¹³⁷		31.3	80	56	41	29	15	34	27	4 59
3	227	12.7		33.2	87	51.4 ¹³⁶		39.3	80	54	35	20	8 03	43	29	50
4	242	12.5		33.4	102	23.9 ¹³⁵		47.1	78	52	29	13	7 53	51	31	42
5	257	12.2	-22	33.7	116	56.4 ¹³⁵	+16	54.9	78	50	6 25	7 06	7 44	13 58	32	4 36
6	272	11.9	-22	34.0	131	28.9 ¹³⁵	+17	02.7	78	45	6 14	6 50	7 24	14 14	35	4 21
7	287	11.7		34.3	146	01.3 ¹³⁴		10.3	76	40	6 04	38	7 08	27	37	4 09
8	302	11.4		34.6	160	33.6 ¹³³		17.9	76	35	5 55	26	6 54	38	39	3 59
9	317	11.1		34.9	175	05.9 ¹³³		25.4	75	30	47	6 16	42	14 47	41	50
10	332	10.9		35.2	189	38.2 ¹³³		32.9	75	20	31	5 58	22	15 04	43	34
11	347	10.6	-22	35.4	204	10.4 ¹³²	+17	40.2	73	10 N	5 15	5 42	6 04	15 18	46	3 21
12	2	10.3	-22	35.7	218	42.6 ¹³²	+17	47.5	73	0	4 59	5 25	5 48	15 32	48	3 08
13	17	10.1		36.0	233	14.6 ¹³⁰	+17	54.7	72	10 S	41	5 08	31	15 46	49	2 56
14	32	09.8		36.3	247	46.7 ¹³¹	+18	01.9	72	20	4 19	4 48	5 13	16 01	51	43
15	47	09.5		36.6	262	18.7 ¹³⁰		08.9	70	30	3 51	24	4 51	18	54	28
16	62	09.3		36.9	276	50.6 ¹²⁹		15.9	70	35	33	4 10	39	28	55	19
17	77	09.0	-22	37.1	291	22.5 ¹²⁹	+18	22.8	69	40	3 11	3 52	4 25	16 39	58	2 09
18	92	08.7	-22	37.4	305	54.3 ¹²⁸	+18	29.6	68	45	2 42	3 31	4 07	16 52	60	1 57
19	107	08.5		37.7	320	26.1 ¹²⁸		36.4	68	50	2 00	3 03	3 46	17 09	62	43
20	122	08.2		38.0	334	57.8 ¹²⁷		43.1	67	52	1 36	2 48	3 36	17	63	36
21	137	07.9		38.2	349	29.5 ¹²⁷		49.6	65	54	1 01	32	24	25	66	29
22	152	07.7		38.5	4	01.1 ¹²⁶	+18	56.2	66	56	** ** *	2 12	3 11	35	67	21
23	167	07.4		38.8	18	32.7 ¹²⁶	+19	02.6	64	58	** ** *	1 46	2 55	46	70	12
24	182	07.1	-22	39.1	33	04.2 ¹²⁵	+19	08.9	63	60 S	** ** *	1 07	2 37	17 59	72	1 02

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO										
	PMG: 18 ^h 55 ^m 2		Mag: -3.9 PMG: 13 ^h 56 ^m		Mag: +0.7 PMG: 5 ^h 54 ^m		Mag: -2.8 PMG: 20 ^h 52 ^m		Mag: +0.7 PMG: 8 ^h 38 ^m										
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec									
h	°	'	°	'	°	'	°	'	°	'									
0	75	25.4	151	08.8	-24	23.4	271	16.3	+9	15.6	46	05.5	+10	32.6	230	10.7	-7	58.4	
1	90	27.8	166	07.8		23.1	286	17.8		15.3	61	08.1		32.5	245	12.9		58.5	
2	105	30.3	181	06.9		22.9	301	19.3		14.9	76	10.7		32.5	260	15.2		58.5	
3	120	32.8	196	06.0		22.6	316	20.8		14.6	91	13.4		32.4	275	17.4		58.6	
4	135	35.2	211	05.1		22.4	331	22.3		14.3	106	16.0		32.4	290	19.6		58.7	
5	150	37.7	226	04.2	-24	22.1	346	23.8	+9	13.9	121	18.6	+10	32.4	305	21.9	-7	58.8	
6	165	40.2	241	03.2	-24	21.9	1	25.3	+9	13.6	136	21.2	+10	32.3	320	24.1	-7	58.9	
7	180	42.6	256	02.3		21.6	16	26.8		13.3	151	23.8		32.3	335	26.4		58.9	
8	195	45.1	271	01.4		21.4	31	28.3		12.9	166	26.5		32.2	350	28.6		59.0	
9	210	47.6	286	00.5		21.1	46	29.8		12.6	181	29.1		32.2	5	30.8		59.1	
10	225	50.0	300	59.5		20.9	61	31.3		12.3	196	31.7		32.1	20	33.1		59.2	
11	240	52.5	315	58.6	-24	20.6	76	32.8	+9	11.9	211	34.3	+10	32.1	35	35.3	-7	59.2	
12	255	55.0	330	57.7	-24	20.3	91	34.3	+9	11.6	226	36.9	+10	32.1	50	37.6	-7	59.3	
13	270	57.4	345	56.8		20.1	106	35.8		11.3	241	39.5		32.0	65	39.8		59.4	
14	285	59.9	0	55.9		19.8	121	37.3		10.9	256	42.2		32.0	80	42.0		59.5	
15	301	02.3	15	54.9		19.6	136	38.8		10.6	271	44.8		31.9	95	44.3		59.6	
16	316	04.8	30	54.0		19.3	151	40.3		10.3	286	47.4		31.9	110	46.5		59.6	
17	331	07.3	45	53.1	-24	19.0	166	41.8	+9	09.9	301	50.0	+10	31.8	125	48.8	-7	59.7	
18	346	09.7	60	52.2	-24	18.8	181	43.3	+9	09.6	316	52.6	+10	31.8	140	51.0	-7	59.8	
19	1	12.2	75	51.3		18.5	196	44.8		09.3	331	55.2		31.8	155	53.3		59.9	
20	16	14.7	90	50.4		18.2	211	46.3		08.9	346	57.9		31.7	170	55.5	-7	59.9	
21	31	17.1	105	49.4		18.0	226	47.9		08.6	2	00.5		31.7	185	57.7	-8	00.0	
22	46	19.6	120	48.5		17.7	241	49.4		08.3	17	03.1		31.6	201	00.0	-8	00.1	
23	61	22.1	135	47.6		17.4	256	50.9		07.9	32	05.7		31.6	216	02.2		00.2	
24	76	24.5	150	46.7	-24	17.2	271	52.4	+9	07.6	47	08.3	+10	31.5	231	04.5	-8	00.3	
Dif	—		-9	+3			+15	-3			+26	0			+22		-1		

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16'2			Edad: 12 ^d 7 PHE { 4 ^h : 54'4 12 ^h : 54'5 20 ^h : 54'6										
	PMG: 11 ^h 51 ^m 7			SD: 14'8 PMG: 22 ^h 31 ^m R°: 50 ^m										
	hG ☉	Dec	hG ☾ Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	
0	182	07.1	-22 39.1	33	04.2	+19 08.9	60 N	14 56	15 52	16 48	13 34	32	6 34	69
1	197	06.9	39.3	47	35.7 ¹²⁵	15.2 ⁶³	58	15 13	16 03	16 55	13 49	34	19	67
2	212	06.6	39.6	62	07.1 ¹²⁴	21.3 ⁶¹	56	26	13	17 01	14 01	36	6 07	65
3	227	06.3	39.9	76	38.5 ¹²⁴	27.4 ⁶¹	54	38	22	07	12	37	5 57	63
4	242	06.0	40.2	91	09.8 ¹²³	33.4 ⁶⁰	52	49	29	13	22	38	47	62
5	257	05.8	-22 40.4	105	41.0 ¹²²	+19 39.3 ⁵⁹	50	15 58	16 36	17 18	14 30	40	5 39	61
6	272	05.5	-22 40.7	120	12.2 ¹²²	+19 45.2 ⁵⁹	45	16 18	16 52	17 29	14 49	41	5 21	59
7	287	05.2	41.0	134	43.4 ¹²²	50.9 ⁵⁷	40	35	17 05	39	15 04	43	5 07	57
8	302	05.0	41.2	149	14.5 ¹²¹	+19 56.6 ⁵⁷	35	16 48	16	48	17	44	4 54	56
9	317	04.7	41.5	163	45.5 ¹²⁰	+20 02.1 ⁵⁵	30	17 00	26	17 56	28	45	44	54
10	332	04.4	41.8	178	16.5 ¹²⁰	07.6 ⁵⁵	20	21	17 45	18 12	15 47	47	26	52
11	347	04.1	-22 42.0	192	47.4 ¹¹⁹	+20 13.0 ⁵⁴	10 N	17 39	18 01	18 28	16 04	48	4 10	50
12	2	03.9	-22 42.3	207	18.3 ¹¹⁹	+20 18.3 ⁵³	0	17 55	18 18	18 44	16 20	49	3 55	48
13	17	03.6	42.6	221	49.2 ¹¹⁹	23.5 ⁵²	10 S	18 12	35	19 02	35	51	40	47
14	32	03.3	42.8	236	19.9 ¹¹⁷	28.6 ⁵¹	20	31	18 55	24	16 52	53	24	45
15	47	03.0	43.1	250	50.7 ¹¹⁸	33.6 ⁵⁰	30	18 52	19 19	19 52	17 12	54	3 06	43
16	62	02.8	43.3	265	21.4 ¹¹⁷	38.5 ⁴⁹	35	19 05	34	20 11	23	55	2 56	41
17	77	02.5	-22 43.6	279	52.0 ¹¹⁶	+20 43.3 ⁴⁸	40	19 19	19 52	20 33	17 37	55	2 44	39
18	92	02.2	-22 43.9	294	22.6 ¹¹⁶	+20 48.1 ⁴⁸	45	19 37	20 14	21 02	17 52	57	2 29	38
19	107	02.0	44.1	308	53.1 ¹¹⁵	52.7 ⁴⁶	50	19 58	42	21 45	18 11	59	12	36
20	122	01.7	44.4	323	23.6 ¹¹⁵	+20 57.2 ⁴⁵	52	20 09	20 56	22 10	20	60	2 04	34
21	137	01.4	44.6	337	54.0 ¹¹⁴	+21 01.7 ⁴⁵	54	20	21 13	22 48	31	60	1 55	33
22	152	01.1	44.9	352	24.4 ¹¹⁴	06.0 ⁴³	56	34	21 34	** **	42	62	45	31
23	167	00.9	45.1	6	54.8 ¹¹⁴	10.2 ⁴²	58	20 50	22 01	** **	18 56	63	33	29
24	182	00.6	-22 45.4	21	25.1 ¹¹³	+21 14.4 ⁴²	60 S	21 09	22 41	** **	19 11	66	1 20	26
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 18 ^h 51 ^m 3		Mag: -3.9 PMG: 13 ^h 58 ^m		Mag: +0.6 PMG: 5 ^h 52 ^m		Mag: -2.8 PMG: 20 ^h 48 ^m		Mag: +0.7 PMG: 8 ^h 34 ^m					
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	°	°	°	°	°	°	°	°					
0	76	24.5	150 46.7	-24 17.2	271 52.4	+9 07.6	47 08.3	+10 31.5	231 04.5	-8 00.3				
1	91	27.0	165 45.8	16.9	286 53.9	07.3	62 10.9	31.5	246 06.7	00.3				
2	106	29.4	180 44.8	16.6	301 55.4	06.9	77 13.5	31.5	261 08.9	00.4				
3	121	31.9	195 43.9	16.3	316 56.9	06.6	92 16.2	31.4	276 11.2	00.5				
4	136	34.4	210 43.0	16.1	331 58.4	06.3	107 18.8	31.4	291 13.4	00.6				
5	151	36.8	225 42.1	-24 15.8	346 59.9	+9 06.0	122 21.4	+10 31.3	306 15.7	-8 00.6				
6	166	39.3	240 41.2	-24 15.5	2 01.4	+9 05.6	137 24.0	+10 31.3	321 17.9	-8 00.7				
7	181	41.8	255 40.3	15.2	17 02.9	05.3	152 26.6	31.3	336 20.2	00.8				
8	196	44.2	270 39.4	14.9	32 04.5	05.0	167 29.2	31.2	351 22.4	00.9				
9	211	46.7	285 38.4	14.6	47 06.0	04.6	182 31.8	31.2	6 24.6	00.9				
10	226	49.2	300 37.5	14.4	62 07.5	04.3	197 34.4	31.1	21 26.9	01.0				
11	241	51.6	315 36.6	-24 14.1	77 09.0	+9 04.0	212 37.1	+10 31.1	36 29.1	-8 01.1				
12	256	54.1	330 35.7	-24 13.8	92 10.5	+9 03.6	227 39.7	+10 31.1	51 31.4	-8 01.2				
13	271	56.6	345 34.8	13.5	107 12.0	03.3	242 42.3	31.0	66 33.6	01.2				
14	286	59.0	0 33.9	13.2	122 13.5	03.0	257 44.9	31.0	81 35.9	01.3				
15	302	01.5	15 33.0	12.9	137 15.1	02.7	272 47.5	30.9	96 38.1	01.4				
16	317	03.9	30 32.0	12.6	152 16.6	02.3	287 50.1	30.9	111 40.3	01.5				
17	332	06.4	45 31.1	-24 12.3	167 18.1	+9 02.0	302 52.7	+10 30.9	126 42.6	-8 01.6				
18	347	08.9	60 30.2	-24 12.0	182 19.6	+9 01.7	317 55.3	+10 30.8	141 44.8	-8 01.6				
19	2	11.3	75 29.3	11.7	197 21.1	01.3	332 57.9	30.8	156 47.1	01.7				
20	17	13.8	90 28.4	11.4	212 22.6	01.0	348 00.5	30.7	171 49.3	01.8				
21	32	16.3	105 27.5	11.1	227 24.2	00.7	3 03.1	30.7	186 51.6	01.9				
22	47	18.7	120 26.6	10.8	242 25.7	+9 00.4	18 05.7	30.7	201 53.8	01.9				
23	62	21.2	135 25.7	10.5	257 27.2	+9 00.0	33 08.4	30.6	216 56.0	02.0				
24	77	23.7	150 24.8	-24 10.2	272 28.7	+8 59.7	48 11.0	+10 30.6	231 58.3	-8 02.1				
Dif	—	—	-9 +3	+15	-3	+26	0	+22	—	—				

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16'2			Edad: 13 ^d 7 PHE { 4 ^h : 54'7 12 ^h : 54'8 20 ^h : 54'9 Rº: 52 ^m												
	PMG: 11 ^h 52 ^m 2			SD: 14'9 PMG: 23 ^h 21 ^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	182	00.6	-22 45.4	21	25.1	+21 14.4	40		60 N	6 56	7 52	8 49	14 06	45	7 43	60
1	197	00.3	45.7	35	55.3 ¹¹²	18.4	40		58	49	41	32	23	45	26	59
2	212	00.0	45.9	50	25.5 ¹¹²	22.4	40		56	43	31	18	37	46	12	58
3	226	59.8	46.2	64	55.7 ¹¹²	26.2	38		54	37	23	8 06	14 49	47	7 00	57
4	241	59.5	46.4	79	25.8 ¹¹¹	30.0	38		52	32	15	7 55	15 00	48	6 49	57
5	256	59.2	-22 46.7	93	55.8 ¹¹⁰	+21 33.6	36		50	6 27	7 08	7 46	15 10	48	6 40	56
6	271	58.9	-22 46.9	108	25.8 ¹¹⁰	+21 37.1	35		45	6 15	6 52	7 26	15 30	49	6 20	55
7	286	58.7	47.2	122	55.8 ¹¹⁰	40.6	35		40	6 05	39	7 10	15 47	49	6 04	54
8	301	58.4	47.4	137	25.7 ¹⁰⁹	43.9	33		35	5 56	28	6 56	16 01	49	5 50	53
9	316	58.1	47.7	151	55.6 ¹⁰⁹	47.1	32		30	48	6 18	44	13	50	38	53
10	331	57.8	47.9	166	25.5 ¹⁰⁹	50.3	32		20	32	5 59	23	34	50	18	52
11	346	57.6	-22 48.2	180	55.3 ¹⁰⁸	+21 53.3	30		10 N	5 16	5 43	6 05	16 52	51	5 00	51
12	1	57.3	-22 48.4	195	25.0 ¹⁰⁷	+21 56.2	29		0	5 00	5 26	5 48	17 09	51	4 43	51
13	16	57.0	48.7	209	54.8 ¹⁰⁸	+21 59.0	28		10 S	4 41	5 08	31	26	52	27	49
14	31	56.7	48.9	224	24.4 ¹⁰⁶	+22 01.7	27		20	4 20	4 49	5 13	17 45	51	4 09	49
15	46	56.4	49.1	238	54.1 ¹⁰⁷	04.3	26		30	3 51	24	4 52	18 06	52	3 49	47
16	61	56.2	49.4	253	23.7 ¹⁰⁶	06.8	25		35	33	4 10	39	18	52	37	47
17	76	55.9	-22 49.6	267	53.2 ¹⁰⁵	+22 09.1	23		40	3 11	3 52	4 24	18 32	53	3 23	46
18	91	55.6	-22 49.9	282	22.8 ¹⁰⁶	+22 11.4	23		45	2 42	3 30	4 07	18 49	53	3 07	45
19	106	55.3	50.1	296	52.3 ¹⁰⁵	13.6	22		50	1 59	3 02	3 45	19 10	53	2 48	43
20	121	55.1	50.3	311	21.7 ¹⁰⁴	15.6	20		52	1 34	2 47	35	20	53	38	43
21	136	54.8	50.6	325	51.1 ¹⁰⁴	17.5	19		54	0 56	30	23	31	54	28	42
22	151	54.5	50.8	340	20.5 ¹⁰⁴	19.4	19		56	** ** *	2 10	3 10	44	54	16	41
23	166	54.2	51.1	354	49.9 ¹⁰⁴	21.1	17		58	** ** *	1 43	2 54	19 59	54	2 02	40
24	181	53.9	-22 51.3	9	19.2 ¹⁰³	+22 22.7	16		60 S	** ** *	1 02	2 35	20 17	54	1 46	38

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO		
	PMG 18 ^h 47 ^m 3		Mag: -3.9 PMG: 13 ^h 59 ^m		Mag: +0.6 PMG: 5 ^h 49 ^m		Mag: -2.8 PMG: 20 ^h 44 ^m		Mag: +0.7 PMG: 8 ^h 31 ^m		
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄		
h	°	'	°	°	'	°	°	'	°	°	'
0	77	23.7	150 24.8	-24 10.2	272 28.7	+8 59.7	48	11.0	+10 30.6	231 58.3	-8 02.1
1	92	26.1	165 23.9	09.9	287 30.2	59.4	63	13.6	30.5	247 00.5	02.2
2	107	28.6	180 22.9	09.6	302 31.8	59.1	78	16.2	30.5	262 02.8	02.2
3	122	31.1	195 22.0	09.3	317 33.3	58.7	93	18.8	30.5	277 05.0	02.3
4	137	33.5	210 21.1	09.0	332 34.8	58.4	108	21.4	30.4	292 07.3	02.4
5	152	36.0	225 20.2	-24 08.7	347 36.3	+8 58.1	123	24.0	+10 30.4	307 09.5	-8 02.5
6	167	38.4	240 19.3	-24 08.4	2 37.8	+8 57.8	138	26.6	+10 30.3	322 11.8	-8 02.5
7	182	40.9	255 18.4	08.1	17 39.4	57.4	153	29.2	30.3	337 14.0	02.6
8	197	43.4	270 17.5	07.8	32 40.9	57.1	168	31.8	30.3	352 16.2	02.7
9	212	45.8	285 16.6	07.4	47 42.4	56.8	183	34.4	30.2	7 18.5	02.8
10	227	48.3	300 15.7	07.1	62 43.9	56.5	198	37.0	30.2	22 20.7	02.8
11	242	50.8	315 14.8	-24 06.8	77 45.5	+8 56.1	213	39.6	+10 30.2	37 23.0	-8 02.9
12	257	53.2	330 13.9	-24 06.5	92 47.0	+8 55.8	228	42.2	+10 30.1	52 25.2	-8 03.0
13	272	55.7	345 13.0	06.2	107 48.5	55.5	243	44.8	30.1	67 27.5	03.1
14	287	58.2	0 12.1	05.9	122 50.1	55.2	258	47.4	30.0	82 29.7	03.1
15	303	00.6	15 11.1	05.5	137 51.6	54.8	273	50.0	30.0	97 32.0	03.2
16	318	03.1	30 10.2	05.2	152 53.1	54.5	288	52.6	30.0	112 34.2	03.3
17	333	05.6	45 09.3	-24 04.9	167 54.6	+8 54.2	303	55.2	+10 29.9	127 36.5	-8 03.4
18	348	08.0	60 08.4	-24 04.6	182 56.2	+8 53.9	318	57.8	+10 29.9	142 38.7	-8 03.4
19	3	10.5	75 07.5	04.2	197 57.7	53.6	334	00.4	29.9	157 40.9	03.5
20	18	12.9	90 06.6	03.9	212 59.2	53.2	349	03.0	29.8	172 43.2	03.6
21	33	15.4	105 05.7	03.6	228 00.8	52.9	4	05.6	29.8	187 45.4	03.7
22	48	17.9	120 04.8	03.2	243 02.3	52.6	19	08.2	29.7	202 47.7	03.7
23	63	20.3	135 03.9	02.9	258 03.8	52.3	34	10.8	29.7	217 49.9	03.8
24	78	22.8	150 03.0	-24 02.6	273 05.4	+8 51.9	49	13.4	+10 29.7	232 52.2	-8 03.9
Dif	—		-9 +3		+15 -3		+26 0		+22 -1		

UT	SOL			☉ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 16/2 PMG: 11 ^h 52 ^m 6			Edad: 14 ^d 7 PHE { SD: 15/0 PMG: *** **m R°: ***											
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m	m	h m	m
0	181	53.9	-22 51.3	9	19.2	+22 22.7	15	60 N	14 55	15 51	16 47	14 51	59	8 43	47
1	196	53.7	51.5	23	48.5 ¹⁰³	24.2	15	58	15 12	16 03	16 55	15 08	59	25	48
2	211	53.4	51.8	38	17.7 ¹⁰²	25.6	14	56	26	12	17 01	23	59	8	10 49
3	226	53.1	52.0	52	46.9 ¹⁰²	26.8	12	54	38	21	07	36	58	7	57 49
4	241	52.8	52.2	67	16.1 ¹⁰²	28.0	12	52	49	29	13	48	57	46	49
5	256	52.5	-22 52.5	81	45.3 ¹⁰²	+22 29.0	10	50	15 58	16 36	17 18	15 58	56	7	36 50
6	271	52.3	-22 52.7	96	14.4 ¹⁰¹	+22 30.0	10	45	16 18	16 52	17 29	16 19	56	7	15 50
7	286	52.0	52.9	110	43.5 ¹⁰¹	30.8	8	40	35	17 05	39	36	55	6	58 50
8	301	51.7	53.2	125	12.6 ¹⁰¹	31.5	7	35	16 48	16	48	16	50	55	43 51
9	316	51.4	53.4	139	41.7 ¹⁰¹	32.1	6	30	17 01	27	17 57	17 03	54	31	51
10	331	51.1	53.6	154	10.7 ¹⁰⁰	32.5	4	20	21	17 45	18 13	24	54	6	10 51
11	346	50.9	-22 53.8	168	39.7 ¹⁰⁰	+22 32.9	4	10 N	17 39	18 02	18 28	17 43	52	5	51 51
12	1	50.6	-22 54.1	183	08.7 ¹⁰⁰	+22 33.1	2	0	17 56	18 19	18 45	18 00	52	5	34 51
13	16	50.3	54.3	197	37.7 ¹⁰⁰	33.3	2	10 S	18 14	37	19 04	18 51	5	16	52
14	31	50.0	54.5	212	06.6 ⁹⁹	33.3	0	20	32	18 57	26	36	51	4	58 52
15	46	49.7	54.7	226	35.5 ⁹⁹	33.2	1	30	18 54	19 21	19 54	18 58	49	36	52
16	61	49.4	55.0	241	04.4 ⁹⁹	32.9	3	35	19 06	36	20 12	19 10	49	24	52
17	76	49.2	-22 55.2	255	33.3 ⁹⁹	+22 32.6	3	40	19 21	19 54	20 35	19 25	48	4	09 53
18	91	48.9	-22 55.4	270	02.2 ⁹⁹	+22 32.1	5	45	19 39	20 16	21 05	19 42	47	3	52 52
19	106	48.6	55.6	284	31.0 ⁹⁸	31.6	5	50	20 00	44	21 48	20 03	46	31	52
20	121	48.3	55.9	298	59.9 ⁹⁹	30.9	7	52	11	20 59	22 14	13	46	21	52
21	136	48.0	56.1	313	28.7 ⁹⁸	30.1	8	54	23	21 16	22 54	25	44	3	10 52
22	151	47.7	56.3	327	57.5 ⁹⁸	29.2	9	56	37	21 37	** ** *	38	43	2	57 52
23	166	47.5	56.5	342	26.3 ⁹⁸	28.1	11	58	20 53	22 05	** ** *	20 53	42	42	52
24	181	47.2	-22 56.7	356	55.1 ⁹⁸	+22 27.0	11	60 S	21 12	22 48	** ** *	21 11	41	2	24 52
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 18 ^h 43 ^m 4		Mag: -3.9 PMG: 14 ^h 01 ^m			Mag: +0.6 PMG: 5 ^h 47 ^m			Mag: -2.8 PMG: 20 ^h 40 ^m			Mag: +0.7 PMG: 8 ^h 27 ^m			
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'			
0	78	22.8	150 03.0	-24 02.6	273 05.4	+8 51.9	49	13.4	+10 29.7	232 52.2	-8 03.9				
1	93	25.3	165 02.1	02.2	288 06.9	51.6	64	16.0	29.6	247 54.4	04.0				
2	108	27.7	180 01.2	01.9	303 08.4	51.3	79	18.6	29.6	262 56.7	04.0				
3	123	30.2	195 00.3	01.6	318 10.0	51.0	94	21.2	29.6	277 58.9	04.1				
4	138	32.7	209 59.4	01.2	333 11.5	50.7	109	23.8	29.5	293 01.2	04.2				
5	153	35.1	224 58.5	-24 00.9	348 13.0	+8 50.3	124	26.4	+10 29.5	308 03.4	-8 04.3				
6	168	37.6	239 57.6	-24 00.6	3 14.6	+8 50.0	139	29.0	+10 29.5	323 05.7	-8 04.3				
7	183	40.1	254 56.7	-24 00.2	18 16.1	49.7	154	31.6	29.4	338 07.9	04.4				
8	198	42.5	269 55.8	-23 59.9	33 17.6	49.4	169	34.2	29.4	353 10.2	04.5				
9	213	45.0	284 54.9	59.5	48 19.2	49.1	184	36.8	29.4	8 12.4	04.6				
10	228	47.4	299 54.0	59.2	63 20.7	48.7	199	39.4	29.3	23 14.6	04.6				
11	243	49.9	314 53.1	-23 58.8	78 22.2	+8 48.4	214	42.0	+10 29.3	38 16.9	-8 04.7				
12	258	52.4	329 52.2	-23 58.5	93 23.8	+8 48.1	229	44.6	+10 29.3	53 19.1	-8 04.8				
13	273	54.8	344 51.3	58.1	108 25.3	47.8	244	47.2	29.2	68 21.4	04.9				
14	288	57.3	359 50.4	57.8	123 26.9	47.5	259	49.8	29.2	83 23.6	04.9				
15	303	59.8	14 49.5	57.4	138 28.4	47.1	274	52.4	29.1	98 25.9	05.0				
16	319	02.2	29 48.6	57.1	153 29.9	46.8	289	55.0	29.1	113 28.1	05.1				
17	334	04.7	44 47.7	-23 56.7	168 31.5	+8 46.5	304	57.5	+10 29.1	128 30.4	-8 05.2				
18	349	07.2	59 46.8	-23 56.4	183 33.0	+8 46.2	320	00.1	+10 29.0	143 32.6	-8 05.2				
19	4	09.6	74 45.9	56.0	198 34.6	45.9	335	02.7	29.0	158 34.9	05.3				
20	19	12.1	89 45.0	55.6	213 36.1	45.5	350	05.3	29.0	173 37.1	05.4				
21	34	14.5	104 44.2	55.3	228 37.7	45.2	5	07.9	28.9	188 39.4	05.5				
22	49	17.0	119 43.3	54.9	243 39.2	44.9	20	10.5	28.9	203 41.6	05.5				
23	64	19.5	134 42.4	54.6	258 40.8	44.6	35	13.1	28.9	218 43.9	05.6				
24	79	21.9	149 41.5	-23 54.2	273 42.3	+8 44.3	50	15.7	+10 28.8	233 46.1	-8 05.7				
Dif	—		-9	+3	+15	-3	+26		0	+22		-1			

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16'2 PMG: 11 ^h 53 ^m 1			Edad: 15 ^d 7 PHE { 4 ^h : 55'4 12 ^h : 55'6 20 ^h : 55'7 SD: 15'1 PMG: 0 ^h 13 ^m R°: 52 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m
0	181	47.2	-22	56.7	356	55.1	+22	27.0	60 N	6 59	7 55	8 52	15 50	73	9 30	35
1	196	46.9		57.0	11	23.8		25.7	58	51	44	35	16 07	70	9 13	37
2	211	46.6		57.2	25	52.6	98	24.3	56	45	34	21	22 68		8 59	38
3	226	46.3		57.4	40	21.3	97	22.8	54	39	25	8 08	34 66		46	40
4	241	46.0		57.6	54	50.1	98	21.2	52	33	17	7 58	45 65		35	41
5	256	45.8	-22	57.8	69	18.8	97	+22	50	6 28	7 10	7 48	16 54	64	8 26	42
6	271	45.5	-22	58.0	83	47.5	97	+22	45	6 17	6 54	7 28	17 15	61	8 05	44
7	286	45.2		58.2	98	16.3	98	15.6	40	6 07	41	7 11	31 60		7 48	46
8	301	44.9		58.5	112	45.0	97	13.5	35	5 58	29	6 57	45 58		34	47
9	316	44.6		58.7	127	13.7	97	11.3	30	49	19	45	17 57	57	22	47
10	331	44.3		58.9	141	42.4	97	09.0	20	33	6 01	25	18 18	55	7 01	49
11	346	44.0	-22	59.1	156	11.1	97	+22	10 N	5 17	5 44	6 06	18 35	54	6 42	51
12	1	43.8	-22	59.3	170	39.8	97	+22	0	5 01	5 27	5 49	18 52	52	6 25	52
13	16	43.5		59.5	185	08.5	97	+22	10 S	4 42	5 09	32	19 09	50	6 08	53
14	31	43.2		59.7	199	37.2	97	+21	20	4 20	4 49	5 14	27 48		5 50	54
15	46	42.9	-22	59.9	214	05.9	97	55.6	30	3 52	25	4 52	47 46		28	56
16	61	42.6	-23	00.1	228	34.6	97	52.5	35	33	4 10	39	19 59	45	16	56
17	76	42.3	-23	00.3	243	03.3	97	+21	40	3 11	3 52	4 25	20 13	43	5 02	57
18	91	42.0	-23	00.5	257	32.0	97	+21	45	2 41	3 30	4 07	20 29	41	4 44	59
19	106	41.8		00.7	272	00.8	98	42.7	50	1 57	3 01	3 45	49 39		23	61
20	121	41.5		00.9	286	29.5	97	39.3	52	1 32	2 47	35	20 59	37	13	62
21	136	41.2		01.1	300	58.2	97	35.6	54	0 52	29	23	21 09	36	4 02	62
22	151	40.9		01.3	315	27.0	98	31.9	56	** ** *	2 08	3 09	21 34		3 49	63
23	166	40.6		01.5	329	55.7	97	28.1	58	** ** *	1 40	2 53	35 32		34	65
24	181	40.3	-23	01.7	344	24.5	98	+21	60 S	** ** *	0 58	2 33	21 52	29	3 16	67

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG 18 ^h 39 ^m 5		Mag: -3.9 PMG: 14 ^h 02 ^m		Mag: +0.6 PMG: 5 ^h 45 ^m		Mag: -2.8 PMG: 20 ^h 35 ^m		Mag: +0.7 PMG: 8 ^h 24 ^m									
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	79	21.9	149	41.5	-23	54.2	273	42.3	+8	44.3	50	15.7	+10	28.8	233	46.1	-8	05.7
1	94	24.4	164	40.6		53.8	288	43.8		44.0	65	18.3		28.8	248	48.4		05.7
2	109	26.9	179	39.7		53.5	303	45.4		43.6	80	20.9		28.8	263	50.6		05.8
3	124	29.3	194	38.8		53.1	318	46.9		43.3	95	23.5		28.7	278	52.9		05.9
4	139	31.8	209	37.9		52.7	333	48.5		43.0	110	26.0		28.7	293	55.1		06.0
5	154	34.3	224	37.0	-23	52.4	348	50.0	+8	42.7	125	28.6	+10	28.7	308	57.4	-8	06.0
6	169	36.7	239	36.1	-23	52.0	3	51.6	+8	42.4	140	31.2	+10	28.6	323	59.6	-8	06.1
7	184	39.2	254	35.2		51.6	18	53.1		42.1	155	33.8		28.6	339	01.9		06.2
8	199	41.7	269	34.3		51.3	33	54.7		41.7	170	36.4		28.6	354	04.1		06.3
9	214	44.1	284	33.4		50.9	48	56.2		41.4	185	39.0		28.6	9	06.4		06.3
10	229	46.6	299	32.6		50.5	63	57.8		41.1	200	41.6		28.5	24	08.6		06.4
11	244	49.0	314	31.7	-23	50.1	78	59.3	+8	40.8	215	44.2	+10	28.5	39	10.9	-8	06.5
12	259	51.5	329	30.8	-23	49.7	94	00.9	+8	40.5	230	46.8	+10	28.5	54	13.1	-8	06.6
13	274	54.0	344	29.9		49.4	109	02.4		40.2	245	49.3		28.4	69	15.4		06.6
14	289	56.4	359	29.0		49.0	124	04.0		39.9	260	51.9		28.4	84	17.6		06.7
15	304	58.9	14	28.1		48.6	139	05.5		39.5	275	54.5		28.4	99	19.9		06.8
16	320	01.4	29	27.2		48.2	154	07.1		39.2	290	57.1		28.3	114	22.1		06.8
17	335	03.8	44	26.3	-23	47.8	169	08.6	+8	38.9	305	59.7	+10	28.3	129	24.4	-8	06.9
18	350	06.3	59	25.4	-23	47.4	184	10.2	+8	38.6	321	02.3	+10	28.3	144	26.6	-8	07.0
19	5	08.8	74	24.6		47.1	199	11.8		38.3	336	04.9		28.2	159	28.9		07.1
20	20	11.2	89	23.7		46.7	214	13.3		38.0	351	07.4		28.2	174	31.1		07.1
21	35	13.7	104	22.8		46.3	229	14.9		37.7	6	10.0		28.2	189	33.4		07.2
22	50	16.2	119	21.9		45.9	244	16.4		37.4	21	12.6		28.1	204	35.6		07.3
23	65	18.6	134	21.0		45.5	259	18.0		37.0	36	15.2		28.1	219	37.9		07.4
24	80	21.1	149	20.1	-23	45.1	274	19.5	+8	36.7	51	17.8	+10	28.1	234	40.1	-8	07.4
Dif	—		-9 +4		+16 -3		+26 0		+23 -1									

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16:2 PMG: 11 ^h 53 ^m 5			Edad: 16 ^d 7 PHE { 4 ^h : 55/9 12 ^h : 56/0 20 ^h : 56/2 SD: 15:2 PMG: 1 ^h 05 ^m R°: 51 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m
0	181	40.3	-23 01.7	344	24.5	+21 24.1	41	60 N	14 54	15 51	16 47	17 03 80	10 05 24	
1	196	40.0	01.9	358	53.2	97 20.0	41	58	15 11	16 02	16 54	17 78	9 50 28	
2	211	39.7	02.1	13	22.0	98 15.9	43	56	25	12	17 01	30 74	37 30	
3	226	39.5	02.3	27	50.8	98 11.6	45	54	38	21	07	40 73	26 32	
4	241	39.2	02.5	42	19.6	98 07.1	45	52	48	29	13	50 70	16 34	
5	256	38.9	-23 02.7	56	48.4	98 +21 02.6	45	50	15 58	16 36	17 18	17 58 69	9 08 35	
6	271	38.6	-23 02.9	71	17.2	98 +20 58.0	46	45	16 18	16 52	17 29	18 16 66	8 49 38	
7	286	38.3	03.1	85	46.0	98 53.2	48	40	35	17 05	39	31 63	34 40	
8	301	38.0	03.3	100	14.9	99 48.4	48	35	16 49	17	48	43 61	21 42	
9	316	37.7	03.5	114	43.8	99 43.4	50	30	17 01	27	17 57	18 54 59	8 09 44	
10	331	37.4	03.7	129	12.6	98 38.3	51	20	22	17 46	18 13	19 13 56	7 50 47	
11	346	37.1	-23 03.9	143	41.5	99 +20 33.1	52	10 N	17 40	18 03	18 29	19 29 53	7 33 49	
12	1	36.9	-23 04.1	158	10.5	100 +20 27.8	53	0	17 57	18 20	18 46	19 44 50	7 17 51	
13	16	36.6	04.2	172	39.4	99 22.3	55	10 S	18 15	38	19 05	19 59 48	7 01 53	
14	31	36.3	04.4	187	08.3	99 16.8	55	20	33	18 58	27	20 15 45	6 44 55	
15	46	36.0	04.6	201	37.3	100 11.2	56	30	18 55	19 22	19 56	33 42	24 58	
16	61	35.7	04.8	216	06.3	100 +20 05.4	58	35	19 08	37	20 14	44 40	6 12 60	
17	76	35.4	-23 05.0	230	35.3	100 +19 59.6	58	40	19 23	19 55	20 37	20 56 38	5 59 62	
18	91	35.1	-23 05.2	245	04.3	100 +19 53.6	60	45	19 40	20 18	21 07	21 10 36	5 43 64	
19	106	34.8	05.4	259	33.4	101 47.5	61	50	20 02	20 47	21 51	28 32	24 67	
20	121	34.5	05.5	274	02.5	101 41.3	62	52	13	21 01	22 17	36 30	15 68	
21	136	34.2	05.7	288	31.6	101 35.0	63	54	25	19	22 59	45 29	5 04 70	
22	151	34.0	05.9	303	00.7	101 28.6	64	56	39	21 40	** **	21 55 27	4 52 72	
23	166	33.7	06.1	317	29.8	101 22.1	65	58	20 55	22 09	** **	22 07 24	39 74	
24	181	33.4	-23 06.3	331	59.0	102 +19 15.5	66	60 S	21 15	22 54	** **	22 21 20	4 23 77	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 18 ^h 35 ^m 5		Mag: -3.9 PMG: 14 ^h 03 ^m			Mag: +0.6 PMG: 5 ^h 42 ^m			Mag: -2.8 PMG: 20 ^h 31 ^m			Mag: +0.7 PMG: 8 ^h 20 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	80	21.1	149 20.1	-23 45.1	274 19.5	+8 36.7	51 17.8	+10 28.1	234 40.1	-8 07.4				
1	95	23.5	164 19.2	44.7	289 21.1	36.4	66 20.4	28.1	249 42.4	07.5				
2	110	26.0	179 18.4	44.3	304 22.7	36.1	81 22.9	28.0	264 44.6	07.6				
3	125	28.5	194 17.5	43.9	319 24.2	35.8	96 25.5	28.0	279 46.9	07.6				
4	140	30.9	209 16.6	43.5	334 25.8	35.5	111 28.1	28.0	294 49.1	07.7				
5	155	33.4	224 15.7	-23 43.1	349 27.3	+8 35.2	126 30.7	+10 27.9	309 51.4	-8 07.8				
6	170	35.9	239 14.8	-23 42.7	4 28.9	+8 34.9	141 33.3	+10 27.9	324 53.6	-8 07.9				
7	185	38.3	254 13.9	42.3	19 30.5	34.6	156 35.8	27.9	339 55.9	07.9				
8	200	40.8	269 13.1	41.9	34 32.0	34.2	171 38.4	27.8	354 58.1	08.0				
9	215	43.3	284 12.2	41.5	49 33.6	33.9	186 41.0	27.8	10 00.4	08.1				
10	230	45.7	299 11.3	41.1	64 35.1	33.6	201 43.6	27.8	25 02.7	08.1				
11	245	48.2	314 10.4	-23 40.7	79 36.7	+8 33.3	216 46.2	+10 27.8	40 04.9	-8 08.2				
12	260	50.7	329 09.5	-23 40.3	94 38.3	+8 33.0	231 48.7	+10 27.7	55 07.2	-8 08.3				
13	275	53.1	344 08.7	39.9	109 39.8	32.7	246 51.3	27.7	70 09.4	08.4				
14	290	55.6	359 07.8	39.5	124 41.4	32.4	261 53.9	27.7	85 11.7	08.4				
15	305	58.0	14 06.9	39.1	139 43.0	32.1	276 56.5	27.6	100 13.9	08.5				
16	321	00.5	29 06.0	38.7	154 44.5	31.8	291 59.1	27.6	115 16.2	08.6				
17	336	03.0	44 05.1	-23 38.2	169 46.1	+8 31.5	307 01.6	+10 27.6	130 18.4	-8 08.7				
18	351	05.4	59 04.3	-23 37.8	184 47.7	+8 31.2	322 04.2	+10 27.6	145 20.7	-8 08.7				
19	6	07.9	74 03.4	37.4	199 49.2	30.8	337 06.8	27.5	160 22.9	08.8				
20	21	10.4	89 02.5	37.0	214 50.8	30.5	352 09.4	27.5	175 25.2	08.9				
21	36	12.8	104 01.6	36.6	229 52.4	30.2	7 11.9	27.5	190 27.4	08.9				
22	51	15.3	119 00.8	36.2	244 54.0	29.9	22 14.5	27.5	205 29.7	09.0				
23	66	17.8	133 59.9	35.7	259 55.5	29.6	37 17.1	27.4	220 31.9	09.1				
24	81	20.2	148 59.0	-23 35.3	274 57.1	+8 29.3	52 19.7	+10 27.4	235 34.2	-8 09.2				
Dif	—		-9	+4	+16	-3	+26	0	+23	-1				

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna						
	SD: 16/2 PMG: 11 ^h 54 ^m 0			Edad: 17 ^d 7 PHE { 4 ^h : 56/3 12 ^h : 56/5 20 ^h : 56/7 SD: 15/3 PMG: 1 ^h 56 ^m R°: 50 ^m															
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°				
h	°	'	°	°	'	°	°	'	°	h m	h m	h m	h m	m	h m	m			
0	181	33.4	-23	06.3	331	59.0	+19	15.5	60 N	7 01	7 57	8 54	18 23	85	10 29	18			
1	196	33.1		06.4	346	28.2		08.8	58	6 53	46	37	35	81	18	20			
2	211	32.8		06.6	0	57.4	+19	02.0	56	47	36	23	44	79	10 07	24			
3	226	32.5		06.8	15	26.6	+18	55.1	54	41	27	10	18 53	76	9 58	26			
4	241	32.2		07.0	29	55.9		48.1	52	35	19	8 00	19 00	74	50	28			
5	256	31.9	-23	07.1	44	25.2	+18	40.9	50	6 30	7 12	7 50	19 07	72	9 43	29			
6	271	31.6	-23	07.3	58	54.5	+18	33.7	45	6 19	6 56	7 29	19 22	68	9 27	33			
7	286	31.3		07.5	73	23.8		26.4	40	6 08	42	7 13	34	65	14	36			
8	301	31.0		07.7	87	53.2		19.0	35	5 59	31	6 59	44	63	9 03	39			
9	316	30.7		07.8	102	22.6		11.4	30	51	20	47	19 53	60	8 53	41			
10	331	30.4		08.0	116	52.0	+18	03.8	20	34	6 02	26	20 09	56	37	44			
11	346	30.2	-23	08.2	131	21.5	+17	56.1	10 N	5 18	5 45	6 07	20 22	53	8 22	47			
12	1	29.9	-23	08.4	145	51.0	+17	48.3	0	5 02	5 28	5 50	20 34	50	8 08	50			
13	16	29.6		08.5	160	20.5		40.3	10 S	4 43	5 10	33	20 47	46	7 54	53			
14	31	29.3		08.7	174	50.0		32.3	20	4 21	4 50	5 14	21 00	43	39	57			
15	46	29.0		08.9	189	19.5		24.2	30	3 52	25	4 52	15	40	22	60			
16	61	28.7		09.0	203	49.1		16.0	35	33	4 10	40	24	37	12	62			
17	76	28.4	-23	09.2	218	18.7	+17	07.7	40	3 11	3 52	4 25	21 34	34	7 01	64			
18	91	28.1	-23	09.4	232	48.4	+16	59.3	45	2 41	3 30	4 07	21 46	31	6 47	67			
19	106	27.8		09.5	247	18.1		50.8	50	1 56	3 01	3 45	22 00	27	31	70			
20	121	27.5		09.7	261	47.8		42.2	52	1 30	2 46	34	06	26	23	72			
21	136	27.2		09.9	276	17.5		33.6	54	0 48	29	22	14	23	14	75			
22	151	26.9		10.0	290	47.2		24.8	56	** **	2 07	3 08	22	21	6	04	77		
23	166	26.6		10.2	305	17.0		16.0	58	** **	1 39	2 52	31	18	5	53	80		
24	181	26.3	-23	10.3	319	46.8	+16	07.0	60 S	** **	0 53	2 32	22 41	16	5	40	83		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO							
	PMG: 18 ^h 31 ^m 6		Mag: -3.9 PMG: 14 ^h 05 ^m			Mag: +0.6 PMG: 5 ^h 40 ^m			Mag: -2.8 PMG: 20 ^h 27 ^m			Mag: +0.7 PMG: 8 ^h 16 ^m							
	hG ♈		hG ♀			hG ♂			hG ♃			hG ♄							
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°	°	'		
0	81	20.2	148	59.0	-23	35.3	274	57.1	+8	29.3	52	19.7	+10	27.4	235	34.2	-8	09.2	
1	96	22.7	163	58.1		34.9	289	58.7		29.0	67	22.2		27.4	250	36.5		09.2	
2	111	25.2	178	57.3		34.5	305	00.2		28.7	82	24.8		27.3	265	38.7		09.3	
3	126	27.6	193	56.4		34.0	320	01.8		28.4	97	27.4		27.3	280	41.0		09.4	
4	141	30.1	208	55.5		33.6	335	03.4		28.1	112	30.0		27.3	295	43.2		09.4	
5	156	32.5	223	54.6	-23	33.2	350	05.0	+8	27.8	127	32.5	+10	27.3	310	45.5	-8	09.5	
6	171	35.0	238	53.8	-23	32.7	5	06.5	+8	27.5	142	35.1	+10	27.2	325	47.7	-8	09.6	
7	186	37.5	253	52.9		32.3	20	08.1		27.2	157	37.7		27.2	340	50.0		09.6	
8	201	39.9	268	52.0		31.9	35	09.7		26.9	172	40.3		27.2	355	52.2		09.7	
9	216	42.4	283	51.1		31.5	50	11.3		26.6	187	42.8		27.2	10	54.5		09.8	
10	231	44.9	298	50.3		31.0	65	12.8		26.3	202	45.4		27.1	25	56.8		09.9	
11	246	47.3	313	49.4	-23	30.6	80	14.4	+8	26.0	217	48.0	+10	27.1	40	59.0	-8	09.9	
12	261	49.8	328	48.5	-23	30.1	95	16.0	+8	25.7	232	50.5	+10	27.1	56	01.3	-8	10.0	
13	276	52.3	343	47.7		29.7	110	17.6		25.3	247	53.1		27.1	71	03.5		10.1	
14	291	54.7	358	46.8		29.3	125	19.1		25.0	262	55.7		27.0	86	05.8		10.1	
15	306	57.2	13	45.9		28.8	140	20.7		24.7	277	58.2		27.0	101	08.0		10.2	
16	321	59.6	28	45.1		28.4	155	22.3		24.4	293	00.8		27.0	116	10.3		10.3	
17	337	02.1	43	44.2	-23	27.9	170	23.9	+8	24.1	308	03.4	+10	27.0	131	12.5	-8	10.4	
18	352	04.6	58	43.3	-23	27.5	185	25.5	+8	23.8	323	06.0	+10	26.9	146	14.8	-8	10.4	
19	7	07.0	73	42.5		27.0	200	27.1		23.5	338	08.5		26.9	161	17.1		10.5	
20	22	09.5	88	41.6		26.6	215	28.6		23.2	353	11.1		26.9	176	19.3		10.6	
21	37	12.0	103	40.7		26.2	230	30.2		22.9	8	13.7		26.9	191	21.6		10.6	
22	52	14.4	118	39.9		25.7	245	31.8		22.6	23	16.2		26.8	206	23.8		10.7	
23	67	16.9	133	39.0		25.3	260	33.4		22.3	38	18.8		26.8	221	26.1		10.8	
24	82	19.4	148	38.1	-23	24.8	275	35.0	+8	22.0	53	21.4	+10	26.8	236	28.3	-8	10.8	
Dif	—		-9			+4	+16			-3	+26		0		+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 5			Edad: 18 ^d 7 PHE { 4 ^h : 56/8 12 ^h : 57/0 20 ^h : 57/2 PMG: 2 ^h 46 ^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	181	26.3	-23	10.3	319	46.8	+16	07.0	60 N	14 53	15 50	16 47	19 48 87	10 47 14				
1	196	26.0		10.5	334	16.7 ¹⁰⁹	+15	58.0 ⁹⁰	58	15 10	16 02	16 54	19 56 83	38 17				
2	211	25.7		10.7	348	46.5 ¹⁰⁸		48.9 ⁹¹	56	25	12	17 01	20 03 80	31 19				
3	226	25.4		10.8	3	16.4 ¹⁰⁹		39.7 ⁹²	54	37	21	07	09 78	24 22				
4	241	25.1		11.0	17	46.4 ¹¹⁰		30.4 ⁹³	52	48	29	13	14 76	18 24				
5	256	24.9	-23	11.1	32	16.3 ¹⁰⁹	+15	21.0 ⁹⁴	50	15 58	16 36	17 18	20 19 74	10 12 26				
6	271	24.6	-23	11.3	46	46.3 ¹¹⁰	+15	11.5 ⁹⁵	45	16 19	16 52	17 30	20 30 70	10 00 30				
7	286	24.3		11.4	61	16.3 ¹¹⁰	+15	02.0 ⁹⁵	40	35	17 06	40	39 66	9 50 33				
8	301	24.0		11.6	75	46.3 ¹¹⁰	+14	52.4 ⁹⁶	35	16 49	17	49	47 63	42 35				
9	316	23.7		11.7	90	16.4 ¹¹¹		42.7 ⁹⁷	30	17 02	28	17 58	20 53 61	34 38				
10	331	23.4		11.9	104	46.5 ¹¹¹		32.9 ⁹⁸	20	23	17 47	18 14	21 05 56	21 42				
11	346	23.1	-23	12.1	119	16.6 ¹¹¹	+14	23.0 ⁹⁹	10 N	17 41	18 04	18 30	21 15 52	9 09 46				
12	1	22.8	-23	12.2	133	46.8 ¹¹²	+14	13.1 ⁹⁹	0	17 58	18 21	18 47	21 24 49	8 58 49				
13	16	22.5		12.4	148	16.9 ¹¹¹	+14	03.0 ¹⁰¹	10 S	18 16	39	19 06	33 45	47 53				
14	31	22.2		12.5	162	47.1 ¹¹²	+13	52.9 ¹⁰¹	20	34	18 59	28	43 41	36 56				
15	46	21.9		12.7	177	17.3 ¹¹²		42.7 ¹⁰²	30	18 56	19 24	19 57	21 55 36	22 60				
16	61	21.6		12.8	191	47.6 ¹¹³		32.5 ¹⁰²	35	19 09	39	20 16	22 01 34	14 63				
17	76	21.3	-23	12.9	206	17.9 ¹¹³	+13	22.2 ¹⁰³	40	19 24	19 57	20 38	22 08 32	8 05 65				
18	91	21.0	-23	13.1	220	48.2 ¹¹³	+13	11.7 ¹⁰⁵	45	19 42	20 19	21 09	22 17 28	7 54 69				
19	106	20.7		13.2	235	18.5 ¹¹³	+13	01.3 ¹⁰⁴	50	20 04	20 49	21 54	27 24	41 73				
20	121	20.4		13.4	249	48.8 ¹¹³	+12	50.7 ¹⁰⁶	52	15	21 04	22 21	32 22	35 75				
21	136	20.1		13.5	264	19.2 ¹¹⁴		40.1 ¹⁰⁶	54	27	21	23 04	37 20	29 77				
22	151	19.8		13.7	278	49.6 ¹¹⁴		29.4 ¹⁰⁷	56	41	21 43	** **	43 18	21 80				
23	166	19.5		13.8	293	20.0 ¹¹⁴		18.6 ¹⁰⁸	58	20 58	22 12	** **	49 16	13 82				
24	181	19.2	-23	14.0	307	50.5 ¹¹⁵	+12	07.8 ¹⁰⁸	60 S	21 18	22 59	** **	22 57 12	7 03 86				
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 18 ^h 27 ^m 7		Mag: -3.9 PMG: 14 ^h 06 ^m			Mag: +0.5 PMG: 5 ^h 37 ^m			Mag: -2.7 PMG: 20 ^h 23 ^m			Mag: +0.7 PMG: 8 ^h 13 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	82	19.4	148	38.1	-23	24.8	275	35.0	+8	22.0	53	21.4	+10	26.8	236	28.3	-8	10.8
1	97	21.8	163	37.3		24.3	290	36.6		21.7	68	23.9		26.8	251	30.6		10.9
2	112	24.3	178	36.4		23.9	305	38.1		21.4	83	26.5		26.7	266	32.8		11.0
3	127	26.8	193	35.5		23.4	320	39.7		21.1	98	29.1		26.7	281	35.1		11.1
4	142	29.2	208	34.7		23.0	335	41.3		20.8	113	31.6		26.7	296	37.4		11.1
5	157	31.7	223	33.8	-23	22.5	350	42.9	+8	20.5	128	34.2	+10	26.7	311	39.6	-8	11.2
6	172	34.1	238	32.9	-23	22.1	5	44.5	+8	20.2	143	36.8	+10	26.6	326	41.9	-8	11.3
7	187	36.6	253	32.1		21.6	20	46.1		19.9	158	39.3		26.6	341	44.1		11.3
8	202	39.1	268	31.2		21.1	35	47.7		19.6	173	41.9		26.6	356	46.4		11.4
9	217	41.5	283	30.4		20.7	50	49.3		19.3	188	44.5		26.6	11	48.7		11.5
10	232	44.0	298	29.5		20.2	65	50.8		19.0	203	47.0		26.5	26	50.9		11.5
11	247	46.5	313	28.6	-23	19.8	80	52.4	+8	18.7	218	49.6	+10	26.5	41	53.2	-8	11.6
12	262	48.9	328	27.8	-23	19.3	95	54.0	+8	18.4	233	52.1	+10	26.5	56	55.4	-8	11.7
13	277	51.4	343	26.9		18.8	110	55.6		18.1	248	54.7		26.5	71	57.7		11.8
14	292	53.9	358	26.1		18.4	125	57.2		17.8	263	57.3		26.5	86	59.9		11.8
15	307	56.3	13	25.2		17.9	140	58.8		17.5	278	59.8		26.4	102	02.2		11.9
16	322	58.8	28	24.3		17.4	156	00.4		17.2	294	02.4		26.4	117	04.5		12.0
17	338	01.3	43	23.5	-23	16.9	171	02.0	+8	16.9	309	05.0	+10	26.4	132	06.7	-8	12.0
18	353	03.7	58	22.6	-23	16.5	186	03.6	+8	16.6	324	07.5	+10	26.4	147	09.0	-8	12.1
19	8	06.2	73	21.8		16.0	201	05.2		16.3	339	10.1		26.3	162	11.2		12.2
20	23	08.6	88	20.9		15.5	216	06.8		16.0	354	12.6		26.3	177	13.5		12.2
21	38	11.1	103	20.1		15.0	231	08.4		15.7	9	15.2		26.3	192	15.8		12.3
22	53	13.6	118	19.2		14.6	246	10.0		15.4	24	17.8		26.3	207	18.0		12.4
23	68	16.0	133	18.3		14.1	261	11.6		15.2	39	20.3		26.3	222	20.3		12.4
24	83	18.5	148	17.5	-23	13.6	276	13.2	+8	14.9	54	22.9	+10	26.2	237	22.5	-8	12.5
Dif	—		-9 +5			+16 -3			+26 0			+23 -1						

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16'2			Edad: 19 ^d 7 PHE { 4 ^h : 57'3 12 ^h : 57'5 20 ^h : 57'7												
	PMG: 11 ^h 55 ^m 0			SD: 15'6 PMG: 3 ^h 36 ^m R°: 48 ^m												
	hG ☉		Dec	hG ☾		Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°
h	°	'	°	°	'		°	'	°	h	m	h	m	h	m	m
0	181	19.2	-23	14.0	307	50.5	+12	07.8	60 N	7	03	7	59	8	57	21 15 87
1	196	18.9		14.1	322	20.9 ¹¹⁴	+11	56.9 ¹⁰⁹	58	6	55	48	39	19	85	10 55 14
2	211	18.6		14.2	336	51.4 ¹¹⁵		45.9 ¹¹⁰	56		49	38	25	23	82	50 17
3	226	18.3		14.4	351	21.9 ¹¹⁵		34.9 ¹¹⁰	54		42	29	12	27	79	46 19
4	241	18.0		14.5	5	52.5 ¹¹⁶		23.8 ¹¹¹	52		37	21	8	01	30	77 42 21
5	256	17.7	-23	14.6	20	23.0 ¹¹⁵	+11	12.6 ¹¹²	50	6	32	7	13	7	52	21 33 75 10 38 23
6	271	17.4	-23	14.8	34	53.6 ¹¹⁶	+11	01.4 ¹¹²	45	6	20	6	57	7	31	21 40 70 10 30 27
7	286	17.1		14.9	49	24.2 ¹¹⁶	+10	50.1 ¹¹³	40		10	44	14	45	67	23 31
8	301	16.8		15.1	63	54.8 ¹¹⁶		38.7 ¹¹⁴	35	6	00	32	7	00	63	17 34
9	316	16.5		15.2	78	25.4 ¹¹⁶		27.3 ¹¹⁴	30	5	52	22	6	48	61	12 36
10	331	16.2		15.3	92	56.0 ¹¹⁶		15.8 ¹¹⁵	20		35	6	03	27	01	56 10 03 40
11	346	15.9	-23	15.5	107	26.7 ¹¹⁷	+10	04.3 ¹¹⁵	10 N	5	19	5	46	6	09	07 52 9 55 44
12	1	15.6	-23	15.6	121	57.4 ¹¹⁷	+9	52.7 ¹¹⁶	0	5	03	5	29	5	51	13 48 9 47 49
13	16	15.3		15.7	136	28.1 ¹¹⁷		41.0 ¹¹⁷	10 S	4	44	5	11	34	18	45 40 52
14	31	15.0		15.8	150	58.8 ¹¹⁷		29.3 ¹¹⁷	20	4	21	4	50	5	15	24 41 32 56
15	46	14.7		16.0	165	29.5 ¹¹⁷		17.5 ¹¹⁸	30	3	52	26	4	53	31	36 22 61
16	61	14.4		16.1	180	00.3 ¹¹⁸	+9	05.7 ¹¹⁸	35		34	4	10	40	35	33 17 63
17	76	14.1	-23	16.2	194	31.0 ¹¹⁷	+8	53.8 ¹¹⁹	40	3	11	3	52	4	25	40 30 9 10 67
18	91	13.8	-23	16.4	209	01.8 ¹¹⁸	+8	41.9 ¹¹⁹	45	2	41	3	30	4	07	45 27 9 03 70
19	106	13.5		16.5	223	32.5 ¹¹⁷		29.9 ¹²⁰	50	1	56	3	01	3	45	51 23 8 54 75
20	121	13.2		16.6	238	03.3 ¹¹⁸		17.9 ¹²⁰	52	1	29	2	46	34	54	21 50 77
21	136	12.9		16.7	252	34.1 ¹¹⁸	+8	05.8 ¹²¹	54	0	45	28	22	22	57 19 46 78	
22	151	12.6		16.9	267	04.9 ¹¹⁸	+7	53.7 ¹²¹	56	** ** *	2	06	3	08	23	01 16 41 81
23	166	12.3		17.0	281	35.8 ¹¹⁹		41.5 ¹²²	58	** ** *	1	37	2	52	05 13 35 84	
24	181	12.0	-23	17.1	296	06.6 ¹¹⁸	+7	29.3 ¹²²	60 S	** ** *	0	50	2	31	09 11 8 29 87	

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 18 ^h 23 ^m 7		Mag: -3.9 PMG: 14 ^h 08 ^m			Mag: +0.5 PMG: 5 ^h 35 ^m			Mag: -2.7 PMG: 20 ^h 19 ^m			Mag: +0.7 PMG: 8 ^h 09 ^m		
	hG ♈		hG ♀		Dec	hG ♂		Dec	hG ♃		Dec	hG ♄		Dec
h	°	'	°	'	°	°	'	°	'	°	'	°	'	°
0	83	18.5	148	17.5	-23	13.6	276	13.2	+8	14.9	54	22.9	+10	26.2
1	98	21.0	163	16.6		13.1	291	14.8		14.6	69	25.4		26.2
2	113	23.4	178	15.8		12.6	306	16.4		14.3	84	28.0		26.2
3	128	25.9	193	14.9		12.2	321	18.0		14.0	99	30.6		26.2
4	143	28.4	208	14.1		11.7	336	19.6		13.7	114	33.1		26.2
5	158	30.8	223	13.2	-23	11.2	351	21.2	+8	13.4	129	35.7	+10	26.1
6	173	33.3	238	12.4	-23	10.7	6	22.8	+8	13.1	144	38.2	+10	26.1
7	188	35.8	253	11.5		10.2	21	24.4		12.8	159	40.8		26.1
8	203	38.2	268	10.7		09.7	36	26.0		12.5	174	43.3		26.1
9	218	40.7	283	09.8		09.2	51	27.6		12.2	189	45.9		26.0
10	233	43.1	298	09.0		08.7	66	29.2		11.9	204	48.4		26.0
11	248	45.6	313	08.1	-23	08.2	81	30.8	+8	11.6	219	51.0	+10	26.0
12	263	48.1	328	07.3	-23	07.7	96	32.4	+8	11.3	234	53.6	+10	26.0
13	278	50.5	343	06.4		07.2	111	34.0		11.0	249	56.1		26.0
14	293	53.0	358	05.6		06.7	126	35.6		10.7	264	58.7		25.9
15	308	55.5	13	04.7		06.3	141	37.2		10.4	280	01.2		25.9
16	323	57.9	28	03.9		05.8	156	38.8		10.2	295	03.8		25.9
17	339	00.4	43	03.0	-23	05.3	171	40.4	+8	09.9	310	06.3	+10	25.9
18	354	02.9	58	02.2	-23	04.7	186	42.0	+8	09.6	325	08.9	+10	25.9
19	9	05.3	73	01.3		04.2	201	43.6		09.3	340	11.4		25.9
20	24	07.8	88	00.5		03.7	216	45.2		09.0	355	14.0		25.8
21	39	10.2	102	59.6		03.2	231	46.9		08.7	10	16.5		25.8
22	54	12.7	117	58.8		02.7	246	48.5		08.4	25	19.1		25.8
23	69	15.2	132	57.9		02.2	261	50.1		08.1	40	21.6		25.8
24	84	17.6	147	57.1	-23	01.7	276	51.7	+8	07.8	55	24.2	+10	25.8

Dif	—	-8	+5	+16	-3	+26	0	+23	-1

UT	SOL				☾ LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna		
	SD: 16:3 PMG: 11 ^h 55 ^m 4				Edad: 20 ^d 7 PHE { 4 ^h : 57/9 12 ^h : 58/0 20 ^h : 58/2 PMG: 4 ^h 24 ^m R°: 48 ^m													
	hG ☉	Dec	hG ☾	Dif	Dec	Dif	Civil	Náutico			Hora	R°	Hora	R°				
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m		
0	181	12.0	-23	17.1	296	06.6	+7	29.3	60 N	14 53	15 50	16 47	22 42 89	11 12 11				
1	196	11.7		17.2	310	37.4 ¹¹⁸		17.0 ¹²³	58	15 10	16 02	16 55	44 85	09 14				
2	211	11.4		17.3	325	08.3 ¹¹⁹	+7	04.7 ¹²³	56	25	12	17 01	45 83	07 16				
3	226	11.1		17.5	339	39.1 ¹¹⁸	+6	52.3 ¹²⁴	54	38	21	08	46 81	05 18				
4	241	10.8		17.6	354	10.0 ¹¹⁹		39.9 ¹²⁴	52	49	29	13	47 78	03 20				
5	256	10.5	-23	17.7	8	40.8 ¹¹⁸	+6	27.5 ¹²⁴	50	15 58	16 37	17 18	22 48 76	11 01 22				
6	271	10.2	-23	17.8	23	11.7 ¹¹⁹	+6	15.0 ¹²⁵	45	16 19	16 53	17 30	22 50 72	10 57 26				
7	286	09.9		17.9	37	42.6 ¹¹⁹	+6	02.5 ¹²⁵	40	36	17 06	40	52 68	54 29				
8	301	09.6		18.1	52	13.4 ¹¹⁸	+5	49.9 ¹²⁶	35	16 50	18	50	53 65	51 32				
9	316	09.3		18.2	66	44.3 ¹¹⁹		37.3 ¹²⁶	30	17 02	29	17 58	55 62	48 36				
10	331	09.0		18.3	81	15.2 ¹¹⁹		24.7 ¹²⁶	20	23	17 47	18 15	57 57	43 41				
11	346	08.7	-23	18.4	95	46.0 ¹¹⁸	+5	12.0 ¹²⁷	10 N	17 42	18 05	18 31	22 59 53	10 39 45				
12	1	08.4	-23	18.5	110	16.9 ¹¹⁹	+4	59.3 ¹²⁷	0	17 59	18 22	18 48	23 01 49	10 36 48				
13	16	08.1		18.6	124	47.8 ¹¹⁹		46.5 ¹²⁸	10 S	18 17	18 40	19 07	03 45	32 52				
14	31	07.8		18.7	139	18.6 ¹¹⁸		33.8 ¹²⁷	20	36	19 00	29	05 40	28 56				
15	46	07.5		18.8	153	49.5 ¹¹⁹		21.0 ¹²⁸	30	18 58	25	19 58	07 36	23 61				
16	61	07.2		18.9	168	20.4 ¹¹⁹	+4	08.1 ¹²⁹	35	19 11	40	20 17	08 34	20 64				
17	76	06.9	-23	19.1	182	51.2 ¹¹⁸	+3	55.2 ¹²⁹	40	19 26	19 58	20 40	23 10 30	10 17 67				
18	91	06.6	-23	19.2	197	22.1 ¹¹⁹	+3	42.3 ¹²⁹	45	19 43	20 21	21 10	23 12 26	10 13 71				
19	106	06.3		19.3	211	52.9 ¹¹⁸		29.4 ¹²⁹	50	20 06	20 50	21 56	14 22	09 75				
20	121	06.0		19.4	226	23.7 ¹¹⁸		16.5 ¹²⁹	52	17	21 05	22 23	15 20	07 77				
21	136	05.7		19.5	240	54.6 ¹¹⁹	+3	03.5 ¹³⁰	54	29	23	23 08	16 18	04 80				
22	151	05.4		19.6	255	25.4 ¹¹⁸	+2	50.5 ¹³⁰	56	20 43	21 45	** ** *	17 16	10 02 82				
23	166	05.1		19.7	269	56.2 ¹¹⁸		37.5 ¹³⁰	58	21 00	22 15	** ** *	18 14	9 59 85				
24	181	04.8	-23	19.8	284	27.0 ¹¹⁸	+2	24.4 ¹³¹	60 S	21 20	23 04	** ** *	23 20 10	9 56 88				
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 18 ^h 19 ^m 8		Mag: -3.9 PMG: 14 ^h 09 ^m				Mag: +0.5 PMG: 5 ^h 32 ^m				Mag: -2.7 PMG: 20 ^h 15 ^m				Mag: +0.7 PMG: 8 ^h 06 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	84	17.6	147	57.1	-23	01.7	276	51.7	+8	07.8	55	24.2	+10	25.8	238	16.8	-8	14.2
1	99	20.1	162	56.3		01.2	291	53.3		07.5	70	26.7		25.7	253	19.1		14.2
2	114	22.6	177	55.4		00.7	306	54.9		07.2	85	29.3		25.7	268	21.3		14.3
3	129	25.0	192	54.6	-23	00.2	321	56.5		07.0	100	31.8		25.7	283	23.6		14.4
4	144	27.5	207	53.7	-22	59.7	336	58.1		06.7	115	34.4		25.7	298	25.8		14.4
5	159	30.0	222	52.9	-22	59.2	351	59.8	+8	06.4	130	36.9	+10	25.7	313	28.1	-8	14.5
6	174	32.4	237	52.1	-22	58.6	7	01.4	+8	06.1	145	39.5	+10	25.7	328	30.4	-8	14.6
7	189	34.9	252	51.2		58.1	22	03.0		05.8	160	42.0		25.6	343	32.6		14.6
8	204	37.4	267	50.4		57.6	37	04.6		05.5	175	44.6		25.6	358	34.9		14.7
9	219	39.8	282	49.5		57.1	52	06.2		05.2	190	47.1		25.6	13	37.2		14.8
10	234	42.3	297	48.7		56.6	67	07.8		04.9	205	49.7		25.6	28	39.4		14.8
11	249	44.7	312	47.9	-22	56.0	82	09.5	+8	04.7	220	52.2	+10	25.6	43	41.7	-8	14.9
12	264	47.2	327	47.0	-22	55.5	97	11.1	+8	04.4	235	54.8	+10	25.6	58	43.9	-8	15.0
13	279	49.7	342	46.2		55.0	112	12.7		04.1	250	57.3		25.5	73	46.2		15.0
14	294	52.1	357	45.3		54.5	127	14.3		03.8	265	59.9		25.5	88	48.5		15.1
15	309	54.6	12	44.5		53.9	142	15.9		03.5	281	02.4		25.5	103	50.7		15.2
16	324	57.1	27	43.7		53.4	157	17.6		03.2	296	05.0		25.5	118	53.0		15.2
17	339	59.5	42	42.8	-22	52.9	172	19.2	+8	02.9	311	07.5	+10	25.5	133	55.3	-8	15.3
18	355	02.0	57	42.0	-22	52.3	187	20.8	+8	02.6	326	10.1	+10	25.5	148	57.5	-8	15.4
19	10	04.5	72	41.2		51.8	202	22.4		02.4	341	12.6		25.4	163	59.8		15.4
20	25	06.9	87	40.3		51.3	217	24.0		02.1	356	15.1		25.4	179	02.1		15.5
21	40	09.4	102	39.5		50.8	232	25.7		01.8	11	17.7		25.4	194	04.3		15.6
22	55	11.9	117	38.7		50.2	247	27.3		01.5	26	20.2		25.4	209	06.6		15.6
23	70	14.3	132	37.8		49.7	262	28.9		01.2	41	22.8		25.4	224	08.9		15.7
24	85	16.8	147	37.0	-22	49.1	277	30.5	+8	00.9	56	25.3	+10	25.4	239	11.1	-8	15.8
Dif	—		-8		+5		+16		-3		+25		0		+23		-1	

UT	SOL				☾ LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'3 PMG: 11 ^h 55 ^m 9				Edad: 21 ^d 7 PHE { 4 ^h : 58'4 12 ^h : 58'6 20 ^h : 58'7 PMG: 5 ^h 12 ^m R°: 49 ^m												
	hG ☉		Dec		hG ☾ Dif		Dec Dif			Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	181	04.8	-23	19.8	284	27.0	+2	24.4	60 N	7	04	8	01	8	59	** ** *	11 23 10
1	196	04.5		19.9	298	57.8 ¹¹⁸	+2	11.3 ¹³¹	58	6	57	7	49	41		** ** *	23 13
2	211	04.1		20.0	313	28.5 ¹¹⁷	+1	58.2 ¹³¹	56		50	39	27			** ** *	23 16
3	226	03.8		20.1	327	59.3 ¹¹⁸		45.1 ¹³¹	54		44	30	14			** ** *	23 19
4	241	03.5		20.2	342	30.0 ¹¹⁷		32.0 ¹³¹	52		38	22	8	03		** ** *	23 21
5	256	03.2	-23	20.3	357	00.7 ¹¹⁷	+1	18.9 ¹³¹	50	6	33	7	15	7	53	** ** *	11 23 23
6	271	02.9	-23	20.4	11	31.4 ¹¹⁷	+1	05.7 ¹³²	45	6	21	6	59	7	32	** ** *	11 23 27
7	286	02.6		20.5	26	02.1 ¹¹⁷	+0	52.5 ¹³²	40		11	45	16			** ** *	23 31
8	301	02.3		20.6	40	32.8 ¹¹⁷		39.3 ¹³²	35	6	02	33	7	02	23	58 66	23 34
9	316	02.0		20.7	55	03.5 ¹¹⁷		26.1 ¹³²	30	5	53	23	6	49	57	63	24 36
10	331	01.7		20.8	69	34.1 ¹¹⁶	+0	12.9 ¹³²	20		37	6	04	28	54	58	24 41
11	346	01.4	-23	20.9	84	04.7 ¹¹⁶	-0	00.3 ¹³²	10 N	5	20	5	47	6	10	23	52 54
12	1	01.1	-23	21.0	98	35.3 ¹¹⁶	-0	13.6 ¹³³	0	5	03	5	30	5	52	23	50 50
13	16	00.8		21.1	113	05.8 ¹¹⁵		26.8 ¹³²	10 S	4	45	5	12	35		48	46
14	31	00.5		21.1	127	36.4 ¹¹⁶		40.1 ¹³³	20	4	22	4	51	5	16	45	42
15	46	00.2		21.2	142	06.9 ¹¹⁵	-0	53.3 ¹³²	30	3	53	26	4	54	43	37	24 63
16	60	59.9		21.3	156	37.3 ¹¹⁴	-1	06.6 ¹³³	35		34	4	11	41		42	34
17	75	59.6	-23	21.4	171	07.8 ¹¹⁵	-1	19.9 ¹³³	40	3	11	3	53	4	26	23	40 31
18	90	59.3	-23	21.5	185	38.2 ¹¹⁴	-1	33.1 ¹³²	45	2	41	3	30	4	08	23	38 28
19	105	59.0		21.6	200	08.6 ¹¹⁴		46.4 ¹³³	50	1	56	3	01	3	45	36	24
20	120	58.7		21.7	214	39.0 ¹¹⁴	-1	59.7 ¹³³	52	1	28	2	46	35		35	22
21	135	58.4		21.8	229	09.3 ¹¹³	-2	12.9 ¹³²	54	0	43	28	22		34	20	24 81
22	150	58.0		21.8	243	39.6 ¹¹³		26.2 ¹³³	56	** ** *	2	06	3	08	33	17	24 84
23	165	57.7		21.9	258	09.9 ¹¹³		39.5 ¹³³	58	** ** *	1	36	2	51	32	14	24 87
24	180	57.4	-23	22.0	272	40.1 ¹¹²	-2	52.7 ¹³²	60 S	** ** *	0	47	2	31	23	30 12	11 24 90

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 18 ^h 15 ^m 9		Mag: -3.9 PMG: 14 ^h 10 ^m		Mag: +0.5 PMG: 5 ^h 29 ^m		Mag: -2.7 PMG: 20 ^h 11 ^m		Mag: +0.7 PMG: 8 ^h 02 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	85	16.8	147	37.0	277	30.5	+8	00.9	56	25.3
1	100	19.2	162	36.2	292	32.2		00.7	71	27.9
2	115	21.7	177	35.3	307	33.8		00.4	86	30.4
3	130	24.2	192	34.5	322	35.4	+8	00.1	101	32.9
4	145	26.6	207	33.7	337	37.1	+7	59.8	116	35.5
5	160	29.1	222	32.8	352	38.7	+7	59.5	131	38.0
6	175	31.6	237	32.0	7	40.3	+7	59.2	146	40.6
7	190	34.0	252	31.2	22	41.9		59.0	161	43.1
8	205	36.5	267	30.3	37	43.6		58.7	176	45.6
9	220	39.0	282	29.5	52	45.2		58.4	191	48.2
10	235	41.4	297	28.7	67	46.8		58.1	206	50.7
11	250	43.9	312	27.9	82	48.5	+7	57.8	221	53.3
12	265	46.3	327	27.0	97	50.1	+7	57.5	236	55.8
13	280	48.8	342	26.2	112	51.7		57.3	251	58.3
14	295	51.3	357	25.4	127	53.4		57.0	267	00.9
15	310	53.7	12	24.6	142	55.0		56.7	282	03.4
16	325	56.2	27	23.7	157	56.6		56.4	297	06.0
17	340	58.7	42	22.9	172	58.3	+7	56.1	312	08.5
18	356	01.1	57	22.1	187	59.9	+7	55.9	327	11.0
19	11	03.6	72	21.3	203	01.6		55.6	342	13.6
20	26	06.1	87	20.4	218	03.2		55.3	357	16.1
21	41	08.5	102	19.6	233	04.8		55.0	12	18.6
22	56	11.0	117	18.8	248	06.5		54.8	27	21.2
23	71	13.5	132	18.0	263	08.1		54.5	42	23.7
24	86	15.9	147	17.2	278	09.8	+7	54.2	57	26.2
Dif	—		-8 +6		+16 -3		+25 0		+23 -1	

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna				
	SD: 16:3 PMG: 11 ^h 56 ^m 4			Edad: 22 ^d 7 PHE { 4 ^h : 58'9 12 ^h : 59'1 20 ^h : 59'2 SD: 16:0 PMG: 6 ^h 01 ^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				
0	180	57.4	-23	22.0	272	40.1	-2	52.7	60 N	14 53	15 51	16 48	0 11 91	11 33 13				
1	195	57.1		22.1	287	10.3 ¹¹²	-3	06.0 ¹³³	58	15 11	16 02	16 55	09 88	36 16				
2	210	56.8		22.2	301	40.5 ¹¹²		19.2 ¹³²	56	25	13	17 02	08 85	39 18				
3	225	56.5		22.3	316	10.6 ¹¹¹		32.5 ¹³³	54	38	22	08	07 82	42 20				
4	240	56.2		22.3	330	40.7 ¹¹¹		45.7 ¹³²	52	49	30	14	05 80	44 22				
5	255	55.9	-23	22.4	345	10.7 ¹¹⁰	-3	58.9 ¹³²	50	15 59	16 37	17 19	0 04 78	11 46 24				
6	270	55.6	-23	22.5	359	40.7 ¹¹⁰	-4	12.1 ¹³²	45	16 20	16 54	17 31	0 02 73	11 50 29				
7	285	55.3		22.6	14	10.7 ¹¹⁰		25.3 ¹³²	40	36	17 07	41	0 00 69	54 32				
8	300	55.0		22.6	28	40.6 ¹⁰⁹		38.5 ¹³²	35	16 51	19	51	** ** *	11 57 36				
9	315	54.7		22.7	43	10.5 ¹⁰⁹	-4	51.7 ¹³²	30	17 03	29	17 59	** ** *	12 00 38				
10	330	54.4		22.8	57	40.4 ¹⁰⁹	-5	04.8 ¹³¹	20	24	17 48	18 16	** ** *	05 43				
11	345	54.1	-23	22.9	72	10.1 ¹⁰⁷	-5	17.9 ¹³¹	10 N	17 43	18 06	18 32	** ** *	12 09 47				
12	0	53.8	-23	22.9	86	39.9 ¹⁰⁸	-5	31.0 ¹³¹	0	18 00	18 23	18 49	** ** *	12 13 51				
13	15	53.5		23.0	101	09.6 ¹⁰⁷		44.1 ¹³¹	10 S	18	18 41	19 08	** ** *	17 55				
14	30	53.1		23.1	115	39.2 ¹⁰⁶	-5	57.2 ¹³¹	20	37	19 01	19 31	** ** *	22 59				
15	45	52.8		23.2	130	08.8 ¹⁰⁶	-6	10.2 ¹³⁰	30	18 59	26	20 00	** ** *	27 64				
16	60	52.5		23.2	144	38.4 ¹⁰⁶		23.3 ¹³¹	35	19 12	19 41	18	** ** *	29 68				
17	75	52.2	-23	23.3	159	07.9 ¹⁰⁵	-6	36.2 ¹²⁹	40	19 27	20 00	20 41	** ** *	12 33 70				
18	90	51.9	-23	23.4	173	37.3 ¹⁰⁴	-6	49.2 ¹³⁰	45	19 45	20 22	21 12	** ** *	12 36 75				
19	105	51.6		23.4	188	06.7 ¹⁰⁴	-7	02.1 ¹²⁹	50	20 07	20 52	21 58	** ** *	41 79				
20	120	51.3		23.5	202	36.1 ¹⁰⁴		15.1 ¹³⁰	52	18	21 07	22 25	23 57 24	43 81				
21	135	51.0		23.6	217	05.4 ¹⁰³		27.9 ¹²⁸	54	31	25	23 12	54 22	45 84				
22	150	50.7		23.6	231	34.6 ¹⁰²		40.8 ¹²⁹	56	20 45	21 47	** ** *	50 20	48 86				
23	165	50.4		23.7	246	03.8 ¹⁰²	-7	53.6 ¹²⁸	58	21 02	22 17	** ** *	46 17	51 89				
24	180	50.1	-23	23.8	260	32.9 ¹⁰¹	-8	06.4 ¹²⁸	60 S	21 22	23 08	** ** *	23 42 14	12 54 92				
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 18 ^h 11 ^m 9		Mag: -3.9 PMG: 14 ^h 12 ^m			Mag: +0.5 PMG: 5 ^h 27 ^m			Mag: -2.7 PMG: 20 ^h 07 ^m			Mag: +0.7 PMG: 7 ^h 58 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	86	15.9	147	17.2	-22	35.9	278	09.8	+7	54.2	57	26.2	+10	25.0	240	05.5	-8	17.3
1	101	18.4	162	16.3		35.3	293	11.4		53.9	72	28.8		25.0	255	07.8		17.4
2	116	20.8	177	15.5		34.8	308	13.0		53.6	87	31.3		25.0	270	10.0		17.5
3	131	23.3	192	14.7		34.2	323	14.7		53.4	102	33.8		25.0	285	12.3		17.5
4	146	25.8	207	13.9		33.6	338	16.3		53.1	117	36.4		25.0	300	14.6		17.6
5	161	28.2	222	13.1	-22	33.1	353	18.0	+7	52.8	132	38.9	+10	25.0	315	16.9	-8	17.7
6	176	30.7	237	12.2	-22	32.5	8	19.6	+7	52.5	147	41.4	+10	25.0	330	19.1	-8	17.7
7	191	33.2	252	11.4		31.9	23	21.3		52.3	162	44.0		24.9	345	21.4		17.8
8	206	35.6	267	10.6		31.3	38	22.9		52.0	177	46.5		24.9	0	23.7		17.9
9	221	38.1	282	09.8		30.8	53	24.5		51.7	192	49.0		24.9	15	25.9		17.9
10	236	40.6	297	09.0		30.2	68	26.2		51.4	207	51.6		24.9	30	28.2		18.0
11	251	43.0	312	08.2	-22	29.6	83	27.8	+7	51.2	222	54.1	+10	24.9	45	30.5	-8	18.1
12	266	45.5	327	07.3	-22	29.0	98	29.5	+7	50.9	237	56.6	+10	24.9	60	32.7	-8	18.1
13	281	48.0	342	06.5		28.5	113	31.1		50.6	252	59.2		24.9	75	35.0		18.2
14	296	50.4	357	05.7		27.9	128	32.8		50.3	268	01.7		24.9	90	37.3		18.3
15	311	52.9	12	04.9		27.3	143	34.4		50.1	283	04.2		24.9	105	39.5		18.3
16	326	55.3	27	04.1		26.7	158	36.1		49.8	298	06.8		24.9	120	41.8		18.4
17	341	57.8	42	03.3	-22	26.1	173	37.7	+7	49.5	313	09.3	+10	24.8	135	44.1	-8	18.4
18	357	00.3	57	02.5	-22	25.5	188	39.4	+7	49.2	328	11.8	+10	24.8	150	46.4	-8	18.5
19	12	02.7	72	01.7		25.0	203	41.0		49.0	343	14.3		24.8	165	48.6		18.6
20	27	05.2	87	00.8		24.4	218	42.7		48.7	358	16.9		24.8	180	50.9		18.6
21	42	07.7	102	00.0		23.8	233	44.3		48.4	13	19.4		24.8	195	53.2		18.7
22	57	10.1	116	59.2		23.2	248	46.0		48.1	28	21.9		24.8	210	55.4		18.8
23	72	12.6	131	58.4		22.6	263	47.7		47.9	43	24.4		24.8	225	57.7		18.8
24	87	15.1	146	57.6	-22	22.0	278	49.3	+7	47.6	58	27.0	+10	24.8	241	00.0	-8	18.9
Dif	—		-8 +6			+16 -3			+25 0			+23 -1						

UT	SOL			 LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 16'3 PMG: 11 ^h 56 ^m 9			Edad: 23 ^d 7 PHE { 4 ^h : 59'4 12 ^h : 59'5 20 ^h : 59'6 SD: 16'1 PMG: 6 ^h 52 ^m R°: 53 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	h	m
0	180	50.1	-23	23.8	260	32.9	-8	06.4	60 N	7 06	8 03	9 00	1 42	94	11 46	15		
1	195	49.8		23.8	275	02.0 ¹⁰¹		19.1 ¹²⁷	58	6 58	7 51	8 43	37	90	52	19		
2	210	49.5		23.9	289	31.0 ¹⁰⁰		31.8 ¹²⁷	56		52	41	28	33	87	11	57	22
3	225	49.1		23.9	303	59.9 ⁹⁹		44.4 ¹²⁶	54		45	32	15	29	84	12	02	24
4	240	48.8		24.0	318	28.8 ⁹⁹	-8	57.1 ¹²⁷	52		40	23	8	04	25	82	06	27
5	255	48.5	-23	24.1	332	57.6 ⁹⁸	-9	09.6 ¹²⁵	50	6 34	7 16	7 54	1 22	80	12 10	29		
6	270	48.2	-23	24.1	347	26.4 ⁹⁸	-9	22.2 ¹²⁶	45	6 23	7 00	7 34	1 15	75	12 19	33		
7	285	47.9		24.2	1	55.1 ⁹⁷		34.7 ¹²⁵	40		12	6 46	17	09	72	26	37	
8	300	47.6		24.2	16	23.7 ⁹⁶		47.1 ¹²⁴	35	6 03	35	7 03	04	68	33	39		
9	315	47.3		24.3	30	52.3 ⁹⁶	-9	59.5 ¹²⁴	30	5 54	24	6 50	1	00	65	38	42	
10	330	47.0		24.4	45	20.8 ⁹⁵	-10	11.8 ¹²³	20		38	6 05	29	0	52	61	48	47
11	345	46.7	-23	24.4	59	49.3 ⁹⁵	-10	24.1 ¹²³	10 N	5 21	5 48	6 11	0	46	56	12	56	51
12	0	46.4	-23	24.5	74	17.7 ⁹⁴	-10	36.4 ¹²³	0	5 04	5 31	5 53	0	40	52	13	04	55
13	15	46.1		24.5	88	46.0 ⁹³	-10	48.6 ¹²²	10 S	4 45	5 12	5 36	34	49	21	58		
14	30	45.7		24.6	103	14.2 ⁹²	-11	00.7 ¹²¹	20	4 23	4 52	5 17	27	45	21	62		
15	45	45.4		24.6	117	42.4 ⁹²		12.8 ¹²¹	30	3 54	27	4 55	20	40	31	66		
16	60	45.1		24.7	132	10.5 ⁹¹		24.8 ¹²⁰	35	35	4 12	42	16	38	37	68		
17	75	44.8	-23	24.7	146	38.6 ⁹¹	-11	36.8 ¹²⁰	40	3 12	3 54	4 26	0	11	35	13	43	72
18	90	44.5	-23	24.8	161	06.5 ⁸⁹	-11	48.6 ¹¹⁸	45	2 41	3 31	4 08	0	06	31	13	51	75
19	105	44.2		24.8	175	34.4 ⁸⁹	-12	00.5 ¹¹⁹	50	1 56	3 01	3 46	0	00	26	14	00	80
20	120	43.9		24.9	190	02.3 ⁸⁹		12.3 ¹¹⁸	52	1 28	2 46	35	**	**	**	04	82	
21	135	43.6		24.9	204	30.0 ⁸⁷		24.0 ¹¹⁷	54	0 42	28	23	**	**	**	09	84	
22	150	43.3		25.0	218	57.7 ⁸⁷		35.6 ¹¹⁶	56	** **	2 06	3 08	**	**	**	14	87	
23	165	43.0		25.0	233	25.3 ⁸⁶		47.2 ¹¹⁶	58	** **	1 36	2 52	**	**	**	20	90	
24	180	42.7	-23	25.0	247	52.9 ⁸⁶	-12	58.7 ¹¹⁵	60 S	** **	0 46	2 31	23	56	18	14	26	94
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 18 ^h 08 ^m 0		Mag: -3.9 PMG: 14 ^h 13 ^m				Mag: +0.4 PMG: 5 ^h 24 ^m				Mag: -2.7 PMG: 20 ^h 03 ^m				Mag: +0.7 PMG: 7 ^h 55 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	87	15.1	146	57.6	-22	22.0	278	49.3	+7	47.6	58	27.0	+10	24.8	241	00.0	-8	18.9
1	102	17.5	161	56.8		21.4	293	51.0		47.3	73	29.5		24.8	256	02.2		19.0
2	117	20.0	176	56.0		20.8	308	52.6		47.1	88	32.0		24.8	271	04.5		19.0
3	132	22.4	191	55.2		20.2	323	54.3		46.8	103	34.6		24.7	286	06.8		19.1
4	147	24.9	206	54.4		19.6	338	55.9		46.5	118	37.1		24.7	301	09.1		19.1
5	162	27.4	221	53.6	-22	19.0	353	57.6	+7	46.2	133	39.6	+10	24.7	316	11.3	-8	19.2
6	177	29.8	236	52.8	-22	18.4	8	59.3	+7	46.0	148	42.1	+10	24.7	331	13.6	-8	19.3
7	192	32.3	251	52.0		17.8	24	00.9		45.7	163	44.7		24.7	346	15.9		19.3
8	207	34.8	266	51.2		17.2	39	02.6		45.4	178	47.2		24.7	1	18.1		19.4
9	222	37.2	281	50.4		16.6	54	04.2		45.2	193	49.7		24.7	16	20.4		19.5
10	237	39.7	296	49.6		16.0	69	05.9		44.9	208	52.2		24.7	31	22.7		19.5
11	252	42.2	311	48.8	-22	15.4	84	07.6	+7	44.6	223	54.7	+10	24.7	46	25.0	-8	19.6
12	267	44.6	326	47.9	-22	14.8	99	09.2	+7	44.4	238	57.3	+10	24.7	61	27.2	-8	19.7
13	282	47.1	341	47.1		14.2	114	10.9		44.1	253	59.8		24.7	76	29.5		19.7
14	297	49.6	356	46.3		13.6	129	12.6		43.8	269	02.3		24.7	91	31.8		19.8
15	312	52.0	11	45.5		13.0	144	14.2		43.5	284	04.8		24.7	106	34.0		19.8
16	327	54.5	26	44.7		12.4	159	15.9		43.3	299	07.4		24.6	121	36.3		19.9
17	342	56.9	41	43.9	-22	11.8	174	17.6	+7	43.0	314	09.9	+10	24.6	136	38.6	-8	20.0
18	357	59.4	56	43.1	-22	11.1	189	19.2	+7	42.7	329	12.4	+10	24.6	151	40.9	-8	20.0
19	13	01.9	71	42.3		10.5	204	20.9		42.5	344	14.9		24.6	166	43.1		20.1
20	28	04.3	86	41.5		09.9	219	22.6		42.2	359	17.4		24.6	181	45.4		20.2
21	43	06.8	101	40.8		09.3	234	24.2		41.9	14	20.0		24.6	196	47.7		20.2
22	58	09.3	116	40.0		08.7	249	25.9		41.7	29	22.5		24.6	211	50.0		20.3
23	73	11.7	131	39.2		08.1	264	27.6		41.4	44	25.0		24.6	226	52.2		20.3
24	88	14.2	146	38.4	-22	07.4	279	29.2	+7	41.1	59	27.5	+10	24.6	241	54.5	-8	20.4
Dif	—		-8		+6		+17		-3		+25		0		+23		-1	

UT	SOL			☉ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16:3 PMG: 11 ^h 57 ^m 4			Edad: 24 ^d 7 PHE { 4 ^h : 59'8 12 ^h : 59'9 20 ^h : 59'9 SD: 16:3 PMG: 7 ^h 45 ^m R°: 57 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m m	h m m	h m m
0	180	42.7	-23	25.0	247	52.9	-12	58.7	60 N	14 54	15 51	16 48	3 16 95	12 01 22
1	195	42.3		25.1	262	20.3	84	-13 10.1	58	15 11	16 03	16 56	07 91	11 25
2	210	42.0		25.1	276	47.7	84	21.5	56	26	13	17 03	3 00 88	19 28
3	225	41.7		25.2	291	15.0	83	32.7	54	39	23	09	2 53 85	26 31
4	240	41.4		25.2	305	42.3	83	43.9	52	15 50	31	15	47 83	33 33
5	255	41.1	-23	25.3	320	09.5	82	-13 55.1	50	16 00	16 38	17 20	2 42 80	12 39 35
6	270	40.8	-23	25.3	334	36.6	81	-14 06.1	45	16 20	16 54	17 32	2 30 76	12 52 39
7	285	40.5		25.3	349	03.6	80	17.1	40	37	17 08	42	21 72	13 03 42
8	300	40.2		25.4	3	30.5	79	28.0	35	16 51	20	17 51	12 70	12 45
9	315	39.9		25.4	17	57.4	79	38.8	30	17 04	30	18 00	2 05 67	20 48
10	330	39.6		25.4	32	24.2	78	-14 49.5	20	25	17 49	17	1 53 63	35 51
11	345	39.2	-23	25.5	46	50.9	77	-15 00.1	10 N	17 44	18 07	18 33	1 42 60	13 47 54
12	0	38.9	-23	25.5	61	17.5	76	-15 10.7	0	18 01	18 24	18 50	1 32 56	13 59 57
13	15	38.6		25.5	75	44.1	76	21.1	10 S	19	18 42	19 09	23 52	14 10 61
14	30	38.3		25.6	90	10.6	75	31.5	20	18 38	19 02	19 32	12 49	23 63
15	45	38.0		25.6	104	37.0	74	41.8	30	19 00	27	20 01	1 00 45	37 68
16	60	37.7		25.6	119	03.3	73	-15 52.0	35	13	19 43	19	0 54 42	45 70
17	75	37.4	-23	25.7	133	29.6	73	-16 02.0	40	19 28	20 01	20 43	0 46 39	14 55 72
18	90	37.1	-23	25.7	147	55.8	72	-16 12.0	45	19 46	20 23	21 13	0 37 36	15 06 76
19	105	36.8		25.7	162	21.9	71	21.9	50	20 09	20 53	21 59	26 32	20 79
20	120	36.5		25.8	176	47.9	70	31.7	52	19	21 08	22 27	21 30	26 82
21	135	36.1		25.8	191	13.9	70	41.4	54	32	26	23 14	16 27	33 84
22	150	35.8		25.8	205	39.7	68	-16 51.0	56	20 46	21 49	** ** *	10 25	41 86
23	165	35.5		25.8	220	05.5	68	-17 00.4	58	21 03	22 19	** ** *	0 03 22	15 50 89
24	180	35.2	-23	25.9	234	31.3	68	-17 09.8	60 S	21 23	23 10	** ** *	** ** *	16 00 93
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 18 ^h 04 ^m 1		Mag: -3.9 PMG: 14 ^h 14 ^m		Mag: +0.4 PMG: 5 ^h 21 ^m		Mag: -2.7 PMG: 19 ^h 59 ^m		Mag: +0.7 PMG: 7 ^h 51 ^m					
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	88	14.2	146	38.4	279	29.2	59	27.5	241	54.5				
1	103	16.7	161	37.6	294	30.9	74	30.0	256	56.8				
2	118	19.1	176	36.8	309	32.6	89	32.5	271	59.1				
3	133	21.6	191	36.0	324	34.2	104	35.1	287	01.3				
4	148	24.1	206	35.2	339	35.9	119	37.6	302	03.6				
5	163	26.5	221	34.4	354	37.6	134	40.1	317	05.9				
6	178	29.0	236	33.6	9	39.3	149	42.6	332	08.1				
7	193	31.4	251	32.8	24	40.9	164	45.1	347	10.4				
8	208	33.9	266	32.0	39	42.6	179	47.6	2	12.7				
9	223	36.4	281	31.2	54	44.3	194	50.2	17	15.0				
10	238	38.8	296	30.4	69	46.0	209	52.7	32	17.2				
11	253	41.3	311	29.6	84	47.6	224	55.2	47	19.5				
12	268	43.8	326	28.9	99	49.3	239	57.7	62	21.8				
13	283	46.2	341	28.1	114	51.0	255	00.2	77	24.1				
14	298	48.7	356	27.3	129	52.7	270	02.7	92	26.3				
15	313	51.2	11	26.5	144	54.4	285	05.2	107	28.6				
16	328	53.6	26	25.7	159	56.0	300	07.8	122	30.9				
17	343	56.1	41	24.9	174	57.7	315	10.3	137	33.2				
18	358	58.5	56	24.1	189	59.4	330	12.8	152	35.4				
19	14	01.0	71	23.3	205	01.1	345	15.3	167	37.7				
20	29	03.5	86	22.6	220	02.8	0	17.8	182	40.0				
21	44	05.9	101	21.8	235	04.5	15	20.3	197	42.3				
22	59	08.4	116	21.0	250	06.1	30	22.8	212	44.6				
23	74	10.9	131	20.2	265	07.8	45	25.3	227	46.8				
24	89	13.3	146	19.4	280	09.5	60	27.8	242	49.1				
Dif	—		-8		+6		+25		+23					
							0		-1					

UT	SOL			 LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 16'3 PMG: 11 ^h 57 ^m 9			Edad: 25 ^d 7 PHE { 4 ^h : 60'0 12 ^h : 60'1 20 ^h : 60'1 SD: 16'3 PMG: 8 ^h 42 ^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	180	35.2	-23	25.9	234	31.3	-17	09.8	60 N	7 07	8 04	9 02	4 51	90	12 23	33		
1	195	34.9		25.9	248	56.9	66	19.1	58	7 00	7 52	8 44	38 87		36 36			
2	210	34.6		25.9	263	22.5	66	28.2	56	6 53	42	29	28 84		47 39			
3	225	34.3		25.9	277	48.0	65	37.3	54	47	33	17	18 82		12 57	41		
4	240	34.0		25.9	292	13.4	64	46.2	52	41	25	8 06	10 79		13 06	43		
5	255	33.7	-23	26.0	306	38.8	64	-17 55.0	50	6 36	7 17	7 56	4 02	78	13 14	44		
6	270	33.3	-23	26.0	321	04.1	63	-18 03.7	45	6 24	7 01	7 35	3 46	75	13 31	47		
7	285	33.0		26.0	335	29.3	62	12.3	40	13	6 47	18	33 72		45 50			
8	300	32.7		26.0	349	54.4	61	20.8	35	6 04	36	7 04	22 70		13 57	52		
9	315	32.4		26.0	4	19.5	61	29.2	30	5 55	25	6 51	3 12	68	14 08	53		
10	330	32.1		26.1	18	44.5	60	37.4	20	39	6 06	30	2 56	64	26 55			
11	345	31.8	-23	26.1	33	09.4	59	-18 45.5	10 N	5 22	5 49	6 12	2 42	61	14 41	58		
12	0	31.5	-23	26.1	47	34.2	58	-18 53.5	0	5 05	5 32	5 54	2 28	59	14 56	60		
13	15	31.2		26.1	61	59.0	58	-19 01.4	10 S	4 46	5 13	37	15 56		15 11	62		
14	30	30.9		26.1	76	23.7	57	09.1	20	4 24	4 53	5 18	2 01	53	26 65			
15	45	30.5		26.1	90	48.4	57	16.7	30	3 55	28	4 55	1 45	50	45 67			
16	60	30.2		26.1	105	13.0	56	24.2	35	36	4 13	42	36 48		15 55	69		
17	75	29.9	-23	26.1	119	37.5	55	-19 31.6	40	3 13	3 54	4 27	1 25	46	16 07	71		
18	90	29.6	-23	26.2	134	01.9	54	-19 38.8	45	2 42	3 32	4 09	1 13	43	16 22	72		
19	105	29.3		26.2	148	26.3	54	45.9	50	1 56	3 02	3 47	0 58	39	39 75			
20	120	29.0		26.2	162	50.7	54	52.8	52	1 28	2 47	36	51 38		48 76			
21	135	28.7		26.2	177	14.9	52	-19 59.7	54	0 41	29	23	43 36		16 57	78		
22	150	28.4		26.2	191	39.1	52	-20 06.3	56	** **	2 06	3 09	35 33		17 07	80		
23	165	28.1		26.2	206	03.3	52	12.9	58	** **	1 36	2 52	25 31		19 83			
24	180	27.7	-23	26.2	220	27.4	51	-20 19.3	60 S	** **	0 45	2 32	0 14	27	17 33	86		
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 18 ^h 00 ^m 2		Mag: -3.9 PMG: 14 ^h 15 ^m				Mag: +0.4 PMG: 5 ^h 19 ^m				Mag: -2.7 PMG: 19 ^h 55 ^m				Mag: +0.7 PMG: 7 ^h 48 ^m			
	hG ♈		hG ♀	Dec			hG ♂	Dec			hG ♃	Dec			hG ♄	Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	89	13.3	146	19.4	-21	52.2	280	09.5	+7	34.9	60	27.8	+10	24.5	242	49.1	-8	21.9
1	104	15.8	161	18.6		51.6	295	11.2		34.6	75	30.4		24.5	257	51.4		22.0
2	119	18.3	176	17.9		51.0	310	12.9		34.3	90	32.9		24.5	272	53.7		22.0
3	134	20.7	191	17.1		50.3	325	14.6		34.1	105	35.4		24.5	287	55.9		22.1
4	149	23.2	206	16.3		49.7	340	16.3		33.8	120	37.9		24.5	302	58.2		22.1
5	164	25.7	221	15.5	-21	49.0	355	18.0	+7	33.6	135	40.4	+10	24.5	318	00.5	-8	22.2
6	179	28.1	236	14.7	-21	48.4	10	19.6	+7	33.3	150	42.9	+10	24.5	333	02.8	-8	22.3
7	194	30.6	251	14.0		47.7	25	21.3		33.1	165	45.4		24.5	348	05.0		22.3
8	209	33.0	266	13.2		47.0	40	23.0		32.8	180	47.9		24.5	3	07.3		22.4
9	224	35.5	281	12.4		46.4	55	24.7		32.5	195	50.4		24.5	18	09.6		22.5
10	239	38.0	296	11.6		45.7	70	26.4		32.3	210	52.9		24.5	33	11.9		22.5
11	254	40.4	311	10.8	-21	45.1	85	28.1	+7	32.0	225	55.4	+10	24.5	48	14.2	-8	22.6
12	269	42.9	326	10.1	-21	44.4	100	29.8	+7	31.8	240	57.9	+10	24.5	63	16.4	-8	22.6
13	284	45.4	341	09.3		43.8	115	31.5		31.5	256	00.4		24.5	78	18.7		22.7
14	299	47.8	356	08.5		43.1	130	33.2		31.3	271	03.0		24.5	93	21.0		22.8
15	314	50.3	11	07.7		42.4	145	34.9		31.0	286	05.5		24.5	108	23.3		22.8
16	329	52.8	26	07.0		41.8	160	36.6		30.8	301	08.0		24.4	123	25.5		22.9
17	344	55.2	41	06.2	-21	41.1	175	38.3	+7	30.5	316	10.5	+10	24.4	138	27.8	-8	22.9
18	359	57.7	56	05.4	-21	40.4	190	40.0	+7	30.2	331	13.0	+10	24.4	153	30.1	-8	23.0
19	15	00.2	71	04.6		39.8	205	41.7		30.0	346	15.5		24.4	168	32.4		23.1
20	30	02.6	86	03.9		39.1	220	43.4		29.7	1	18.0		24.4	183	34.7		23.1
21	45	05.1	101	03.1		38.4	235	45.1		29.5	16	20.5		24.4	198	36.9		23.2
22	60	07.5	116	02.3		37.8	250	46.8		29.2	31	23.0		24.4	213	39.2		23.2
23	75	10.0	131	01.6		37.1	265	48.5		29.0	46	25.5		24.4	228	41.5		23.3
24	90	12.5	146	00.8	-21	36.4	280	50.2	+7	28.7	61	28.0	+10	24.4	243	43.8	-8	23.4
Dif	—		-8		+7		+17		-3		+25		0		+23		-1	

UT	SOL				● LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna		
	SD: 16:3 PMG: 11 ^h 58 ^m 4				Edad: 26 ^d 7 PHE { 4 ^h : 60 ^l 1 12 ^h : 60 ^l 1 20 ^h : 60 ^l 1 PMG: 9 ^h 42 ^m R°: 61 ^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	
0	180	27.7	-23	26.2	220	27.4	-20	19.3	60 N	14 55	15 52	16 49	6 21	79	12 56	49		
1	195	27.4		26.2	234	51.4		25.6	58	15 12	16 04	16 57	6 05	77	13 12	51		
2	210	27.1		26.2	249	15.4		31.7	56	27	14	17 04	5 52	74	26	52		
3	225	26.8		26.2	263	39.3		37.7	54	40	23	10	40	73	38	53		
4	240	26.5		26.2	278	03.2		43.6	52	15 51	32	15	29	73	49	54		
5	255	26.2	-23	26.2	292	27.0	-20	49.3	50	16 01	16 39	17 21	5 20	72	13 58	55		
6	270	25.9	-23	26.2	306	50.8	-20	54.9	45	16 21	16 55	17 33	5 01	69	14 18	57		
7	285	25.6		26.2	321	14.5	-21	00.3	40	38	17 09	43	4 45	68	35	57		
8	300	25.2		26.2	335	38.1		05.6	35	16 52	21	17 52	32	66	14 49	58		
9	315	24.9		26.2	350	01.8		10.7	30	17 05	31	18 01	20	66	15 01	59		
10	330	24.6		26.2	4	25.4		15.7	20	26	17 50	18	4 00	64	21	60		
11	345	24.3	-23	26.2	18	48.9	-21	20.5	10 N	17 45	18 08	18 34	3 43	63	15 39	61		
12	0	24.0	-23	26.2	33	12.4	-21	25.2	0	18 02	18 25	18 51	3 27	61	15 56	62		
13	15	23.7		26.2	47	35.9		29.7	10 S	20	18 43	19 10	3 11	60	16 13	62		
14	30	23.4		26.2	61	59.3		34.1	20	18 39	19 03	19 33	2 54	58	31	63		
15	45	23.1		26.2	76	22.7		38.3	30	19 01	28	20 02	35	56	16 52	63		
16	60	22.8		26.2	90	46.0		42.4	35	14	19 44	20	24	55	17 04	64		
17	75	22.4	-23	26.2	105	09.3	-21	46.3	40	19 29	20 02	20 44	2 11	54	17 18	64		
18	90	22.1	-23	26.1	119	32.6	-21	50.1	45	19 47	20 25	21 14	1 56	52	17 34	66		
19	105	21.8		26.1	133	55.9		53.7	50	20 10	20 54	22 00	37	50	17 54	67		
20	120	21.5		26.1	148	19.1	-21	57.1	52	21	21 09	22 28	29	48	18 04	67		
21	135	21.2		26.1	162	42.3	-22	00.5	54	33	28	23 15	19	47	15	67		
22	150	20.9		26.1	177	05.5		03.6	56	20 47	21 50	** ** *	1 08	45	27	68		
23	165	20.6		26.1	191	28.7		06.6	58	21 04	22 20	** ** *	0 56	43	42	68		
24	180	20.3	-23	26.1	205	51.8	-22	09.4	60 S	21 25	23 11	** ** *	0 41	41	18 59	69		
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 17 ^h 56 ^m 2		Mag: -3.9 PMG: 14 ^h 17 ^m				Mag: +0.4 PMG: 5 ^h 16 ^m				Mag: -2.7 PMG: 19 ^h 51 ^m				Mag: +0.7 PMG: 7 ^h 44 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	90	12.5	146	00.8	-21	36.4	280	50.2	+7	28.7	61	28.0	+10	24.4	243	43.8	-8	23.4
1	105	14.9	161	00.0		35.7	295	51.9		28.5	76	30.5		24.4	258	46.1		23.4
2	120	17.4	175	59.3		35.1	310	53.6		28.2	91	33.0		24.4	273	48.3		23.5
3	135	19.9	190	58.5		34.4	325	55.3		28.0	106	35.5		24.4	288	50.6		23.5
4	150	22.3	205	57.7		33.7	340	57.0		27.7	121	38.0		24.4	303	52.9		23.6
5	165	24.8	220	57.0	-21	33.0	355	58.7	+7	27.5	136	40.5	+10	24.4	318	55.2	-8	23.7
6	180	27.3	235	56.2	-21	32.4	11	00.4	+7	27.2	151	43.0	+10	24.4	333	57.5	-8	23.7
7	195	29.7	250	55.4		31.7	26	02.1		27.0	166	45.5		24.5	348	59.7		23.8
8	210	32.2	265	54.7		31.0	41	03.8		26.7	181	48.0		24.5	4	02.0		23.8
9	225	34.7	280	53.9		30.3	56	05.5		26.5	196	50.5		24.5	19	04.3		23.9
10	240	37.1	295	53.1		29.6	71	07.2		26.2	211	53.0		24.5	34	06.6		24.0
11	255	39.6	310	52.4	-21	29.0	86	08.9	+7	26.0	226	55.5	+10	24.5	49	08.9	-8	24.0
12	270	42.0	325	51.6	-21	28.3	101	10.7	+7	25.7	241	58.0	+10	24.5	64	11.1	-8	24.1
13	285	44.5	340	50.8		27.6	116	12.4		25.5	257	00.5		24.5	79	13.4		24.1
14	300	47.0	355	50.1		26.9	131	14.1		25.2	272	03.0		24.5	94	15.7		24.2
15	315	49.4	10	49.3		26.2	146	15.8		25.0	287	05.5		24.5	109	18.0		24.3
16	330	51.9	25	48.6		25.5	161	17.5		24.7	302	08.0		24.5	124	20.3		24.3
17	345	54.4	40	47.8	-21	24.8	176	19.2	+7	24.5	317	10.5	+10	24.5	139	22.5	-8	24.4
18	0	56.8	55	47.0	-21	24.1	191	20.9	+7	24.2	332	13.0	+10	24.5	154	24.8	-8	24.4
19	15	59.3	70	46.3		23.4	206	22.6		24.0	347	15.5		24.5	169	27.1		24.5
20	31	01.8	85	45.5		22.8	221	24.4		23.7	2	17.9		24.5	184	29.4		24.5
21	46	04.2	100	44.8		22.1	236	26.1		23.5	17	20.4		24.5	199	31.7		24.6
22	61	06.7	115	44.0		21.4	251	27.8		23.3	32	22.9		24.5	214	34.0		24.7
23	76	09.2	130	43.2		20.7	266	29.5		23.0	47	25.4		24.5	229	36.2		24.7
24	91	11.6	145	42.5	-21	20.0	281	31.2	+7	22.8	62	27.9	+10	24.5	244	38.5	-8	24.8
Dif	—		-8		+7		+17		-2		+25		0		+23		-1	

UT	SOL				● LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 16'3 PMG: 11 ^h 58 ^m 9				Edad: 27 ^d 7 PHE { 4 ^h : 60'0 12 ^h : 59'9 20 ^h : 59'8 R°: 61 ^m															
	hG ☉		Dec		hG ☾		Dif			Dec			Dif		Náutico		Civil		Hora	
h	°	'	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m
0	180	20.3	-23	26.1	205	51.8	-22	09.4	27	60 N	7 08	8 05	9 03	7 40	59	13 45	68			
1	195	19.9		26.0	220	15.0		12.1	27	58	7 00	7 53	8 45		22 59	14 03	67			
2	210	19.6		26.0	234	38.1	41	14.6	25	56	6 54	43	30	7 06	60	18	67			
3	225	19.3		26.0	249	01.2	41	17.0	24	54	48	34	18	6 53	60	31	67			
4	240	19.0		26.0	263	24.3	41	19.2	22	52	42	26	8 07	42	60	43	66			
5	255	18.7	-23	26.0	277	47.3	40	-22	21.2	50	6 37	7 18	7 57	6 32	60	14 53	66			
6	270	18.4	-23	26.0	292	10.4	41	-22	23.1	45	6 25	7 02	7 36	6 10	61	15 15	64			
7	285	18.1		25.9	306	33.5	41	24.8	17	40	14	6 48	19	5 53	61	32	64			
8	300	17.8		25.9	320	56.5	40	26.4	16	35	6 05	37	7 05	38	61	15 47	63			
9	315	17.5		25.9	335	19.6	41	27.8	14	30	5 56	26	6 52	26	61	16 00	63			
10	330	17.1		25.9	349	42.6	40	29.0	12	20	40	6 07	31	5 04	62	21	62			
11	345	16.8	-23	25.8	4	05.7	41	-22	30.1	10 N	5 23	5 50	6 13	4 46	61	16 40	62			
12	0	16.5	-23	25.8	18	28.8	41	-22	31.0	0	5 06	5 33	5 55	4 28	62	16 58	60			
13	15	16.2		25.8	32	51.9	41	31.8	8	10 S	4 47	5 14	38	4 11	61	17 15	60			
14	30	15.9		25.8	47	14.9	40	32.4	6	20	4 25	4 54	5 19	3 52	62	34	59			
15	45	15.6		25.7	61	38.0	41	32.9	5	30	3 56	29	4 56	31	61	17 55	59			
16	60	15.3		25.7	76	01.1	41	33.1	2	35	37	4 14	43	19	61	18 08	58			
17	75	15.0	-23	25.7	90	24.3	42	-22	33.3	40	3 14	3 55	4 28	3 05	61	18 22	57			
18	90	14.6	-23	25.7	104	47.4	41	-22	33.2	45	2 43	3 33	4 10	2 48	61	18 40	56			
19	105	14.3		25.6	119	10.6	42	33.0	2	50	1 57	3 03	3 48	27	60	19 01	54			
20	120	14.0		25.6	133	33.7	41	32.7	3	52	1 29	2 48	37	17	60	11	54			
21	135	13.7		25.6	147	56.9	42	32.2	5	54	0 42	30	24	2 06	60	22	53			
22	150	13.4		25.5	162	20.2	43	31.5	7	56	** **	2 07	3 10	1 53	60	35	52			
23	165	13.1		25.5	176	43.4	42	30.7	8	58	** **	1 37	2 53	39	59	19 50	51			
24	180	12.8	-23	25.5	191	06.7	43	-22	29.7	60 S	** **	0 46	2 33	1 22	58	20 08	49			
UT	ARIES				VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 17 ^h 52 ^m 3				Mag: -3.9 PMG: 14 ^h 18 ^m				Mag: +0.4 PMG: 5 ^h 13 ^m				Mag: -2.7 PMG: 19 ^h 47 ^m				Mag: +0.7 PMG: 7 ^h 40 ^m			
	hG ♈		Dec		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	91	11.6	145	42.5	-21	20.0			281	31.2	+7	22.8	62	27.9	+10	24.5	244	38.5	-8	24.8
1	106	14.1	160	41.7		19.3			296	32.9		22.5	77	30.4		24.5	259	40.8		24.8
2	121	16.5	175	41.0		18.6			311	34.7		22.3	92	32.9		24.5	274	43.1		24.9
3	136	19.0	190	40.2		17.9			326	36.4		22.0	107	35.4		24.5	289	45.4		25.0
4	151	21.5	205	39.5		17.2			341	38.1		21.8	122	37.9		24.5	304	47.7		25.0
5	166	23.9	220	38.7	-21	16.5			356	39.8	+7	21.5	137	40.4	+10	24.5	319	49.9	-8	25.1
6	181	26.4	235	38.0	-21	15.8			11	41.5	+7	21.3	152	42.9	+10	24.5	334	52.2	-8	25.1
7	196	28.9	250	37.2		15.1			26	43.3		21.1	167	45.4		24.5	349	54.5		25.2
8	211	31.3	265	36.5		14.3			41	45.0		20.8	182	47.9		24.5	4	56.8		25.3
9	226	33.8	280	35.7		13.6			56	46.7		20.6	197	50.3		24.5	19	59.1		25.3
10	241	36.3	295	35.0		12.9			71	48.4		20.3	212	52.8		24.5	35	01.4		25.4
11	256	38.7	310	34.2	-21	12.2			86	50.2	+7	20.1	227	55.3	+10	24.5	50	03.6	-8	25.4
12	271	41.2	325	33.5	-21	11.5			101	51.9	+7	19.8	242	57.8	+10	24.5	65	05.9	-8	25.5
13	286	43.6	340	32.7		10.8			116	53.6		19.6	258	00.3		24.5	80	08.2		25.5
14	301	46.1	355	32.0		10.1			131	55.3		19.4	273	02.8		24.5	95	10.5		25.6
15	316	48.6	10	31.2		09.4			146	57.1		19.1	288	05.3		24.5	110	12.8		25.7
16	331	51.0	25	30.5		08.7			161	58.8		18.9	303	07.8		24.6	125	15.1		25.7
17	346	53.5	40	29.7	-21	07.9			177	00.5	+7	18.6	318	10.3	+10	24.6	140	17.3	-8	25.8
18	1	56.0	55	29.0	-21	07.2			192	02.3	+7	18.4	333	12.7	+10	24.6	155	19.6	-8	25.8
19	16	58.4	70	28.2		06.5			207	04.0		18.2	348	15.2		24.6	170	21.9		25.9
20	32	00.9	85	27.5		05.8			222	05.7		17.9	3	17.7		24.6	185	24.2		25.9
21	47	03.4	100	26.7		05.1			237	07.5		17.7	18	20.2		24.6	200	26.5		26.0
22	62	05.8	115	26.0		04.3			252	09.2		17.4	33	22.7		24.6	215	28.8		26.1
23	77	08.3	130	25.3		03.6			267	10.9		17.2	48	25.2		24.6	230	31.1		26.1
24	92	10.8	145	24.5	-21	02.9			282	12.7	+7	17.0	63	27.7	+10	24.6	245	33.3	-8	26.2
Dif	—		-7		+7		+17		-2		+25		0		+23		-1			

UT	SOL				● LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna		
	SD: 16'3 PMG: 11 ^h 59 ^m 4				Edad: 28 ^d 7 PHE { 4 ^h : 59'7 12 ^h : 59'5 20 ^h : 59'3 Rº: 59 ^m													
	hG ☉		Dec		hG ☾		Dif				Civil			Náutico			Hora Rº	
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m		
0	180	12.8	-23	25.5	191	06.7	-22	29.7	60 N	14 56	15 54	16 50	8 39 40	14 53 82				
1	195	12.5		25.4	205	30.0	43	28.6	58	15 13	16 05	16 58	21 43	15 10 80				
2	210	12.1		25.4	219	53.4	44	27.3	56	28	16	17 05	8 06 45	25 77				
3	225	11.8		25.4	234	16.8	44	25.8	54	41	25	11	7 53 46	38 75				
4	240	11.5		25.3	248	40.2	44	24.2	52	15 52	33	17	42 48	49 74				
5	255	11.2	-23	25.3	263	03.6	44	-22 22.4	50	16 02	16 40	17 22	7 32 49	15 59 72				
6	270	10.9	-23	25.2	277	27.1	45	-22 20.5	45	16 23	16 56	17 34	7 11 51	16 19 70				
7	285	10.6		25.2	291	50.7	46	18.4	40	39	17 10	44	6 54 52	36 68				
8	300	10.3		25.2	306	14.3	46	16.2	35	16 54	22	17 53	39 54	16 50 66				
9	315	10.0		25.1	320	37.9	46	13.8	30	17 06	32	18 02	27 55	17 03 64				
10	330	09.7		25.1	335	01.6	47	11.3	20	27	17 51	19	6 06 56	23 63				
11	345	09.3	-23	25.0	349	25.3	47	-22 08.6	10 N	17 46	18 09	18 35	5 47 58	17 42 60				
12	0	09.0	-23	25.0	3	49.1	48	-22 05.8	0	18 03	18 26	18 52	5 30 59	17 58 59				
13	15	08.7		24.9	18	13.0	49	-22 02.8	10 S	21	18 44	19 11	5 12 61	18 15 56				
14	30	08.4		24.9	32	36.9	49	-21 59.7	20	18 40	19 04	19 34	4 54 62	33 54				
15	45	08.1		24.8	47	00.8	49	56.4	30	19 02	29	20 03	32 64	18 54 51				
16	60	07.8		24.8	61	24.8	50	53.0	35	15	19 45	21	20 65	19 06 50				
17	75	07.5	-23	24.8	75	48.9	51	-21 49.4	40	19 30	20 03	20 44	4 06 66	19 19 49				
18	90	07.2	-23	24.7	90	13.0	51	-21 45.7	45	19 48	20 25	21 15	3 49 67	19 36 46				
19	105	06.8		24.7	104	37.2	52	41.9	50	20 10	20 55	22 01	27 70	19 55 44				
20	120	06.5		24.6	119	01.5	53	37.9	52	21	21 10	22 29	17 71	20 05 42				
21	135	06.2		24.6	133	25.8	53	33.7	54	34	28	23 15	3 06 71	15 40				
22	150	05.9		24.5	147	50.2	54	29.4	56	20 48	21 51	** **	2 53 73	27 38				
23	165	05.6		24.4	162	14.7	55	25.0	58	21 05	22 20	** **	38 74	41 36				
24	180	05.3	-23	24.4	176	39.2	55	-21 20.5	60 S	21 25	23 11	** **	2 20 76	20 57 33				
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 17 ^h 48 ^m 4		Mag: -3.9 PMG: 14 ^h 19 ^m				Mag: +0.4 PMG: 5 ^h 11 ^m				Mag: -2.7 PMG: 19 ^h 43 ^m				Mag: +0.7 PMG: 7 ^h 37 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	92	10.8	145	24.5	-21	02.9	282	12.7	+7	17.0	63	27.7	+10	24.6	245	33.3	-8	26.2
1	107	13.2	160	23.8		02.2	297	14.4		16.7	78	30.1		24.6	260	35.6		26.2
2	122	15.7	175	23.0		01.5	312	16.1		16.5	93	32.6		24.6	275	37.9		26.3
3	137	18.1	190	22.3	-21	00.7	327	17.9		16.3	108	35.1		24.6	290	40.2		26.4
4	152	20.6	205	21.5	-21	00.0	342	19.6		16.0	123	37.6		24.6	305	42.5		26.4
5	167	23.1	220	20.8	-20	59.3	357	21.3	+7	15.8	138	40.1	+10	24.6	320	44.8	-8	26.5
6	182	25.5	235	20.1	-20	58.5	12	23.1	+7	15.5	153	42.6	+10	24.6	335	47.1	-8	26.5
7	197	28.0	250	19.3		57.8	27	24.8		15.3	168	45.0		24.6	350	49.3		26.6
8	212	30.5	265	18.6		57.1	42	26.6		15.1	183	47.5		24.7	5	51.6		26.6
9	227	32.9	280	17.9		56.3	57	28.3		14.8	198	50.0		24.7	20	53.9		26.7
10	242	35.4	295	17.1		55.6	72	30.0		14.6	213	52.5		24.7	35	56.2		26.8
11	257	37.9	310	16.4	-20	54.9	87	31.8	+7	14.4	228	55.0	+10	24.7	50	58.5	-8	26.8
12	272	40.3	325	15.6	-20	54.1	102	33.5	+7	14.1	243	57.5	+10	24.7	66	00.8	-8	26.9
13	287	42.8	340	14.9		53.4	117	35.3		13.9	258	59.9		24.7	81	03.1		26.9
14	302	45.3	355	14.2		52.7	132	37.0		13.7	274	02.4		24.7	96	05.4		27.0
15	317	47.7	10	13.4		51.9	147	38.8		13.4	289	04.9		24.7	111	07.6		27.0
16	332	50.2	25	12.7		51.2	162	40.5		13.2	304	07.4		24.7	126	09.9		27.1
17	347	52.6	40	12.0	-20	50.5	177	42.3	+7	13.0	319	09.9	+10	24.7	141	12.2	-8	27.1
18	2	55.1	55	11.2	-20	49.7	192	44.0	+7	12.7	334	12.3	+10	24.7	156	14.5	-8	27.2
19	17	57.6	70	10.5		49.0	207	45.8		12.5	349	14.8		24.7	171	16.8		27.3
20	33	00.0	85	09.8		48.2	222	47.5		12.3	4	17.3		24.8	186	19.1		27.3
21	48	02.5	100	09.1		47.5	237	49.3		12.0	19	19.8		24.8	201	21.4		27.4
22	63	05.0	115	08.3		46.7	252	51.0		11.8	34	22.2		24.8	216	23.7		27.4
23	78	07.4	130	07.6		46.0	267	52.8		11.6	49	24.7		24.8	231	25.9		27.5
24	93	09.9	145	06.9	-20	45.2	282	54.5	+7	11.3	64	27.2	+10	24.8	246	28.2	-8	27.5
Dif	—		-7		+7		+17		-2		+25		0		+23		-1	

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 16:3 PMG: 11 ^h 59 ^m 9			Edad: 0 ^d 2 PHE { 4 ^h : 59:1 12 ^h : 58:9 20 ^h : 58:7 R°: 55 ^m PMG: 12 ^h 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	05.3	-23	24.4	176	39.2	-21	20.5	60 N	7 09	8 06	9 03	9 19	25	16 15	88		
1	195	05.0		24.3	191	03.8	56	15.8	58	7 01	7 54	8 46	9 04	29	30	84		
2	210	04.7		24.3	205	28.5	57	10.9	56	6 54	44	31	8 51	32	42	82		
3	225	04.4		24.2	219	53.3	58	06.0	54	48	35	18	39	35	16 53	79		
4	240	04.0		24.2	234	18.1	58	-21 00.9	52	43	26	8 07	30	36	17 03	76		
5	255	03.7	-23	24.1	248	43.0	59	-20 55.6	50	6 37	7 19	7 57	8 21	38	17 11	75		
6	270	03.4	-23	24.0	263	08.0	60	-20 50.3	45	6 26	7 03	7 37	8 02	41	17 29	71		
7	285	03.1		24.0	277	33.1	61	44.8	40	15	6 49	20	7 46	44	44	68		
8	300	02.8		23.9	291	58.2	61	39.1	35	6 06	38	7 06	33	46	17 56	66		
9	315	02.5		23.9	306	23.4	62	33.4	30	5 57	27	6 53	22	48	18 07	64		
10	330	02.2		23.8	320	48.7	63	27.5	20	41	6 08	32	7 02	51	26	60		
11	345	01.9	-23	23.7	335	14.1	64	-20 21.5	10 N	5 24	5 51	6 14	6 45	54	18 42	57		
12	0	01.6	-23	23.7	349	39.6	65	-20 15.4	0	5 07	5 34	5 56	6 29	56	18 57	54		
13	15	01.2		23.6	4	05.2	66	09.1	10 S	4 48	5 15	39	6 13	59	19 11	52		
14	30	00.9		23.5	18	30.8	66	-20 02.7	20	4 26	4 55	5 20	5 56	61	27	49		
15	45	00.6		23.5	32	56.6	68	-19 56.3	30	3 57	30	4 58	36	65	45	45		
16	60	00.3		23.4	47	22.4	68	49.6	35	38	4 15	45	25	66	19 56	43		
17	75	00.0	-23	23.3	61	48.3	69	-19 42.9	40	3 15	3 57	4 29	5 12	68	20 08	40		
18	89	59.7	-23	23.3	76	14.3	70	-19 36.1	45	2 44	3 34	4 11	4 56	71	20 22	37		
19	104	59.4		23.2	90	40.4	71	29.1	50	1 59	3 04	3 49	37	74	39	33		
20	119	59.1		23.1	105	06.6	72	22.0	52	1 31	2 49	38	28	75	47	32		
21	134	58.8		23.1	119	32.9	73	14.8	54	0 44	31	26	17	78	20 55	30		
22	149	58.4		23.0	133	59.3	74	07.5	56	** **	2 09	3 11	4 06	79	21 05	28		
23	164	58.1		22.9	148	25.7	74	-19 00.1	58	** **	1 39	2 55	3 52	83	17	25		
24	179	57.8	-23	22.8	162	52.3	76	-18 52.6	60 S	** **	0 48	2 34	3 36	86	21 30	21		
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 17 ^h 44 ^m 4		Mag: -3.9 PMG: 14 ^h 20 ^m				Mag: +0.3 PMG: 5 ^h 08 ^m				Mag: -2.7 PMG: 19 ^h 39 ^m				Mag: +0.7 PMG: 7 ^h 33 ^m			
h	°	'	hG ♈	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec						
0	93	09.9	145	06.9	-20	45.2	282	54.5	+7	11.3	64	27.2	+10	24.8	246	28.2	-8	27.5
1	108	12.4	160	06.1		44.5	297	56.3		11.1	79	29.7		24.8	261	30.5		27.6
2	123	14.8	175	05.4		43.7	312	58.0		10.9	94	32.1		24.8	276	32.8		27.7
3	138	17.3	190	04.7		43.0	327	59.8		10.7	109	34.6		24.8	291	35.1		27.7
4	153	19.8	205	04.0		42.2	343	01.5		10.4	124	37.1		24.8	306	37.4		27.8
5	168	22.2	220	03.2	-20	41.5	358	03.3	+7	10.2	139	39.6	+10	24.8	321	39.7	-8	27.8
6	183	24.7	235	02.5	-20	40.7	13	05.0	+7	10.0	154	42.0	+10	24.8	336	42.0	-8	27.9
7	198	27.1	250	01.8		40.0	28	06.8		09.7	169	44.5		24.9	351	44.3		27.9
8	213	29.6	265	01.1		39.2	43	08.5		09.5	184	47.0		24.9	6	46.6		28.0
9	228	32.1	280	00.3		38.5	58	10.3		09.3	199	49.5		24.9	21	48.8		28.0
10	243	34.5	294	59.6		37.7	73	12.1		09.1	214	51.9		24.9	36	51.1		28.1
11	258	37.0	309	58.9	-20	37.0	88	13.8	+7	08.8	229	54.4	+10	24.9	51	53.4	-8	28.2
12	273	39.5	324	58.2	-20	36.2	103	15.6	+7	08.6	244	56.9	+10	24.9	66	55.7	-8	28.2
13	288	41.9	339	57.5		35.4	118	17.3		08.4	259	59.4		24.9	81	58.0		28.3
14	303	44.4	354	56.7		34.7	133	19.1		08.1	275	01.8		24.9	97	00.3		28.3
15	318	46.9	9	56.0		33.9	148	20.9		07.9	290	04.3		24.9	112	02.6		28.4
16	333	49.3	24	55.3		33.1	163	22.6		07.7	305	06.8		25.0	127	04.9		28.4
17	348	51.8	39	54.6	-20	32.4	178	24.4	+7	07.5	320	09.2	+10	25.0	142	07.2	-8	28.5
18	3	54.3	54	53.9	-20	31.6	193	26.1	+7	07.2	335	11.7	+10	25.0	157	09.5	-8	28.5
19	18	56.7	69	53.1		30.8	208	27.9		07.0	350	14.2		25.0	172	11.8		28.6
20	33	59.2	84	52.4		30.1	223	29.7		06.8	5	16.7		25.0	187	14.0		28.7
21	49	01.6	99	51.7		29.3	238	31.4		06.6	20	19.1		25.0	202	16.3		28.7
22	64	04.1	114	51.0		28.5	253	33.2		06.3	35	21.6		25.0	217	18.6		28.8
23	79	06.6	129	50.3		27.8	268	35.0		06.1	50	24.1		25.0	232	20.9		28.8
24	94	09.0	144	49.6	-20	27.0	283	36.7	+7	05.9	65	26.5	+10	25.0	247	23.2	-8	28.9
Dif	—		-7		+8		+18		-2		+25		0		+23		-1	

ALMANAQUE NÁUTICO PERSEUS

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16:3 PMG: 12 ^h 00 ^m 9			Edad: 2 ^d 2 PHE { 4 ^h : 57/6 12 ^h : 57/4 20 ^h : 57/1 R°: 47 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m
0	179	50.4	-23	20.8	149	58.0	-15	23.8	60 N	7 09	8 06	9 04	10 02	13	19 10	85
1	194	50.1		20.7	164	26.9	99	14.1	58	7 02	7 54	8 46	9 54	15	18 81	
2	209	49.8		20.6	178	55.9	100		56	6 55	44	32	46	19	24 79	
3	224	49.5		20.6	193	25.0	101	-14	54	49	35	19	40	21	30 76	
4	239	49.1		20.5	207	54.2	102		52	43	27	8 08	34	23	35 74	
5	254	48.8	-23	20.4	222	23.5	103	-14	34	6 38	7 20	7 58	9 29	24	19 40	72
6	269	48.5	-23	20.3	236	52.9	104	-14	24	6 26	7 04	7 37	9 17	29	19 50	68
7	284	48.2		20.2	251	22.4	105		40	16	6 50	21	9 07	32	19 59	64
8	299	47.9		20.1	265	52.0	106	-14	04	6 07	38	7 06	8 59	35	20 06	61
9	314	47.6		20.0	280	21.6	106	-13	53	5 58	28	6 54	52	37	12 59	
10	329	47.3		19.9	294	51.4	108		43	42	6 09	33	39	42	23 54	
11	344	47.0	-23	19.8	309	21.2	108	-13	33	5 25	5 52	6 15	8 28	45	20 32	51
12	359	46.7	-23	19.7	323	51.1	109	-13	22	5 08	5 35	5 57	8 18	48	20 41	47
13	14	46.4		19.6	338	21.1	110		10 S	4 49	5 17	40	8 07	52	50 43	
14	29	46.1		19.4	352	51.2	111	-13	01	4 27	4 56	5 21	7 56	56	20 59	40
15	44	45.7		19.3	7	21.4	112	-12	51	3 58	31	4 59	43	60	21 10	35
16	59	45.4		19.2	21	51.7	113		40	39	4 16	46	36	62	16 33	
17	74	45.1	-23	19.1	36	22.1	114	-12	29	3 16	3 58	4 31	7 27	65	21 22	31
18	89	44.8	-23	19.0	50	52.5	114	-12	18	2 46	3 35	4 13	7 17	69	21 30	27
19	104	44.5		18.9	65	23.1	116	-12	08	2 00	3 06	3 50	05	73	40 23	
20	119	44.2		18.8	79	53.7	116	-11	57	1 33	2 51	39	7 00	74	44 21	
21	134	43.9		18.7	94	24.4	117		46	0 47	33	27	6 53	77	49 19	
22	149	43.6		18.6	108	55.1	117		35	** **	2 11	3 13	46	80	21 54	17
23	164	43.3		18.5	123	26.0	119		24	** **	1 41	2 56	39	82	22 00	14
24	179	43.0	-23	18.4	137	57.0	120	-11	13	** **	0 52	2 36	6 30	85	22 07	11
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO							
	PMG: 17 ^h 36 ^m 6		Mag: -3.9 PMG: 14 ^h 22 ^m		Mag: +0.3 PMG: 5 ^h 02 ^m		Mag: -2.7 PMG: 19 ^h 31 ^m		Mag: +0.7 PMG: 7 ^h 26 ^m							
h	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec						
0	95	08.2	144	32.6	284	19.4	66	25.7	248	18.3						
1	110	10.6	159	31.9	299	21.2	81	28.1	263	20.6						
2	125	13.1	174	31.2	314	23.0	96	30.6	278	22.8						
3	140	15.6	189	30.5	329	24.8	111	33.0	293	25.1						
4	155	18.0	204	29.8	344	26.6	126	35.5	308	27.4						
5	170	20.5	219	29.1	359	28.4	141	38.0	323	29.7						
6	185	23.0	234	28.4	14	30.1	156	40.4	338	32.0						
7	200	25.4	249	27.7	29	31.9	171	42.9	353	34.3						
8	215	27.9	264	27.0	44	33.7	186	45.3	8	36.6						
9	230	30.4	279	26.4	59	35.5	201	47.8	23	38.9						
10	245	32.8	294	25.7	74	37.3	216	50.2	38	41.2						
11	260	35.3	309	25.0	89	39.1	231	52.7	53	43.5						
12	275	37.7	324	24.3	104	40.9	246	55.2	68	45.8						
13	290	40.2	339	23.6	119	42.7	261	57.6	83	48.1						
14	305	42.7	354	22.9	134	44.5	277	00.1	98	50.4						
15	320	45.1	9	22.2	149	46.3	292	02.5	113	52.7						
16	335	47.6	24	21.5	164	48.1	307	05.0	128	55.0						
17	350	50.1	39	20.8	179	49.9	322	07.4	143	57.3						
18	5	52.5	54	20.1	194	51.7	337	09.9	158	59.6						
19	20	55.0	69	19.5	209	53.5	352	12.3	174	01.9						
20	35	57.5	84	18.8	224	55.3	7	14.8	189	04.2						
21	50	59.9	99	18.1	239	57.1	22	17.2	204	06.5						
22	66	02.4	114	17.4	254	58.9	37	19.7	219	08.8						
23	81	04.9	129	16.7	270	00.7	52	22.2	234	11.1						
24	96	07.3	144	16.0	285	02.5	67	24.6	249	13.4						
Dif	—		-7	+8	+18	-2	+25	0	+23	-1						

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16:3 PMG: 12 ^h 01 ^m 4			Edad: 3 ^d 2 PHE { 4 ^h : 56/8 12 ^h : 56/6 20 ^h : 56/3 PMG: 15 ^h 17 ^m 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	179	43.0	-23	18.4	137	57.0	-11	13.4	60 N	14 59	15 57	16 53	10 15 10	20 35 80
1	194	42.7		18.2	152	28.0 ¹²⁰	-11	02.4 ¹¹⁰	58	15 17	16 08	17 01	09 13	39 78
2	209	42.4		18.1	166	59.1 ¹²¹	-10	51.3 ¹¹¹	56	31	19	08	05 15	43 75
3	224	42.0		18.0	181	30.3 ¹²²		40.1 ¹¹²	54	44	28	14	10 01 17	46 73
4	239	41.7		17.9	196	01.5 ¹²²		28.9 ¹¹²	52	15 55	36	19	9 57 19	49 71
5	254	41.4	-23	17.8	210	32.9 ¹²⁴	-10	17.7 ¹¹²	50	16 05	16 43	17 25	9 53 22	20 52 69
6	269	41.1	-23	17.7	225	04.3 ¹²⁴	-10	06.5 ¹¹²	45	16 25	16 59	17 36	9 46 25	20 58 65
7	284	40.8		17.5	239	35.8 ¹²⁵	-9	55.2 ¹¹³	40	42	17 12	46	39 29	21 03 61
8	299	40.5		17.4	254	07.3 ¹²⁵		43.9 ¹¹³	35	16 56	24	17 56	34 31	07 59
9	314	40.2		17.3	268	38.9 ¹²⁶		32.5 ¹¹⁴	30	17 08	35	18 04	29 34	11 56
10	329	39.9		17.2	283	10.7 ¹²⁸		21.2 ¹¹³	20	29	17 53	21	21 38	17 52
11	344	39.6	-23	17.1	297	42.4 ¹²⁷	-9	09.8 ¹¹⁴	10 N	17 48	18 11	18 37	9 13 42	21 23 48
12	359	39.3	-23	16.9	312	14.3 ¹²⁹	-8	58.3 ¹¹⁵	0	18 05	18 28	18 54	9 06 45	21 28 44
13	14	39.0		16.8	326	46.2 ¹²⁹		46.9 ¹¹⁴	10 S	23	18 46	19 13	8 59 49	33 41
14	29	38.7		16.7	341	18.2 ¹³⁰		35.4 ¹¹⁵	20	18 41	19 06	19 35	52 52	39 37
15	44	38.4		16.6	355	50.3 ¹³¹		23.8 ¹¹⁶	30	19 03	31	20 04	43 57	45 33
16	59	38.1		16.4	10	22.4 ¹³¹		12.3 ¹¹⁵	35	16	19 46	23	38 60	49 30
17	74	37.8	-23	16.3	24	54.6 ¹³²	-8	00.7 ¹¹⁶	40	19 31	20 04	20 46	8 32 63	21 53 27
18	89	37.4	-23	16.2	39	26.8 ¹³²	-7	49.2 ¹¹⁵	45	19 49	20 26	21 16	8 26 66	21 57 25
19	104	37.1		16.1	53	59.2 ¹³⁴		37.5 ¹¹⁷	50	20 11	20 56	22 01	18 70	22 03 20
20	119	36.8		15.9	68	31.5 ¹³³		25.9 ¹¹⁶	52	22	21 11	22 28	14 72	05 19
21	134	36.5		15.8	83	04.0 ¹³⁵		14.3 ¹¹⁶	54	34	29	23 12	10 74	08 17
22	149	36.2		15.7	97	36.5 ¹³⁵	-7	02.6 ¹¹⁷	56	20 49	21 50	** **	06 76	11 15
23	164	35.9		15.5	112	09.1 ¹³⁶	-6	50.9 ¹¹⁷	58	21 05	22 20	** **	8 01 79	14 13
24	179	35.6	-23	15.4	126	41.7 ¹³⁶	-6	39.2 ¹¹⁷	60 S	21 25	23 07	** **	7 55 82	22 18 10
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 17 ^h 32 ^m 6		Mag: -3.9 PMG: 14 ^h 24 ^m			Mag: +0.3 PMG: 4 ^h 59 ^m			Mag: -2.7 PMG: 19 ^h 27 ^m			Mag: +0.7 PMG: 7 ^h 22 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	96	07.3	144	16.0	-19	48.8	285	02.5	+6	55.6	67	24.6	+10	25.8
1	111	09.8	159	15.3		48.0	300	04.3		55.4	82	27.1		25.8
2	126	12.2	174	14.7		47.1	315	06.1		55.1	97	29.5		25.8
3	141	14.7	189	14.0		46.3	330	07.9		54.9	112	32.0		25.8
4	156	17.2	204	13.3		45.5	345	09.7		54.7	127	34.4		25.9
5	171	19.6	219	12.6	-19	44.7	0	11.5	+6	54.5	142	36.9	+10	25.9
6	186	22.1	234	11.9	-19	43.8	15	13.3	+6	54.3	157	39.3	+10	25.9
7	201	24.6	249	11.3		43.0	30	15.1		54.1	172	41.8		25.9
8	216	27.0	264	10.6		42.2	45	17.0		53.9	187	44.2		25.9
9	231	29.5	279	09.9		41.4	60	18.8		53.7	202	46.7		26.0
10	246	32.0	294	09.2		40.5	75	20.6		53.5	217	49.1		26.0
11	261	34.4	309	08.5	-19	39.7	90	22.4	+6	53.3	232	51.5	+10	26.0
12	276	36.9	324	07.9	-19	38.9	105	24.2	+6	53.1	247	54.0	+10	26.0
13	291	39.4	339	07.2		38.0	120	26.0		52.9	262	56.4		26.0
14	306	41.8	354	06.5		37.2	135	27.8		52.7	277	58.9		26.1
15	321	44.3	9	05.8		36.4	150	29.6		52.5	293	01.3		26.1
16	336	46.7	24	05.2		35.6	165	31.5		52.3	308	03.8		26.1
17	351	49.2	39	04.5	-19	34.7	180	33.3	+6	52.1	323	06.2	+10	26.1
18	6	51.7	54	03.8	-19	33.9	195	35.1	+6	51.9	338	08.7	+10	26.1
19	21	54.1	69	03.1		33.0	210	36.9		51.7	353	11.1		26.2
20	36	56.6	84	02.5		32.2	225	38.7		51.5	8	13.6		26.2
21	51	59.1	99	01.8		31.4	240	40.6		51.3	23	16.0		26.2
22	67	01.5	114	01.1		30.5	255	42.4		51.1	38	18.5		26.2
23	82	04.0	129	00.5		29.7	270	44.2		50.9	53	20.9		26.3
24	97	06.5	143	59.8	-19	28.8	285	46.0	+6	50.7	68	23.3	+10	26.3
Dif	—		-7 +8			+18 -2			+24 0			+23 -1		

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna														
	SD: 16'3 PMG: 12 ^h 01 ^m 9			Edad: 4 ^d 2 PHE { SD: 15'3 PMG: 16 ^h 02 ^m																							
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°												
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m											
0	179	35.6	-23	15.4	126	41.7	-6	39.2	60 N	7 10	8 06	9 03	10 25	9	21 55	78											
1	194	35.3		15.3	141	14.4 ¹³⁷		27.5 ¹¹⁷	58	7 02	7 55	8 46	22 12		57 75												
2	209	35.0		15.1	155	47.2 ¹³⁸		15.8 ¹¹⁷	56	6 55	44	32	20 14		58 73												
3	224	34.7		15.0	170	20.0 ¹³⁸		-6 04.0 ¹¹⁸	54	49	35	19	18 16		21 59	7											
4	239	34.4		14.9	184	52.8 ¹³⁸		-5 52.3 ¹¹⁷	52	44	27	8 08	16 18		22 00	69											
5	254	34.1	-23	14.7	199	25.8 ¹⁴⁰		-5 40.5 ¹¹⁸	50	6 39	7 20	7 58	10 15	19	22 01	67											
6	269	33.8	-23	14.6	213	58.7 ¹³⁹		-5 28.7 ¹¹⁸	45	6 27	7 04	7 38	10 11	23	22 03	63											
7	284	33.5		14.5	228	31.8 ¹⁴¹		16.9 ¹¹⁸	40	17	6 51	21	08 26		04 60												
8	299	33.2		14.3	243	04.8 ¹⁴⁰		-5 05.1 ¹¹⁸	35	6 07	39	7 07	05 29		06 56												
9	314	32.9		14.2	257	38.0 ¹⁴²		-4 53.3 ¹¹⁸	30	5 59	29	6 55	10 03	31	07 54												
10	329	32.6		14.0	272	11.2 ¹⁴²		41.5 ¹¹⁸	20	42	6 10	34	9 59	36	09 50												
11	344	32.2	-23	13.9	286	44.4 ¹⁴²		-4 29.7 ¹¹⁸	10 N	5 26	5 53	6 15	9 55	40	22 11	46											
12	359	31.9	-23	13.8	301	17.7 ¹⁴³		-4 17.9 ¹¹⁸	0	5 09	5 36	5 58	9 51	44	22 12	43											
13	14	31.6		13.6	315	51.0 ¹⁴³		-4 06.0 ¹¹⁹	10 S	4 51	5 18	41	48 47		14 39												
14	29	31.3		13.5	330	24.4 ¹⁴⁴		-3 54.2 ¹¹⁸	20	4 28	4 57	22	44 51		16 35												
15	44	31.0		13.3	344	57.8 ¹⁴⁴		42.3 ¹¹⁹	30	3 59	33	5 00	40 55		18 31												
16	59	30.7		13.2	359	31.3 ¹⁴⁵		30.5 ¹¹⁸	35	41	4 17	4 47	38 57		19 29												
17	74	30.4	-23	13.0	14	04.8 ¹⁴⁵		-3 18.7 ¹¹⁸	40	3 18	3 59	4 32	9 35	60	22 20	26											
18	89	30.1	-23	12.9	28	38.3 ¹⁴⁵		-3 06.8 ¹¹⁹	45	2 47	3 37	4 14	9 32	64	22 22	23											
19	104	29.8		12.7	43	11.9 ¹⁴⁶		-2 55.0 ¹¹⁸	50	2 03	3 07	3 52	28 68		23 20												
20	119	29.5		12.6	57	45.6 ¹⁴⁷		43.1 ¹¹⁹	52	1 35	2 53	41	26 70		24 18												
21	134	29.2		12.4	72	19.2 ¹⁴⁶		31.3 ¹¹⁸	54	0 51	35	29	24 72		25 16												
22	149	28.9		12.3	86	52.9 ¹⁴⁷		19.4 ¹¹⁹	56	** **	2 13	3 15	22 74		26 13												
23	164	28.6		12.1	101	26.7 ¹⁴⁸		-2 07.6 ¹¹⁸	58	** **	1 44	2 58	20 76		27 11												
24	179	28.3	-23	12.0	116	00.5 ¹⁴⁸		-1 55.7 ¹¹⁹	60 S	** **	0 56	2 38	9 17	79	22 28	9											
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO														
	PMG: 17 ^h 28 ^m 7			Mag: -3.9 PMG: 14 ^h 25 ^m			Mag: +0.3 PMG: 4 ^h 56 ^m			Mag: -2.6 PMG: 19 ^h 23 ^m			Mag: +0.7 PMG: 7 ^h 18 ^m														
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec													
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'											
0	97	06.5	143	59.8	-19	28.8	285	46.0	+6	50.7	68	23.3	+10	26.3	250	08.6	-8	32.7									
1	112	08.9	158	59.1		28.0	300	47.8		50.5	83	25.8		26.3	265	10.9		32.7									
2	127	11.4	173	58.4		27.2	315	49.7		50.3	98	28.2		26.3	280	13.2		32.8									
3	142	13.8	188	57.8		26.3	330	51.5		50.1	113	30.7		26.3	295	15.5		32.8									
4	157	16.3	203	57.1		25.5	345	53.3		49.9	128	33.1		26.4	310	17.8		32.9									
5	172	18.8	218	56.4	-19	24.6	0	55.1	+6	49.7	143	35.5	+10	26.4	325	20.1	-8	32.9									
6	187	21.2	233	55.8	-19	23.8	15	57.0	+6	49.5	158	38.0	+10	26.4	340	22.4	-8	33.0									
7	202	23.7	248	55.1		22.9	30	58.8		49.3	173	40.4		26.4	355	24.7		33.0									
8	217	26.2	263	54.5		22.1	46	00.6		49.1	188	42.9		26.5	10	27.0		33.1									
9	232	28.6	278	53.8		21.2	61	02.4		48.9	203	45.3		26.5	25	29.3		33.1									
10	247	31.1	293	53.1		20.4	76	04.3		48.7	218	47.8		26.5	40	31.6		33.2									
11	262	33.6	308	52.5	-19	19.5	91	06.1	+6	48.5	233	50.2	+10	26.5	55	33.9	-8	33.2									
12	277	36.0	323	51.8	-19	18.7	106	07.9	+6	48.3	248	52.6	+10	26.5	70	36.2	-8	33.3									
13	292	38.5	338	51.1		17.8	121	09.8		48.1	263	55.1		26.6	85	38.5		33.3									
14	307	41.0	353	50.5		17.0	136	11.6		47.9	278	57.5		26.6	100	40.8		33.4									
15	322	43.4	8	49.8		16.1	151	13.4		47.7	293	59.9		26.6	115	43.1		33.4									
16	337	45.9	23	49.2		15.3	166	15.3		47.5	309	02.4		26.6	130	45.4		33.5									
17	352	48.3	38	48.5	-19	14.4	181	17.1	+6	47.3	324	04.8	+10	26.7	145	47.7	-8	33.5									
18	7	50.8	53	47.8	-19	13.5	196	18.9	+6	47.1	339	07.3	+10	26.7	160	50.0	-8	33.6									
19	22	53.3	68	47.2		12.7	211	20.8		46.9	354	09.7		26.7	175	52.3		33.6									
20	37	55.7	83	46.5		11.8	226	22.6		46.7	9	12.1		26.7	190	54.7		33.7									
21	52	58.2	98	45.9		11.0	241	24.5		46.6	24	14.6		26.8	205	57.0		33.7									
22	68	00.7	113	45.2		10.1	256	26.3		46.4	39	17.0		26.8	220	59.3		33.8									
23	83	03.1	128	44.6		09.2	271	28.1		46.2	54	19.4		26.8	236	01.6		33.8									
24	98	05.6	143	43.9	-19	08.4	286	30.0	+6	46.0	69	21.9	+10	26.8	251	03.9	-8	33.9									
Dif	—			-7			+9			+18			-2			+24			0			+23			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 4				Edad: 5 ^d 2 PHE { 4 ^h : 55/4 12 ^h : 55/2 20 ^h : 55/0 PMG: 16 ^h 45 ^m R°: 42 ^m													
	hG ☉	Dec	hG ☾	Dif	Dec	Dif	Civil	Náutico			Hora	R°	Hora	R°				
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m	m	h m	m			
0	179	28.3	-23	12.0	116	00.5	-1	55.7	60 N	15 02	15 59	16 55	10 34	9	23 13	77		
1	194	28.0		11.8	130	34.3 ¹⁴⁸		43.9 ¹¹⁸	58	19	16 10	17 03	34	11	12	74		
2	209	27.7		11.7	145	08.2 ¹⁴⁹		32.1 ¹¹⁸	56	33	20	09	34	14	11	71		
3	224	27.4		11.5	159	42.1 ¹⁴⁹		20.3 ¹¹⁸	54	46	29	15	34	16	10	67		
4	239	27.1		11.4	174	16.0 ¹⁴⁹	-1	08.4 ¹¹⁹	52	15 57	37	21	34	18	09	67		
5	254	26.8	-23	11.2	188	50.0 ¹⁵⁰	-0	56.6 ¹¹⁸	50	16 06	16 45	17 26	10 34	19	23 08	65		
6	269	26.5	-23	11.1	203	24.0 ¹⁵⁰	-0	44.8 ¹¹⁸	45	16 27	17 01	17 38	10 34	23	23 06	61		
7	284	26.2		10.9	217	58.0 ¹⁵⁰		33.0 ¹¹⁸	40	43	14	48	34	26	04	58		
8	299	25.9		10.8	232	32.0 ¹⁵⁰		21.3 ¹¹⁷	35	16 57	25	17 57	34	29	02	56		
9	314	25.6		10.6	247	06.1 ¹⁵¹	-0	09.5 ¹¹⁸	30	17 10	36	18 06	34	31	23 01	53		
10	329	25.3		10.4	261	40.2 ¹⁵¹	+0	02.3 ¹¹⁸	20	31	17 55	22	35	35	22 59	49		
11	344	25.0	-23	10.3	276	14.3 ¹⁵¹	+0	14.0 ¹¹⁷	10 N	17 49	18 12	18 38	10 35	38	22 57	45		
12	359	24.7	-23	10.1	290	48.5 ¹⁵²	+0	25.8 ¹¹⁸	0	18 06	18 29	18 55	10 35	42	22 55	42		
13	14	24.4		10.0	305	22.7 ¹⁵²		37.5 ¹¹⁷	10 S	23	18 46	19 14	35	46	53	39		
14	29	24.1		09.8	319	56.9 ¹⁵²	+0	49.2 ¹¹⁷	20	18 42	19 07	19 36	35	49	51	35		
15	44	23.8		09.6	334	31.1 ¹⁵²	+1	00.9 ¹¹⁷	30	19 04	31	20 05	35	54	49	31		
16	59	23.5		09.5	349	05.4 ¹⁵³		12.6 ¹¹⁷	35	17	19 46	23	35	56	48	28		
17	74	23.2	-23	09.3	3	39.6 ¹⁵²	+1	24.3 ¹¹⁷	40	19 32	20 04	20 46	10 35	59	22 46	26		
18	89	22.9	-23	09.1	18	13.9 ¹⁵³	+1	35.9 ¹¹⁶	45	19 49	20 27	21 16	10 36	62	22 45	23		
19	104	22.6		09.0	32	48.2 ¹⁵³		47.6 ¹¹⁷	50	20 12	20 56	22 00	36	66	43	19		
20	119	22.3		08.8	47	22.6 ¹⁵⁴	+1	59.2 ¹¹⁶	52	22	21 11	22 27	36	68	42	17		
21	134	22.0		08.6	61	56.9 ¹⁵³	+2	10.8 ¹¹⁶	54	34	28	23 09	36	70	41	15		
22	149	21.6		08.5	76	31.3 ¹⁵⁴		22.4 ¹¹⁶	56	20 48	21 50	** **	36	72	39	14		
23	164	21.3		08.3	91	05.7 ¹⁵⁴		33.9 ¹¹⁵	58	21 05	22 18	** **	36	74	38	12		
24	179	21.0	-23	08.1	105	40.0 ¹⁵³	+2	45.5 ¹¹⁶	60 S	21 25	23 04	** **	10 36	77	22 37	9		
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 17 ^h 24 ^m 8		Mag: -3.9 PMG: 14 ^h 26 ^m				Mag: +0.2 PMG: 4 ^h 53 ^m				Mag: -2.6 PMG: 19 ^h 19 ^m				Mag: +0.7 PMG: 7 ^h 15 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	98	05.6	143	43.9	-19	08.4	286	30.0	+6	46.0	69	21.9	+10	26.8	251	03.9	-8	33.9
1	113	08.1	158	43.3		07.5	301	31.8		45.8	84	24.3		26.9	266	06.2		33.9
2	128	10.5	173	42.6		06.6	316	33.7		45.6	99	26.7		26.9	281	08.5		34.0
3	143	13.0	188	41.9		05.8	331	35.5		45.4	114	29.2		26.9	296	10.8		34.0
4	158	15.5	203	41.3		04.9	346	37.3		45.2	129	31.6		26.9	311	13.1		34.1
5	173	17.9	218	40.6	-19	04.0	1	39.2	+6	45.0	144	34.0	+10	27.0	326	15.4	-8	34.1
6	188	20.4	233	40.0	-19	03.2	16	41.0	+6	44.8	159	36.5	+10	27.0	341	17.7	-8	34.2
7	203	22.8	248	39.3		02.3	31	42.9		44.6	174	38.9		27.0	356	20.0		34.2
8	218	25.3	263	38.7		01.4	46	44.7		44.5	189	41.3		27.0	11	22.3		34.3
9	233	27.8	278	38.0	-19	00.6	61	46.6		44.3	204	43.8		27.1	26	24.6		34.3
10	248	30.2	293	37.4	-18	59.7	76	48.4		44.1	219	46.2		27.1	41	26.9		34.4
11	263	32.7	308	36.7	-18	58.8	91	50.3	+6	43.9	234	48.6	+10	27.1	56	29.2	-8	34.4
12	278	35.2	323	36.1	-18	57.9	106	52.1	+6	43.7	249	51.1	+10	27.1	71	31.5	-8	34.5
13	293	37.6	338	35.5		57.1	121	54.0		43.5	264	53.5		27.2	86	33.9		34.5
14	308	40.1	353	34.8		56.2	136	55.8		43.3	279	55.9		27.2	101	36.2		34.6
15	323	42.6	8	34.2		55.3	151	57.7		43.1	294	58.4		27.2	116	38.5		34.6
16	338	45.0	23	33.5		54.4	166	59.5		43.0	310	00.8		27.2	131	40.8		34.7
17	353	47.5	38	32.9	-18	53.5	182	01.4	+6	42.8	325	03.2	+10	27.3	146	43.1	-8	34.7
18	8	49.9	53	32.2	-18	52.7	197	03.2	+6	42.6	340	05.6	+10	27.3	161	45.4	-8	34.7
19	23	52.4	68	31.6		51.8	212	05.1		42.4	355	08.1		27.3	176	47.7		34.8
20	38	54.9	83	31.0		50.9	227	06.9		42.2	10	10.5		27.3	191	50.0		34.8
21	53	57.3	98	30.3		50.0	242	08.8		42.0	25	12.9		27.4	206	52.3		34.9
22	68	59.8	113	29.7		49.1	257	10.7		41.8	40	15.4		27.4	221	54.6		34.9
23	84	02.3	128	29.0		48.2	272	12.5		41.7	55	17.8		27.4	236	56.9		35.0
24	99	04.7	143	28.4	-18	47.4	287	14.4	+6	41.5	70	20.2	+10	27.5	251	59.2	-8	35.0
Dif	—		-6		+9		+19		-2		+24		0		+23		0	

UT	SOL			 LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16:3			Edad: 6 ^d 2	PHE { 4 ^h : 54:8 12 ^h : 54:7 20 ^h : 54:6											
	PMG: 12 ^h 02 ^m 8					SD: 15:0		PMG: 17 ^h 27 ^m			R ^o : 42 ^m					
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m
0	179	21.0	-23 08.1	105	40.0	+2 45.5		60 N	7 09	8 06	9 03	10 43	9	*** ** *	*** ** *	
1	194	20.7	07.9	120	14.4 ¹⁵⁴	+2 57.0 ¹¹⁵		58	7 02	7 55	8 46	45	13	*** ** *	*** ** *	
2	209	20.4	07.8	134	48.9 ¹⁵⁵	+3 08.5 ¹¹⁵		56	6 56	44	32	48	14	*** ** *	*** ** *	
3	224	20.1	07.6	149	23.3 ¹⁵⁴	20.0 ¹¹⁵		54	50	36	19	50	16	*** ** *	*** ** *	
4	239	19.8	07.4	163	57.7 ¹⁵⁴	31.5 ¹¹⁵		52	44	28	8 08	52	18	*** ** *	*** ** *	
5	254	19.5	-23 07.2	178	32.2 ¹⁵⁵	+3 42.9 ¹¹⁴		50	6 39	7 20	7 59	10 53	20	*** ** *	*** ** *	
6	269	19.2	-23 07.1	193	06.6 ¹⁵⁴	+3 54.3 ¹¹⁴		45	6 27	7 04	7 38	10 57	24	*** ** *	*** ** *	
7	284	18.9	06.9	207	41.1 ¹⁵⁵	+4 05.7 ¹¹⁴		40	17	6 51	22	11 00	27	*** ** *	*** ** *	
8	299	18.6	06.7	222	15.5 ¹⁵⁴	17.1 ¹¹⁴		35	6 08	40	7 08	03	29	23 58	55	
9	314	18.3	06.5	236	50.0 ¹⁵⁵	28.4 ¹¹³		30	5 59	29	6 55	05	32	54	53	
10	329	18.0	06.4	251	24.5 ¹⁵⁵	39.8 ¹¹⁴		20	43	6 11	35	10	35	48	49	
11	344	17.7	-23 06.2	265	59.0 ¹⁵⁵	+4 51.1 ¹¹³		10 N	5 27	5 54	6 16	11 13	39	23 42	46	
12	359	17.4	-23 06.0	280	33.5 ¹⁵⁵	+5 02.3 ¹¹²		0	5 10	5 37	5 59	11 17	42	23 37	43	
13	14	17.2	05.8	295	07.9 ¹⁵⁴	13.6 ¹¹³		10 S	4 52	5 19	42	21	45	32	39	
14	29	16.9	05.6	309	42.4 ¹⁵⁵	24.8 ¹¹²		20	29	4 59	23	24	49	26	36	
15	44	16.6	05.5	324	16.9 ¹⁵⁵	36.0 ¹¹²		30	4 01	34	5 01	29	53	20	32	
16	59	16.3	05.3	338	51.4 ¹⁵⁵	47.1 ¹¹¹		35	3 42	19	4 48	31	56	16	30	
17	74	16.0	-23 05.1	353	25.9 ¹⁵⁵	+5 58.2 ¹¹¹		40	3 19	4 01	4 34	11 34	58	23 12	27	
18	89	15.7	-23 04.9	8	00.4 ¹⁵⁵	+6 09.3 ¹¹¹		45	2 49	3 39	4 16	11 38	61	23 08	24	
19	104	15.4	04.7	22	34.8 ¹⁵⁴	20.4 ¹¹¹		50	2 05	3 09	3 54	42	65	23 02	20	
20	119	15.1	04.5	37	09.3 ¹⁵⁵	31.4 ¹¹⁰		52	1 38	2 55	43	44	66	22 59	19	
21	134	14.8	04.3	51	43.8 ¹⁵⁵	42.4 ¹¹⁰		54	0 56	37	31	46	68	56	18	
22	149	14.5	04.2	66	18.3 ¹⁵⁵	+6 53.4 ¹¹⁰		56	*** **	2 16	17	48	71	53	15	
23	164	14.2	04.0	80	52.7 ¹⁵⁴	+7 04.3 ¹⁰⁹		58	*** **	1 47	3 01	50	74	50	13	
24	179	13.9	-23 03.8	95	27.2 ¹⁵⁵	+7 15.2 ¹⁰⁹		60 S	*** **	1 01	2 41	11 53	77	22 46	10	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 17 ^h 20 ^m 8		Mag: -3.9 PMG: 14 ^h 27 ^m		Mag: +0.2 PMG: 4 ^h 50 ^m		Mag: -2.6 PMG: 19 ^h 16 ^m		Mag: +0.7 PMG: 7 ^h 11 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	99	04.7	143	28.4	-18 47.4	287	14.4	+6 41.5	70	20.2	+10 27.5	251	59.2	-8 35.0
1	114	07.2	158	27.8	46.5	302	16.2	41.3	85	22.6	27.5	267	01.5	35.1
2	129	09.7	173	27.1	45.6	317	18.1	41.1	100	25.1	27.5	282	03.9	35.1
3	144	12.1	188	26.5	44.7	332	20.0	40.9	115	27.5	27.5	297	06.2	35.2
4	159	14.6	203	25.8	43.8	347	21.8	40.7	130	29.9	27.6	312	08.5	35.2
5	174	17.1	218	25.2	-18 42.9	2	23.7	+6 40.6	145	32.3	+10 27.6	327	10.8	-8 35.3
6	189	19.5	233	24.6	-18 42.0	17	25.5	+6 40.4	160	34.8	+10 27.6	342	13.1	-8 35.3
7	204	22.0	248	23.9	41.1	32	27.4	40.2	175	37.2	27.7	357	15.4	35.4
8	219	24.4	263	23.3	40.2	47	29.3	40.0	190	39.6	27.7	12	17.7	35.4
9	234	26.9	278	22.7	39.4	62	31.1	39.8	205	42.0	27.7	27	20.0	35.5
10	249	29.4	293	22.0	38.5	77	33.0	39.7	220	44.5	27.7	42	22.3	35.5
11	264	31.8	308	21.4	-18 37.6	92	34.9	+6 39.5	235	46.9	+10 27.8	57	24.6	-8 35.6
12	279	34.3	323	20.8	-18 36.7	107	36.7	+6 39.3	250	49.3	+10 27.8	72	27.0	-8 35.6
13	294	36.8	338	20.1	35.8	122	38.6	39.1	265	51.7	27.8	87	29.3	35.7
14	309	39.2	353	19.5	34.9	137	40.5	38.9	280	54.1	27.9	102	31.6	35.7
15	324	41.7	8	18.9	34.0	152	42.4	38.8	295	56.6	27.9	117	33.9	35.7
16	339	44.2	23	18.2	33.1	167	44.2	38.6	310	59.0	27.9	132	36.2	35.8
17	354	46.6	38	17.6	-18 32.2	182	46.1	+6 38.4	326	01.4	+10 27.9	147	38.5	-8 35.8
18	9	49.1	53	17.0	-18 31.3	197	48.0	+6 38.2	341	03.8	+10 28.0	162	40.8	-8 35.9
19	24	51.6	68	16.4	30.4	212	49.8	38.1	356	06.3	28.0	177	43.1	35.9
20	39	54.0	83	15.7	29.5	227	51.7	37.9	11	08.7	28.0	192	45.4	36.0
21	54	56.5	98	15.1	28.6	242	53.6	37.7	26	11.1	28.1	207	47.8	36.0
22	69	58.9	113	14.5	27.7	257	55.5	37.5	41	13.5	28.1	222	50.1	36.1
23	85	01.4	128	13.9	26.8	272	57.4	37.4	56	15.9	28.1	237	52.4	36.1
24	100	03.9	143	13.2	-18 25.8	287	59.2	+6 37.2	71	18.3	+10 28.2	252	54.7	-8 36.2
Dif	—		-6		+9	+19		-2	+24		0	+23		0

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 16/3 PMG: 12 ^h 03 ^m 3			Edad: 7 ^d 2 SD: 14/8 PMG: 18 ^h 09 ^m	PHE { 4 ^h : 54/4 12 ^h : 54/4 20 ^h : 54/3 R°: 43 ^m											
	hG ☉	Dec				hG ☾			Dif	Dec	Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m		
0	179	13.9	-23 03.8	95	27.2	+7 15.2		60 N	15 04	16 01	16 57	10 52 12	0 30 76			
1	194	13.6	03.6	110	01.6 ¹⁵⁴	26.1 ¹⁰⁹		58	21	12	17 05	10 58 13	26 73			
2	209	13.3	03.4	124	36.0 ¹⁵⁴	36.9 ¹⁰⁸		56	35	22	11	11 02 16	22 71			
3	224	13.0	03.2	139	10.5 ¹⁵⁵	47.7 ¹⁰⁸		54	48	31	17	06 18	19 68			
4	239	12.7	03.0	153	44.9 ¹⁵⁴	+7 58.5 ¹⁰⁸		52	15 59	39	23	10 20	16 66			
5	254	12.4	-23 02.8	168	19.3 ¹⁵⁴	+8 09.2 ¹⁰⁷		50	16 08	16 46	17 28	11 13 22	0 13 65			
6	269	12.1	-23 02.6	182	53.7 ¹⁵⁴	+8 19.9 ¹⁰⁷		45	16 29	17 02	17 39	11 21 25	0 07 61			
7	284	11.8	02.4	197	28.0 ¹⁵³	30.5 ¹⁰⁶		40	45	15	49	27 28	0 02 58			
8	299	11.5	02.2	212	02.4 ¹⁵⁴	41.2 ¹⁰⁷		35	16 59	27	17 58	32 31	** ** *			
9	314	11.2	02.0	226	36.7 ¹⁵³	+8 51.7 ¹⁰⁵		30	17 11	37	18 07	37 32	** ** *			
10	329	10.9	01.8	241	11.1 ¹⁵⁴	+9 02.3 ¹⁰⁶		20	32	17 56	23	45 36	** ** *			
11	344	10.6	-23 01.6	255	45.4 ¹⁵³	+9 12.8 ¹⁰⁵		10 N	17 50	18 13	18 39	11 52 40	** ** *			
12	359	10.3	-23 01.4	270	19.7 ¹⁵³	+9 23.2 ¹⁰⁴		0	18 07	18 30	18 56	11 59 43	** ** *			
13	14	10.0	01.2	284	53.9 ¹⁵²	33.6 ¹⁰⁴		10 S	24	18 47	19 14	12 06 46	** ** *			
14	29	09.7	01.0	299	28.2 ¹⁵³	44.0 ¹⁰⁴		20	18 43	19 07	19 36	13 50	** ** *			
15	44	09.4	00.8	314	02.4 ¹⁵²	+9 54.3 ¹⁰³		30	19 05	32	20 05	22 53	23 52 34			
16	59	09.1	00.6	328	36.6 ¹⁵²	+10 04.6 ¹⁰³		35	17	19 47	23	27 55	46 32			
17	74	08.8	-23 00.4	343	10.8 ¹⁵²	+10 14.9 ¹⁰³		40	19 32	20 05	20 46	12 32 58	23 39 30			
18	89	08.5	-23 00.2	357	45.0 ¹⁵²	+10 25.1 ¹⁰²		45	19 50	20 27	21 16	12 39 61	23 32 26			
19	104	08.2	-23 00.0	12	19.2 ¹⁵²	35.2 ¹⁰¹		50	20 12	20 56	21 59	47 64	22 24			
20	119	07.9	-22 59.8	26	53.3 ¹⁵¹	45.3 ¹⁰¹		52	22	21 10	22 25	50 67	18 22			
21	134	07.7	59.6	41	27.4 ¹⁵¹	+10 55.4 ¹⁰¹		54	34	28	23 05	54 69	14 19			
22	149	07.4	59.4	56	01.4 ¹⁵⁰	+11 05.4 ¹⁰⁰		56	20 48	21 49	** ** *	12 59 70	08 18			
23	164	07.1	59.2	70	35.5 ¹⁵¹	15.4 ¹⁰⁰		58	21 04	22 17	** ** *	13 04 73	23 03 15			
24	179	06.8	-22 59.0	85	09.5 ¹⁵⁰	+11 25.3 ⁹⁹		60 S	21 24	23 00	** ** *	13 10 75	22 56 13			
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 17 ^h 16 ^m 9			Mag: -4.0 PMG: 14 ^h 28 ^m			Mag: +0.2 PMG: 4 ^h 47 ^m			Mag: -2.6 PMG: 19 ^h 12 ^m			Mag: +0.7 PMG: 7 ^h 07 ^m			
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°	
0	100	03.9	143 13.2	-18 25.8	287 59.2	+6 37.2	71	18.3	+10 28.2	252 54.7	-8 36.2					
1	115	06.3	158 12.6	24.9	303 01.1	37.0	86	20.8	28.2	267 57.0	36.2					
2	130	08.8	173 12.0	24.0	318 03.0	36.8	101	23.2	28.2	282 59.3	36.3					
3	145	11.3	188 11.4	23.1	333 04.9	36.7	116	25.6	28.2	298 01.6	36.3					
4	160	13.7	203 10.8	22.2	348 06.8	36.5	131	28.0	28.3	313 03.9	36.4					
5	175	16.2	218 10.1	-18 21.3	3 08.6	+6 36.3	146	30.4	+10 28.3	328 06.2	-8 36.4					
6	190	18.7	233 09.5	-18 20.4	18 10.5	+6 36.1	161	32.8	+10 28.3	343 08.6	-8 36.4					
7	205	21.1	248 08.9	19.5	33 12.4	36.0	176	35.3	28.4	358 10.9	36.5					
8	220	23.6	263 08.3	18.6	48 14.3	35.8	191	37.7	28.4	13 13.2	36.5					
9	235	26.0	278 07.7	17.6	63 16.2	35.6	206	40.1	28.4	28 15.5	36.6					
10	250	28.5	293 07.0	16.7	78 18.1	35.4	221	42.5	28.5	43 17.8	36.6					
11	265	31.0	308 06.4	-18 15.8	93 19.9	+6 35.3	236	44.9	+10 28.5	58 20.1	-8 36.7					
12	280	33.4	323 05.8	-18 14.9	108 21.8	+6 35.1	251	47.3	+10 28.5	73 22.4	-8 36.7					
13	295	35.9	338 05.2	14.0	123 23.7	34.9	266	49.8	28.6	88 24.8	36.8					
14	310	38.4	353 04.6	13.1	138 25.6	34.8	281	52.2	28.6	103 27.1	36.8					
15	325	40.8	8 04.0	12.1	153 27.5	34.6	296	54.6	28.6	118 29.4	36.9					
16	340	43.3	23 03.3	11.2	168 29.4	34.4	311	57.0	28.7	133 31.7	36.9					
17	355	45.8	38 02.7	-18 10.3	183 31.3	+6 34.3	326	59.4	+10 28.7	148 34.0	-8 36.9					
18	10	48.2	53 02.1	-18 09.4	198 33.2	+6 34.1	342	01.8	+10 28.7	163 36.3	-8 37.0					
19	25	50.7	68 01.5	08.5	213 35.1	33.9	357	04.2	28.8	178 38.6	37.0					
20	40	53.2	83 00.9	07.5	228 37.0	33.7	12	06.6	28.8	193 41.0	37.1					
21	55	55.6	98 00.3	06.6	243 38.9	33.6	27	09.1	28.8	208 43.3	37.1					
22	70	58.1	112 59.7	05.7	258 40.8	33.4	42	11.5	28.9	223 45.6	37.2					
23	86	00.5	127 59.1	04.8	273 42.7	33.2	57	13.9	28.9	238 47.9	37.2					
24	101	03.0	142 58.5	-18 03.8	288 44.6	+6 33.1	72	16.3	+10 28.9	253 50.2	-8 37.3					
Dif	—			-6 +9	+19 -2			+24 0			+23 0			0		

Nº	NOMBRE	Mag		Ene	Feb	Mar	Abr	May	Jun	Jul	Ago	Sep	Oct	Nov	Dic
			o	/	/	/	/	/	/	/	/	/	/	/	/
1 - α And	<i>Alpheratz</i>	2.1	357	45.5	45.5	45.6	45.5	45.3	45.1	44.8	44.6	44.4	44.4	44.5	44.5
2 - β Cas	<i>Caph</i>	2.3	357	33.3	33.5	33.6	33.5	33.2	32.8	32.5	32.1	32.0	31.9	32.0	32.2
3 - γ Peg	<i>Algenib</i>	2.8	356	32.8	32.8	32.8	32.8	32.6	32.4	32.1	31.9	31.8	31.8	31.8	31.9
4 - α Phe	<i>Ankaa</i>	2.4	353	17.5	17.6	17.6	17.6	17.4	17.2	16.9	16.6	16.5	16.4	16.5	16.6
5 - α Cas	<i>Schedar</i>	2.2	349	42.7	42.9	43.0	43.0	42.7	42.4	42.0	41.7	41.5	41.4	41.4	41.6
6 - β Cet	<i>Diphda</i>	2.0	348	57.7	57.7	57.8	57.7	57.6	57.4	57.2	56.9	56.8	56.7	56.8	56.8
7 - γ Cas	<i>Navi</i>	1.6	345	39.0	39.3	39.4	39.4	39.1	38.8	38.3	38.0	37.7	37.6	37.6	37.8
8 - β And	<i>Mirach</i>	2.1	342	24.4	24.5	24.6	24.6	24.5	24.2	23.9	23.7	23.5	23.4	23.4	23.4
9 - α Eri	<i>Achernar</i>	0.5	335	27.9	28.2	28.3	28.4	28.3	28.1	27.7	27.4	27.1	27.0	27.0	27.2
10 - γ And	<i>Almak</i>	2.3	328	50.9	51.0	51.1	51.2	51.1	50.8	50.5	50.2	50.0	49.9	49.8	49.8
12 - α Ari	<i>Hamal</i>	2.0	328	2.7	2.8	2.9	2.9	2.8	2.6	2.4	2.1	1.9	1.8	1.7	1.7
11 - α UMi	<i>Polaris</i>	2.0	317	88.5	101.7	112.7	119.3	118.1	109.3	96.3	81.3	67.4	57.4	52.9	55.9
13 - θ Eri	<i>Acamar</i>	3.3	315	19.4	19.6	19.8	19.9	19.9	19.7	19.5	19.2	19.0	18.8	18.7	18.8
14 - α Cet	<i>Menkar</i>	2.5	314	16.7	16.8	16.9	17.0	17.0	16.8	16.6	16.4	16.2	16.0	15.9	15.9
15 - β Per	<i>Algol</i>	2.1	312	46.1	46.2	46.4	46.5	46.4	46.2	46.0	45.7	45.4	45.2	45.1	45.0
16 - α Per	<i>Mirfak</i>	1.8	308	42.6	42.8	43.0	43.1	43.1	42.9	42.6	42.2	41.9	41.7	41.5	41.4
17 - η Tau	<i>Alcyone</i>	2.9	302	57.3	57.4	57.5	57.6	57.6	57.5	57.3	57.1	56.8	56.6	56.5	56.4
18 - γ Eri	<i>Zaurak</i>	3.0	300	21.4	21.5	21.6	21.7	21.7	21.6	21.4	21.2	21.0	20.8	20.7	20.6
19 - α Tau	<i>Aldebaran</i>	0.9	290	51.1	51.2	51.3	51.4	51.4	51.4	51.2	51.0	50.7	50.5	50.3	50.2
20 - β Ori	<i>Rigel</i>	0.1	281	13.4	13.5	13.6	13.7	13.8	13.8	13.6	13.4	13.2	13.0	12.8	12.7
21 - α Aur	<i>Capella</i>	0.1	280	36.6	36.7	36.9	37.0	37.1	37.1	36.9	36.6	36.3	36.0	35.7	35.5
22 - γ Ori	<i>Bellatrix</i>	1.6	278	33.6	33.6	33.7	33.9	33.9	33.9	33.7	33.6	33.3	33.1	32.9	32.8
23 - β Tau	<i>Elnath</i>	1.7	278	14.5	14.5	14.7	14.8	14.9	14.8	14.7	14.4	14.2	13.9	13.7	13.6
24 - δ Ori	<i>Mintaka</i>	2.2	276	50.9	50.9	51.0	51.2	51.2	51.2	51.1	50.9	50.7	50.5	50.3	50.1
25 - ε Ori	<i>Alnilam</i>	1.7	275	47.8	47.9	48.0	48.1	48.2	48.2	48.0	47.8	47.6	47.4	47.2	47.1
26 - ζ Ori	<i>Alnitak</i>	1.9	274	39.7	39.7	39.9	40.0	40.1	40.0	39.9	39.7	39.5	39.3	39.1	39.0
27 - κ Ori	<i>Saiph</i>	2.1	272	55.2	55.3	55.4	55.5	55.6	55.6	55.5	55.3	55.1	54.9	54.7	54.6
28 - α Ori	<i>Betelgeuse</i>	0.4	271	2.8	2.9	3.0	3.1	3.2	3.2	3.1	2.9	2.7	2.5	2.2	2.1
29 - β Aur	<i>Menkalinan</i>	1.9	269	54.1	54.1	54.3	54.5	54.6	54.6	54.4	54.2	53.9	53.6	53.3	53.1
30 - β CMa	<i>Mirzam</i>	2.0	264	11.6	11.7	11.8	11.9	12.0	12.1	12.0	11.8	11.6	11.4	11.2	11.0
31 - α Car	<i>Canopus</i>	-0.7	263	56.4	56.5	56.7	57.0	57.2	57.3	57.3	57.1	56.8	56.5	56.2	56.1
32 - γ Gem	<i>Alhena</i>	1.9	260	24.1	24.1	24.2	24.4	24.4	24.4	24.4	24.2	24.0	23.8	23.5	23.3
33 - α CMa	<i>Sirius</i>	-1.5	258	34.9	34.9	35.0	35.2	35.3	35.3	35.3	35.1	34.9	34.7	34.5	34.3
34 - ε CMa	<i>Adhara</i>	1.5	255	13.5	13.5	13.7	13.8	14.0	14.0	14.0	13.8	13.6	13.4	13.2	13.0
35 - δ CMa	<i>Wezen</i>	1.9	252	46.8	46.8	46.9	47.1	47.2	47.3	47.2	47.1	46.9	46.7	46.5	46.3
36 - η CMa	<i>Aludra</i>	2.5	248	51.4	51.4	51.5	51.7	51.8	51.9	51.9	51.8	51.6	51.4	51.1	50.9
37 - α Gem	<i>Castor</i>	2.0	246	9.7	9.7	9.8	9.9	10.0	10.1	10.0	9.9	9.7	9.4	9.2	8.9
38 - α CMi	<i>Procyon</i>	0.4	245	1.2	1.2	1.2	1.4	1.5	1.5	1.5	1.4	1.2	1.0	0.7	0.5
39 - β Gem	<i>Pollux</i>	1.1	243	29.4	29.4	29.5	29.6	29.7	29.8	29.7	29.6	29.4	29.2	28.9	28.7
40 - ζ Pup	<i>Naos</i>	2.3	238	59.8	59.8	59.9	60.1	60.2	60.4	60.4	60.3	60.1	59.9	59.6	59.4
41 - γ Vel	<i>Regor</i>	1.8	237	31.2	31.2	31.4	31.6	31.8	31.9	32.0	31.9	31.7	31.5	31.2	30.9
42 - ε Car	<i>Avior</i>	1.9	234	18.1	18.2	18.3	18.6	18.9	19.1	19.2	19.2	19.0	18.7	18.3	18.0
43 - δ Velorum		2.0	228	44.2	44.1	44.3	44.5	44.7	44.9	45.0	45.0	44.8	44.6	44.2	43.9
44 - ζ Hydrae		3.1	225	59.7	59.7	59.7	59.8	59.9	60.0	60.0	59.9	59.8	59.6	59.4	59.1
45 - λ Vel	<i>Suhail</i>	2.2	222	53.3	53.3	53.3	53.5	53.7	53.8	53.9	53.9	53.7	53.5	53.2	53.0
46 - β Car	<i>Miaplacidus</i>	1.7	221	39.3	39.2	39.4	39.8	40.2	40.6	40.9	41.0	40.8	40.4	39.9	39.4
47 - ι Car	<i>Aspidiske</i>	2.3	220	38.5	38.4	38.5	38.7	39.0	39.3	39.4	39.4	39.3	39.0	38.6	38.3
48 - α Lyn	<i>Elvashak</i>	3.1	219	33.4	33.3	33.3	33.4	33.6	33.7	33.7	33.7	33.5	33.4	33.1	32.8
49 - α Hyd	<i>Alphard</i>	2.0	217	57.5	57.4	57.4	57.5	57.6	57.7	57.7	57.7	57.6	57.4	57.2	56.9
50 - α Leo	<i>Regulus</i>	1.4	207	45.1	44.9	44.9	45.0	45.1	45.2	45.2	45.2	45.1	45.0	44.8	44.5

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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	9.3	9.2	9.2	9.1	9.1	9.2	9.3	9.4	9.5	9.6	9.7	9.7
2 - β Cas	<i>Caph</i>	2.3	+59	13.0	12.9	12.8	12.7	12.6	12.6	12.7	12.8	13.0	13.2	13.3	13.3
3 - γ Peg	<i>Algenib</i>	2.8	+15	14.8	14.8	14.7	14.7	14.8	14.8	14.9	15.0	15.1	15.2	15.2	15.2
4 - α Phe	<i>Ankaa</i>	2.4	-42	14.9	14.9	14.8	14.6	14.5	14.3	14.2	14.2	14.3	14.4	14.5	14.6
5 - α Cas	<i>Schedar</i>	2.2	+56	36.2	36.2	36.0	35.9	35.8	35.8	35.9	36.0	36.2	36.3	36.5	36.5
6 - β Cet	<i>Diphda</i>	2.0	-17	55.6	55.6	55.6	55.5	55.4	55.2	55.1	55.1	55.1	55.1	55.2	55.3
7 - γ Cas	<i>Navi</i>	1.6	+60	47.0	46.9	46.8	46.6	46.6	46.5	46.6	46.7	46.9	47.0	47.2	47.3
8 - β And	<i>Mirach</i>	2.1	+35	41.0	40.9	40.9	40.8	40.7	40.8	40.8	40.9	41.1	41.2	41.3	41.3
9 - α Eri	<i>Achernar</i>	0.5	-57	11.1	11.0	10.9	10.7	10.6	10.4	10.3	10.3	10.3	10.5	10.6	10.7
10 - γ And	<i>Almak</i>	2.3	+42	23.2	23.2	23.1	23.0	23.0	22.9	23.0	23.1	23.2	23.3	23.4	23.5
12 - α Ari	<i>Hamal</i>	2.0	+23	31.0	31.0	31.0	30.9	30.9	30.9	31.0	31.1	31.2	31.2	31.3	31.3
11 - α UMi	<i>Polaris</i>	2.0	+89	19.1	19.1	19.1	18.9	18.8	18.6	18.6	18.6	18.7	18.8	19.0	19.2
13 - θ Eri	<i>Acamar</i>	3.3	-40	15.8	15.8	15.8	15.7	15.5	15.4	15.2	15.2	15.2	15.3	15.4	15.5
14 - α Cet	<i>Menkar</i>	2.5	+4	8.0	8.0	8.0	8.0	8.0	8.1	8.2	8.2	8.3	8.3	8.3	8.2
15 - β Per	<i>Algol</i>	2.1	+40	60.1	60.1	60.0	60.0	59.9	59.9	59.9	59.9	60.0	60.1	60.2	60.2
16 - α Per	<i>Mirfak</i>	1.8	+49	54.2	54.3	54.2	54.1	54.0	54.0	53.9	54.0	54.1	54.1	54.3	54.3
17 - η Tau	<i>Alcyone</i>	2.9	+24	8.4	8.4	8.4	8.4	8.3	8.3	8.4	8.4	8.5	8.5	8.6	8.6
18 - γ Eri	<i>Zaurak</i>	3.0	-13	28.7	28.8	28.8	28.7	28.7	28.5	28.4	28.3	28.3	28.3	28.4	28.5
19 - α Tau	<i>Aldebaran</i>	0.9	+16	31.9	31.9	31.9	31.9	31.8	31.9	31.9	31.9	32.0	32.0	32.0	32.0
20 - β Ori	<i>Rigel</i>	0.1	-8	11.4	11.5	11.5	11.5	11.4	11.4	11.3	11.2	11.2	11.2	11.2	11.3
21 - α Aur	<i>Capella</i>	0.1	+46	0.6	0.7	0.7	0.6	0.6	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	17.4	17.4	17.5
25 - ϵ Ori	<i>Alnilam</i>	1.7	-1	11.8	11.8	11.9	11.8	11.8	11.8	11.7	11.6	11.6	11.6	11.7	11.7
26 - ζ Ori	<i>Alnitak</i>	1.9	-1	56.3	56.4	56.4	56.4	56.3	56.3	56.2	56.1	56.1	56.1	56.2	56.2
27 - κ Ori	<i>Saiph</i>	2.1	-9	40.1	40.1	40.2	40.1	40.1	40.0	39.9	39.8	39.8	39.8	39.9	40.0
28 - α Ori	<i>Betelgeuse</i>	0.4	+7	24.5	24.4	24.4	24.4	24.4	24.5	24.5	24.6	24.6	24.6	24.5	24.5
29 - β Aur	<i>Menkalinan</i>	1.9	+44	56.9	57.0	57.0	57.0	56.9	56.8	56.8	56.7	56.7	56.7	56.7	56.8
30 - β CMa	<i>Mirzam</i>	2.0	-17	57.8	57.9	58.0	58.0	57.9	57.8	57.7	57.6	57.6	57.6	57.7	57.8
31 - α Car	<i>Canopus</i>	-0.7	-52	42.3	42.4	42.5	42.5	42.4	42.2	42.1	41.9	41.9	41.9	42.0	42.1
32 - γ Gem	<i>Alhena</i>	1.9	+16	23.3	23.3	23.3	23.3	23.3	23.3	23.3	23.3	23.3	23.3	23.2	23.2
33 - α CMa	<i>Sirius</i>	-1.5	-16	44.0	44.1	44.2	44.2	44.1	44.0	43.9	43.8	43.8	43.8	43.9	44.0
34 - ϵ CMa	<i>Adhara</i>	1.5	-28	59.4	59.5	59.6	59.6	59.5	59.4	59.3	59.2	59.1	59.1	59.2	59.3
35 - δ CMa	<i>Wezen</i>	1.9	-26	24.8	24.9	25.0	25.0	24.9	24.9	24.7	24.6	24.6	24.6	24.6	24.8
36 - η CMa	<i>Aludra</i>	2.5	-29	19.6	19.7	19.8	19.8	19.8	19.7	19.6	19.5	19.4	19.4	19.5	19.6
37 - α Gem	<i>Castor</i>	2.0	+31	51.7	51.7	51.8	51.8	51.8	51.8	51.7	51.7	51.6	51.6	51.5	51.5
38 - α CMi	<i>Procyon</i>	0.4	+5	11.6	11.6	11.6	11.6	11.6	11.6	11.7	11.7	11.7	11.7	11.6	11.5
39 - β Gem	<i>Pollux</i>	1.1	+27	59.8	59.8	59.9	59.9	59.9	59.9	59.8	59.8	59.8	59.7	59.7	59.6
40 - ζ Pup	<i>Naos</i>	2.3	-40	2.2	2.3	2.4	2.5	2.5	2.4	2.3	2.1	2.0	2.0	2.1	2.2
41 - γ Vel	<i>Regor</i>	1.8	-47	22.2	22.4	22.5	22.6	22.6	22.5	22.4	22.2	22.1	22.1	22.1	22.3
42 - ϵ Car	<i>Avior</i>	1.9	-59	32.8	32.9	33.1	33.2	33.2	33.1	33.0	32.8	32.7	32.6	32.7	32.8
43 - δ Velorum		2.0	-54	45.0	45.2	45.3	45.4	45.4	45.4	45.3	45.1	45.0	44.9	44.9	45.1
44 - ζ Hydrae		3.1	+5	54.0	54.0	53.9	54.0	54.0	54.0	54.0	54.0	54.0	54.0	53.9	53.8
45 - λ Vel	<i>Suhail</i>	2.2	-43	28.7	28.9	29.0	29.1	29.1	29.0	28.9	28.8	28.7	28.6	28.7	28.8
46 - β Car	<i>Miaplacidus</i>	1.7	-69	45.7	45.9	46.1	46.2	46.3	46.2	46.1	46.0	45.8	45.7	45.7	45.8
47 - ι Car	<i>Aspidiske</i>	2.3	-59	19.3	19.5	19.7	19.8	19.8	19.8	19.7	19.5	19.4	19.3	19.3	19.4
48 - α Lyn	<i>Elvashak</i>	3.1	+34	20.5	20.5	20.6	20.6	20.7	20.7	20.6	20.6	20.5	20.4	20.3	20.2
49 - α Hyd	<i>Alphard</i>	2.0	-8	42.5	42.6	42.7	42.7	42.7	42.7	42.6	42.6	42.5	42.5	42.6	42.7
50 - α Leo	<i>Regulus</i>	1.4	+11	54.6	54.5	54.5	54.5	54.6	54.6	54.6	54.6	54.6	54.5	54.4	54.3

Nº	NOMBRE	Mag		Ene	Feb	Mar	Abr	May	Jun	Jul	Ago	Sep	Oct	Nov	Dic
			°	/	/	/	/	/	/	/	/	/	/	/	/
51 - μ	Velorum	2.7	198	10.7	10.5	10.5	10.6	10.7	10.9	11.0	11.1	11.1	10.9	10.7	10.3
52 - ν	Hydrae	3.1	197	27.0	26.8	26.7	26.8	26.9	27.0	27.0	27.0	27.0	26.9	26.7	26.4
53 - β	UMa Merak	2.4	194	21.8	21.5	21.5	21.5	21.7	21.9	22.1	22.2	22.2	22.0	21.7	21.4
54 - α	UMa Dubhe	1.8	193	53.2	52.9	52.8	52.9	53.2	53.4	53.7	53.8	53.8	53.6	53.3	52.8
55 - β	Leo Denebola	2.1	182	35.2	35.0	34.9	34.9	35.0	35.1	35.2	35.2	35.2	35.2	35.0	34.8
56 - γ	Crv Gienah	2.6	175	54.0	53.8	53.7	53.6	53.7	53.7	53.8	53.9	53.9	53.9	53.7	53.5
57 - α	Cru Acrux	1.4	173	11.2	10.8	10.6	10.6	10.7	10.9	11.1	11.4	11.5	11.4	11.2	10.7
58 - γ	Cru Gacrux	1.6	172	2.8	2.4	2.3	2.2	2.3	2.4	2.6	2.8	2.9	2.9	2.6	2.3
59 - γ	Cen Muhlifain	2.2	169	27.6	27.3	27.2	27.1	27.1	27.2	27.4	27.5	27.6	27.6	27.4	27.1
60 - β	Cru Mimosa	1.3	167	54.0	53.6	53.4	53.3	53.3	53.5	53.7	53.9	54.1	54.0	53.8	53.4
61 - ε	UMa Alioth	1.8	166	22.0	21.6	21.5	21.4	21.5	21.7	21.9	22.1	22.2	22.2	22.1	21.8
62 - α^2	CVn Cor Caroli	2.9	165	51.5	51.3	51.1	51.1	51.1	51.2	51.3	51.5	51.5	51.5	51.4	51.2
63 - ε	Vir Vindemiatrix	2.8	164	18.8	18.6	18.4	18.4	18.4	18.4	18.5	18.6	18.7	18.6	18.5	18.3
64 - ζ	UMa Mizar	2.3	158	54.2	53.9	53.7	53.6	53.6	53.8	54.0	54.2	54.4	54.4	54.3	54.1
65 - α	Vir Spica	1.0	158	33.1	32.8	32.7	32.6	32.6	32.6	32.7	32.8	32.8	32.8	32.7	32.5
66 - η	UMa Alkaid	1.9	152	60.2	59.9	59.7	59.6	59.6	59.7	59.8	60.0	60.2	60.3	60.2	60.0
67 - β	Cen Hadar	0.6	148	50.5	50.1	49.8	49.6	49.5	49.6	49.7	50.0	50.2	50.3	50.2	49.8
68 - θ	Cen Menkent	2.1	148	9.7	9.4	9.2	9.1	9.0	9.0	9.1	9.2	9.4	9.4	9.3	9.1
69 - α	Boo Arcturus	0.0	145	57.3	57.1	56.9	56.8	56.8	56.8	56.9	57.0	57.1	57.1	57.1	56.9
70 - α^1	Cen Rigil Kentaurus	0.0	139	54.4	54.0	53.6	53.4	53.3	53.3	53.5	53.8	54.0	54.1	54.1	53.8
71 - α^2	Lib Zubenelgenubi	2.8	137	7.5	7.2	7.0	6.8	6.8	6.7	6.8	6.9	7.0	7.1	7.0	6.9
72 - β	UMi Kochab	2.1	137	20.2	19.5	19.0	18.6	18.6	18.9	19.4	20.0	20.5	20.9	21.1	20.9
73 - β	Lib Zubeneschamali	2.6	130	35.8	35.6	35.4	35.2	35.1	35.1	35.1	35.2	35.3	35.4	35.4	35.2
74 - α	CrB Alphecca	2.2	126	12.6	12.4	12.2	12.0	11.9	11.9	11.9	12.0	12.2	12.3	12.3	12.2
75 - α	Ser Unukalhai	2.7	123	47.7	47.5	47.3	47.1	47.0	47.0	47.0	47.1	47.2	47.3	47.3	47.2
76 - α	Sco Antares	0.9	112	28.7	28.4	28.1	27.9	27.8	27.7	27.6	27.7	27.9	28.0	28.0	27.9
77 - α	TrA Atria	1.9	107	32.5	32.0	31.4	30.8	30.5	30.2	30.2	30.5	30.9	31.2	31.4	31.3
78 - ε	Scorpii	2.3	107	16.8	16.5	16.2	16.0	15.8	15.7	15.6	15.7	15.9	16.0	16.1	16.0
79 - η	Oph Sabik	2.4	102	14.8	14.6	14.4	14.1	14.0	13.8	13.8	13.9	14.0	14.1	14.2	14.1
80 - α	Her Rasalgethi	3.1	101	12.8	12.6	12.4	12.1	12.0	11.9	11.9	11.9	12.1	12.2	12.3	12.2
81 - λ	Sco Shaula	1.6	96	24.6	24.4	24.1	23.8	23.6	23.4	23.4	23.4	23.6	23.7	23.8	23.8
82 - α	Oph Rasalhague	2.1	96	8.3	8.1	7.9	7.7	7.5	7.4	7.4	7.4	7.6	7.7	7.8	7.8
83 - θ	Sco Sargas	1.9	95	28.3	28.0	27.8	27.5	27.2	27.0	27.0	27.0	27.2	27.4	27.5	27.4
84 - γ	Dra Eltanin	2.2	90	47.4	47.2	46.9	46.6	46.4	46.3	46.3	46.4	46.6	46.9	47.1	47.2
85 - ε	Sgr Kaus Australis	1.9	83	46.5	46.3	46.0	45.7	45.5	45.3	45.2	45.2	45.3	45.5	45.6	45.6
86 - α	Lyr Vega	0.0	80	40.6	40.4	40.2	39.9	39.7	39.5	39.5	39.5	39.7	39.9	40.0	40.1
87 - σ	Sgr Nunki	2.0	75	60.8	60.6	60.4	60.2	59.9	59.7	59.6	59.6	59.7	59.8	60.0	60.0
88 - α	Aql Altair	0.8	62	10.3	10.1	10.0	9.8	9.5	9.3	9.2	9.2	9.3	9.4	9.5	9.6
89 - γ	Cyg Sadr	2.2	54	20.9	20.8	20.6	20.4	20.1	19.9	19.7	19.7	19.8	20.0	20.1	20.3
90 - α	Pav Peacock	1.9	53	22.5	22.3	22.1	21.7	21.3	21.0	20.7	20.6	20.7	20.9	21.2	21.3
91 - α	Cyg Deneb	1.3	49	33.2	33.1	32.9	32.7	32.4	32.1	32.0	31.9	32.0	32.2	32.4	32.5
92 - α	Cep Alderamin	2.4	40	17.9	17.9	17.8	17.4	17.0	16.7	16.4	16.3	16.4	16.7	17.0	17.3
93 - ε	Peg Enif	0.7	33	49.1	49.1	49.0	48.8	48.6	48.4	48.2	48.1	48.1	48.1	48.2	48.3
94 - δ	Cap Deneb Algedi	2.9	33	5.3	5.2	5.1	5.0	4.8	4.5	4.3	4.2	4.2	4.2	4.3	4.4
95 - α	Gru Al Na'ir	1.7	27	46.2	46.2	46.1	45.9	45.6	45.3	45.0	44.8	44.8	44.9	45.1	45.2
96 - β	Gruis	2.1	19	10.2	10.2	10.2	10.0	9.7	9.4	9.1	8.9	8.8	8.9	9.1	9.2
97 - α	PsA Fomalhaut	1.2	15	26.1	26.1	26.1	25.9	25.7	25.5	25.2	25.0	24.9	25.0	25.1	25.2
98 - β	Peg Scheat	2.4	13	55.3	55.3	55.3	55.2	55.0	54.7	54.5	54.3	54.2	54.3	54.4	54.5
99 - α	Peg Markab	2.5	13	40.3	40.3	40.3	40.2	40.0	39.7	39.5	39.3	39.2	39.3	39.3	39.4

ESTRELLAS, 2011
Posiciones aparentes379
DECLINACIÓN

Nº	NOMBRE	Mag		Ene	Feb	Mar	Abr	May	Jun	Jul	Ago	Sep	Oct	Nov	Dic
			°	/	/	/	/	/	/	/	/	/	/	/	/
51 - μ	Velorum	2.7	-49	28.7	28.9	29.0	29.2	29.2	29.2	29.2	29.1	28.9	28.8	28.8	28.9
52 - ν	Hydrae	3.1	-16	15.2	15.3	15.4	15.5	15.5	15.5	15.4	15.3	15.3	15.3	15.3	15.4
53 - β	UMa Merak	2.4	+56	19.0	19.1	19.2	19.3	19.4	19.4	19.4	19.2	19.1	18.9	18.8	18.7
54 - α	UMa Dubhe	1.8	+61	41.1	41.2	41.3	41.4	41.5	41.5	41.4	41.3	41.2	41.0	40.8	40.8
55 - β	Leo Denebola	2.1	+14	30.4	30.3	30.3	30.3	30.4	30.4	30.5	30.5	30.4	30.3	30.2	30.1
56 - γ	Crv Gienah	2.6	-17	36.3	36.4	36.5	36.5	36.6	36.6	36.5	36.5	36.4	36.4	36.4	36.5
57 - α	Cru Acrux	1.4	-63	9.5	9.6	9.8	9.9	10.1	10.2	10.2	10.1	9.9	9.8	9.7	9.7
58 - γ	Cru Gacrux	1.6	-57	10.4	10.5	10.7	10.8	11.0	11.0	11.0	10.9	10.8	10.7	10.6	10.6
59 - γ	Cen Muhlifain	2.2	-49	1.1	1.3	1.4	1.5	1.7	1.7	1.7	1.6	1.5	1.4	1.4	1.4
60 - β	Cru Mimosas	1.3	-59	44.8	44.9	45.1	45.2	45.4	45.5	45.5	45.4	45.3	45.2	45.1	45.0
61 - ϵ	UMa Alioth	1.8	+55	53.6	53.6	53.7	53.8	53.9	54.0	54.0	54.0	53.9	53.7	53.5	53.4
62 - α^2	CVn Cor Caroli	2.9	+38	15.2	15.1	15.2	15.3	15.4	15.5	15.5	15.5	15.4	15.3	15.1	15.0
63 - ϵ	Vir Vindemiatrix	2.8	+10	53.8	53.7	53.7	53.7	53.8	53.8	53.8	53.9	53.8	53.8	53.7	53.6
64 - ζ	UMa Mizar	2.3	+54	51.7	51.6	51.7	51.8	52.0	52.1	52.1	52.1	52.0	51.8	51.6	51.5
65 - α	Vir Spica	1.0	-11	13.2	13.3	13.4	13.4	13.4	13.4	13.4	13.4	13.3	13.3	13.3	13.4
66 - η	UMa Alkaid	1.9	+49	15.1	15.1	15.1	15.3	15.4	15.5	15.6	15.5	15.4	15.3	15.1	15.0
67 - β	Cen Hadar	0.6	-60	25.4	25.5	25.6	25.7	25.9	26.0	26.0	26.0	25.9	25.8	25.7	25.6
68 - θ	Cen Menkent	2.1	-36	25.4	25.5	25.6	25.7	25.8	25.8	25.8	25.8	25.7	25.6	25.6	25.6
69 - α	Boo Arcturus	0.0	+19	7.3	7.2	7.2	7.2	7.3	7.4	7.4	7.5	7.4	7.4	7.2	7.1
70 - α^1	Cen Rigil Kentaurus	0.0	-60	52.7	52.7	52.8	53.0	53.1	53.2	53.3	53.3	53.2	53.1	52.9	52.9
71 - α^2	Lib Zubenelgenubi	2.8	-16	5.3	5.4	5.4	5.5	5.5	5.5	5.5	5.4	5.4	5.4	5.4	5.4
72 - β	UMi Kochab	2.1	+74	6.2	6.2	6.2	6.4	6.5	6.7	6.7	6.7	6.7	6.5	6.3	6.1
73 - β	Lib Zubeneshamali	2.6	-9	25.5	25.5	25.6	25.6	25.6	25.6	25.5	25.5	25.5	25.5	25.5	25.6
74 - α	CrB Alphecca	2.2	+26	40.4	40.3	40.3	40.4	40.5	40.6	40.7	40.8	40.7	40.7	40.6	40.4
75 - α	Ser Unukalhai	2.7	+6	23.3	23.3	23.2	23.2	23.3	23.4	23.4	23.5	23.5	23.5	23.4	23.3
76 - α	Sco Antares	0.9	-26	27.3	27.4	27.4	27.4	27.4	27.5	27.5	27.5	27.5	27.4	27.4	27.4
77 - α	TrA Atria	1.9	-69	2.6	2.6	2.6	2.7	2.8	2.9	3.0	3.1	3.1	3.0	2.9	2.8
78 - ϵ	Scorpii	2.3	-34	18.7	18.7	18.7	18.8	18.8	18.8	18.9	18.9	18.9	18.9	18.8	18.8
79 - η	Oph Sabik	2.4	-15	44.3	44.3	44.4	44.4	44.3	44.3	44.3	44.3	44.3	44.3	44.3	44.3
80 - α	Her Rasalgethi	3.1	+14	22.6	22.5	22.5	22.5	22.6	22.7	22.8	22.8	22.9	22.9	22.8	22.7
81 - λ	Sco Shaula	1.6	-37	6.6	6.6	6.6	6.6	6.6	6.7	6.7	6.7	6.8	6.7	6.7	6.6
82 - α	Oph Rasalhague	2.1	+12	33.1	33.0	32.9	33.0	33.0	33.1	33.2	33.3	33.3	33.3	33.3	33.2
83 - θ	Sco Sargas	1.9	-43	0.2	0.1	0.1	0.2	0.2	0.2	0.3	0.3	0.4	0.3	0.3	0.2
84 - γ	Dra Eltanin	2.2	+51	29.1	29.0	28.9	29.0	29.1	29.3	29.4	29.6	29.6	29.6	29.5	29.4
85 - ϵ	Sgr Kaus Australis	1.9	-34	22.7	22.7	22.6	22.6	22.6	22.6	22.7	22.7	22.7	22.7	22.7	22.6
86 - α	Lyr Vega	0.0	+38	47.6	47.5	47.4	47.4	47.5	47.7	47.8	48.0	48.0	48.0	48.0	47.9
87 - σ	Sgr Nunki	2.0	-26	16.9	16.9	16.9	16.9	16.8	16.8	16.8	16.8	16.8	16.8	16.8	16.8
88 - α	Aql Altair	0.8	+8	53.9	53.8	53.8	53.8	53.9	54.0	54.1	54.2	54.2	54.3	54.2	54.2
89 - γ	Cyg Sadr	2.2	+40	17.6	17.5	17.4	17.4	17.4	17.6	17.7	17.9	18.0	18.1	18.1	18.0
90 - α	Pav Peacock	1.9	-56	42.0	41.8	41.7	41.6	41.6	41.6	41.6	41.7	41.8	41.9	41.9	41.8
91 - α	Cyg Deneb	1.3	+45	19.3	19.2	19.1	19.0	19.1	19.2	19.4	19.5	19.7	19.8	19.8	19.7
92 - α	Cep Alderamin	2.4	+62	38.2	38.0	37.9	37.8	37.8	37.9	38.1	38.3	38.4	38.6	38.6	38.6
93 - ϵ	Peg Enif	0.7	+9	55.6	55.6	55.5	55.5	55.6	55.7	55.8	55.9	56.0	56.0	56.0	56.0
94 - δ	Cap Deneb Algedi	2.9	-16	4.6	4.6	4.6	4.5	4.4	4.3	4.3	4.2	4.2	4.3	4.3	4.3
95 - α	Gru Al Na'ir	1.7	-46	54.5	54.4	54.3	54.2	54.0	54.0	54.0	54.0	54.1	54.2	54.3	54.3
96 - β	Gruis	2.1	-46	49.7	49.6	49.5	49.3	49.2	49.1	49.1	49.1	49.2	49.3	49.4	49.4
97 - α	PsA Fomalhaut	1.2	-29	33.9	33.8	33.7	33.6	33.5	33.4	33.4	33.3	33.4	33.5	33.5	33.6
98 - β	Peg Scheat	2.4	+28	8.8	8.7	8.6	8.6	8.6	8.6	8.8	8.9	9.0	9.1	9.2	9.2
99 - α	Peg Markab	2.5	+15	16.0	16.0	15.9	15.9	15.9	16.0	16.1	16.3	16.4	16.4	16.4	16.4

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

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

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

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

DETERMINACIÓN DE LA LATITUD
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TABLA I

h.L.Υ	Corr.	h.L.Υ	Corr.	h.L.Υ	Corr.	h.L.Υ	Corr.	h.L.Υ	Corr.	h.L.Υ	Corr.	h.L.Υ	Corr.
0 00	-30.8	26 00	-39.6	52 00	-40.4	78 00	-33.1	104 00	-19.0	130 00	-1.1	156 00	+17.0
0 30	-31.0	26 30	-39.7	52 30	-40.4	78 30	-32.8	104 30	-18.7	130 30	-0.8	156 30	+17.3
1 00	-31.2	27 00	-39.8	53 00	-40.3	79 00	-32.6	105 00	-18.4	131 00	-0.4	157 00	+17.7
1 30	-31.5	27 30	-39.9	53 30	-40.2	79 30	-32.4	105 30	-18.1	131 30	0.0	157 30	+18.0
2 00	-31.7	28 00	-40.0	54 00	-40.1	80 00	-32.2	106 00	-17.7	132 00	+0.3	158 00	+18.3
2 30	-31.9	28 30	-40.0	54 30	-40.1	80 30	-32.0	106 30	-17.4	132 30	+0.7	158 30	+18.6
3 00	-32.1	29 00	-40.1	55 00	-40.0	81 00	-31.7	107 00	-17.1	133 00	+1.0	159 00	+18.9
3 30	-32.4	29 30	-40.2	55 30	-39.9	81 30	-31.5	107 30	-16.8	133 30	+1.4	159 30	+19.3
4 00	-32.6	30 00	-40.3	56 00	-39.8	82 00	-31.3	108 00	-16.4	134 00	+1.8	160 00	+19.6
4 30	-32.8	30 30	-40.3	56 30	-39.7	82 30	-31.0	108 30	-16.1	134 30	+2.1	160 30	+19.9
5 00	-33.0	31 00	-40.4	57 00	-39.6	83 00	-30.8	109 00	-15.8	135 00	+2.5	161 00	+20.2
5 30	-33.2	31 30	-40.5	57 30	-39.5	83 30	-30.6	109 30	-15.4	135 30	+2.8	161 30	+20.5
6 00	-33.4	32 00	-40.5	58 00	-39.4	84 00	-30.3	110 00	-15.1	136 00	+3.2	162 00	+20.8
6 30	-33.7	32 30	-40.6	58 30	-39.3	84 30	-30.1	110 30	-14.8	136 30	+3.5	162 30	+21.1
7 00	-33.9	33 00	-40.6	59 00	-39.2	85 00	-29.8	111 00	-14.4	137 00	+3.9	163 00	+21.4
7 30	-34.1	33 30	-40.7	59 30	-39.1	85 30	-29.6	111 30	-14.1	137 30	+4.3	163 30	+21.8
8 00	-34.3	34 00	-40.7	60 00	-39.0	86 00	-29.3	112 00	-13.8	138 00	+4.6	164 00	+22.1
8 30	-34.5	34 30	-40.8	60 30	-38.9	86 30	-29.1	112 30	-13.4	138 30	+5.0	164 30	+22.4
9 00	-34.6	35 00	-40.8	61 00	-38.8	87 00	-28.8	113 00	-13.1	139 00	+5.3	165 00	+22.7
9 30	-34.8	35 30	-40.9	61 30	-38.6	87 30	-28.6	113 30	-12.7	139 30	+5.7	165 30	+23.0
10 00	-35.0	36 00	-40.9	62 00	-38.5	88 00	-28.3	114 00	-12.4	140 00	+6.0	166 00	+23.3
10 30	-35.2	36 30	-40.9	62 30	-38.4	88 30	-28.1	114 30	-12.1	140 30	+6.4	166 30	+23.5
11 00	-35.4	37 00	-41.0	63 00	-38.3	89 00	-27.8	115 00	-11.7	141 00	+6.7	167 00	+23.8
11 30	-35.6	37 30	-41.0	63 30	-38.1	89 30	-27.5	115 30	-11.4	141 30	+7.1	167 30	+24.1
12 00	-35.8	38 00	-41.0	64 00	-38.0	90 00	-27.3	116 00	-11.0	142 00	+7.5	168 00	+24.4
12 30	-35.9	38 30	-41.0	64 30	-37.9	90 30	-27.0	116 30	-10.7	142 30	+7.8	168 30	+24.7
13 00	-36.1	39 00	-41.1	65 00	-37.7	91 00	-26.7	117 00	-10.3	143 00	+8.2	169 00	+25.0
13 30	-36.3	39 30	-41.1	65 30	-37.6	91 30	-26.4	117 30	-10.0	143 30	+8.5	169 30	+25.3
14 00	-36.4	40 00	-41.1	66 00	-37.4	92 00	-26.2	118 00	-9.6	144 00	+8.9	170 00	+25.6
14 30	-36.6	40 30	-41.1	66 30	-37.3	92 30	-25.9	118 30	-9.3	144 30	+9.2	170 30	+25.8
15 00	-36.8	41 00	-41.1	67 00	-37.1	93 00	-25.6	119 00	-8.9	145 00	+9.6	171 00	+26.1
15 30	-36.9	41 30	-41.1	67 30	-37.0	93 30	-25.3	119 30	-8.6	145 30	+9.9	171 30	+26.4
16 00	-37.1	42 00	-41.1	68 00	-36.8	94 00	-25.1	120 00	-8.2	146 00	+10.3	172 00	+26.7
16 30	-37.2	42 30	-41.1	68 30	-36.6	94 30	-24.8	120 30	-7.9	146 30	+10.6	172 30	+26.9
17 00	-37.4	43 00	-41.1	69 00	-36.5	95 00	-24.5	121 00	-7.5	147 00	+11.0	173 00	+27.2
17 30	-37.5	43 30	-41.1	69 30	-36.3	95 30	-24.2	121 30	-7.2	147 30	+11.3	173 30	+27.5
18 00	-37.7	44 00	-41.1	70 00	-36.1	96 00	-23.9	122 00	-6.8	148 00	+11.6	174 00	+27.7
18 30	-37.8	44 30	-41.1	70 30	-36.0	96 30	-23.6	122 30	-6.5	148 30	+12.0	174 30	+28.0
19 00	-38.0	45 00	-41.0	71 00	-35.8	97 00	-23.3	123 00	-6.1	149 00	+12.3	175 00	+28.3
19 30	-38.1	45 30	-41.0	71 30	-35.6	97 30	-23.0	123 30	-5.8	149 30	+12.7	175 30	+28.5
20 00	-38.2	46 00	-41.0	72 00	-35.4	98 00	-22.7	124 00	-5.4	150 00	+13.0	176 00	+28.8
20 30	-38.4	46 30	-41.0	72 30	-35.3	98 30	-22.4	124 30	-5.0	150 30	+13.3	176 30	+29.0
21 00	-38.5	47 00	-40.9	73 00	-35.1	99 00	-22.1	125 00	-4.7	151 00	+13.7	177 00	+29.3
21 30	-38.6	47 30	-40.9	73 30	-34.9	99 30	-21.8	125 30	-4.3	151 30	+14.0	177 30	+29.5
22 00	-38.7	48 00	-40.8	74 00	-34.7	100 00	-21.5	126 00	-4.0	152 00	+14.4	178 00	+29.8
22 30	-38.9	48 30	-40.8	74 30	-34.5	100 30	-21.2	126 30	-3.6	152 30	+14.7	178 30	+30.0
23 00	-39.0	49 00	-40.8	75 00	-34.3	101 00	-20.9	127 00	-3.3	153 00	+15.0	179 00	+30.3
23 30	-39.1	49 30	-40.7	75 30	-34.1	101 30	-20.6	127 30	-2.9	153 30	+15.4	179 30	+30.5
24 00	-39.2	50 00	-40.7	76 00	-33.9	102 00	-20.3	128 00	-2.5	154 00	+15.7	180 00	+30.8
24 30	-39.3	50 30	-40.6	76 30	-33.7	102 30	-20.0	128 30	-2.2	154 30	+16.0	180 30	+31.0
25 00	-39.4	51 00	-40.5	77 00	-33.5	103 00	-19.6	129 00	-1.8	155 00	+16.4	181 00	+31.2
25 30	-39.5	51 30	-40.5	77 30	-33.3	103 30	-19.3	129 30	-1.5	155 30	+16.7	181 30	+31.5
26 00	-39.6	52 00	-40.4	78 00	-33.1	104 00	-19.0	130 00	-1.1	156 00	+17.0	182 00	+31.7

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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	+31.7	208 00	+40.0	234 00	+40.1	260 00	+32.2	286 00	+17.7	312 00	-0.3	338 00	-18.3
182 30	+31.9	208 30	+40.0	234 30	+40.1	260 30	+32.0	286 30	+17.4	312 30	-0.7	338 30	-18.6
183 00	+32.1	209 00	+40.1	235 00	+40.0	261 00	+31.7	287 00	+17.1	313 00	-1.0	339 00	-18.9
183 30	+32.4	209 30	+40.2	235 30	+39.9	261 30	+31.5	287 30	+16.8	313 30	-1.4	339 30	-19.3
184 00	+32.6	210 00	+40.3	236 00	+39.8	262 00	+31.3	288 00	+16.4	314 00	-1.8	340 00	-19.6
184 30	+32.8	210 30	+40.3	236 30	+39.7	262 30	+31.0	288 30	+16.1	314 30	-2.1	340 30	-19.9
185 00	+33.0	211 00	+40.4	237 00	+39.6	263 00	+30.8	289 00	+15.8	315 00	-2.5	341 00	-20.2
185 30	+33.2	211 30	+40.5	237 30	+39.5	263 30	+30.6	289 30	+15.4	315 30	-2.8	341 30	-20.5
186 00	+33.4	212 00	+40.5	238 00	+39.4	264 00	+30.3	290 00	+15.1	316 00	-3.2	342 00	-20.8
186 30	+33.7	212 30	+40.6	238 30	+39.3	264 30	+30.1	290 30	+14.8	316 30	-3.5	342 30	-21.1
187 00	+33.9	213 00	+40.6	239 00	+39.2	265 00	+29.8	291 00	+14.4	317 00	-3.9	343 00	-21.4
187 30	+34.1	213 30	+40.7	239 30	+39.1	265 30	+29.6	291 30	+14.1	317 30	-4.3	343 30	-21.8
188 00	+34.3	214 00	+40.7	240 00	+39.0	266 00	+29.3	292 00	+13.8	318 00	-4.6	344 00	-22.1
188 30	+34.5	214 30	+40.8	240 30	+38.9	266 30	+29.1	292 30	+13.4	318 30	-5.0	344 30	-22.4
189 00	+34.6	215 00	+40.8	241 00	+38.8	267 00	+28.8	293 00	+13.1	319 00	-5.3	345 00	-22.7
189 30	+34.8	215 30	+40.9	241 30	+38.6	267 30	+28.6	293 30	+12.7	319 30	-5.7	345 30	-23.0
190 00	+35.0	216 00	+40.9	242 00	+38.5	268 00	+28.3	294 00	+12.4	320 00	-6.0	346 00	-23.3
190 30	+35.2	216 30	+40.9	242 30	+38.4	268 30	+28.1	294 30	+12.1	320 30	-6.4	346 30	-23.5
191 00	+35.4	217 00	+41.0	243 00	+38.3	269 00	+27.8	295 00	+11.7	321 00	-6.7	347 00	-23.8
191 30	+35.6	217 30	+41.0	243 30	+38.1	269 30	+27.5	295 30	+11.4	321 30	-7.1	347 30	-24.1
192 00	+35.8	218 00	+41.0	244 00	+38.0	270 00	+27.3	296 00	+11.0	322 00	-7.5	348 00	-24.4
192 30	+35.9	218 30	+41.0	244 30	+37.9	270 30	+27.0	296 30	+10.7	322 30	-7.8	348 30	-24.7
193 00	+36.1	219 00	+41.1	245 00	+37.7	271 00	+26.7	297 00	+10.3	323 00	-8.2	349 00	-25.0
193 30	+36.3	219 30	+41.1	245 30	+37.6	271 30	+26.4	297 30	+10.0	323 30	-8.5	349 30	-25.3
194 00	+36.4	220 00	+41.1	246 00	+37.4	272 00	+26.2	298 00	+9.6	324 00	-8.9	350 00	-25.6
194 30	+36.6	220 30	+41.1	246 30	+37.3	272 30	+25.9	298 30	+9.3	324 30	-9.2	350 30	-25.8
195 00	+36.8	221 00	+41.1	247 00	+37.1	273 00	+25.6	299 00	+8.9	325 00	-9.6	351 00	-26.1
195 30	+36.9	221 30	+41.1	247 30	+37.0	273 30	+25.3	299 30	+8.6	325 30	-9.9	351 30	-26.4
196 00	+37.1	222 00	+41.1	248 00	+36.8	274 00	+25.1	300 00	+8.2	326 00	-10.3	352 00	-26.7
196 30	+37.2	222 30	+41.1	248 30	+36.6	274 30	+24.8	300 30	+7.9	326 30	-10.6	352 30	-26.9
197 00	+37.4	223 00	+41.1	249 00	+36.5	275 00	+24.5	301 00	+7.5	327 00	-11.0	353 00	-27.2
197 30	+37.5	223 30	+41.1	249 30	+36.3	275 30	+24.2	301 30	+7.2	327 30	-11.3	353 30	-27.5
198 00	+37.7	224 00	+41.1	250 00	+36.1	276 00	+23.9	302 00	+6.8	328 00	-11.6	354 00	-27.7
198 30	+37.8	224 30	+41.1	250 30	+36.0	276 30	+23.6	302 30	+6.5	328 30	-12.0	354 30	-28.0
199 00	+38.0	225 00	+41.0	251 00	+35.8	277 00	+23.3	303 00	+6.1	329 00	-12.3	355 00	-28.3
199 30	+38.1	225 30	+41.0	251 30	+35.6	277 30	+23.0	303 30	+5.8	329 30	-12.7	355 30	-28.5
200 00	+38.2	226 00	+41.0	252 00	+35.4	278 00	+22.7	304 00	+5.4	330 00	-13.0	356 00	-28.8
200 30	+38.4	226 30	+41.0	252 30	+35.3	278 30	+22.4	304 30	+5.0	330 30	-13.3	356 30	-29.0
201 00	+38.5	227 00	+40.9	253 00	+35.1	279 00	+22.1	305 00	+4.7	331 00	-13.7	357 00	-29.3
201 30	+38.6	227 30	+40.9	253 30	+34.9	279 30	+21.8	305 30	+4.3	331 30	-14.0	357 30	-29.5
202 00	+38.7	228 00	+40.8	254 00	+34.7	280 00	+21.5	306 00	+4.0	332 00	-14.4	358 00	-29.8
202 30	+38.9	228 30	+40.8	254 30	+34.5	280 30	+21.2	306 30	+3.6	332 30	-14.7	358 30	-30.0
203 00	+39.0	229 00	+40.8	255 00	+34.3	281 00	+20.9	307 00	+3.3	333 00	-15.0	359 00	-30.3
203 30	+39.1	229 30	+40.7	255 30	+34.1	281 30	+20.6	307 30	+2.9	333 30	-15.4	359 30	-30.5
204 00	+39.2	230 00	+40.7	256 00	+33.9	282 00	+20.3	308 00	+2.5	334 00	-15.7	360 00	-30.8
204 30	+39.3	230 30	+40.6	256 30	+33.7	282 30	+20.0	308 30	+2.2	334 30	-16.0		
205 00	+39.4	231 00	+40.5	257 00	+33.5	283 00	+19.6	309 00	+1.8	335 00	-16.4		
205 30	+39.5	231 30	+40.5	257 30	+33.3	283 30	+19.3	309 30	+1.5	335 30	-16.7		
206 00	+39.6	232 00	+40.4	258 00	+33.1	284 00	+19.0	310 00	+1.1	336 00	-17.0		
206 30	+39.7	232 30	+40.4	258 30	+32.8	284 30	+18.7	310 30	+0.8	336 30	-17.3		
207 00	+39.8	233 00	+40.3	259 00	+32.6	285 00	+18.4	311 00	+0.4	337 00	-17.7		
207 30	+39.9	233 30	+40.2	259 30	+32.4	285 30	+18.1	311 30	0.0	337 30	-18.0		
208 00	+40.0	234 00	+40.1	260 00	+32.2	286 00	+17.7	312 00	-0.3	338 00	-18.3		

DETERMINACIÓN DE LA LATITUD
POR LA OBSERVACIÓN DE UNA ALTURA DE LA POLAR, 2011

TABLA II

(SIEMPRE POSITIVA)

hL $\cap$	Altura											
	10°	15°	20°	25°	30°	35°	40°	45°	50°	55°	60°	65°
°	/	/	/	/	/	/	/	/	/	/	/	/
0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2
20	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	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	0.1	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	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2
200	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	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	0.1	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	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2

TABLA III

hL $\cap$	Ene 1	Feb 1	Mar 1	Abr 1	May 1	Jun 1	Jul 1	Ago 1	Sep 1	Oct 1	Nov 1	Dic 1	Dic 32
°	/	/	/	/	/	/	/	/	/	/	/	/	/
0	+0.1	+0.1	0.0	-0.2	-0.3	-0.4	-0.4	-0.3	-0.1	+0.1	+0.3	+0.4	+0.5
20	+0.2	+0.2	+0.1	0.0	-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	-0.3	-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	+0.4	+0.3	+0.2	0.0	-0.2	-0.3	-0.3	-0.3	-0.2	-0.1
120	0.0	+0.1	+0.3	+0.4	+0.4	+0.3	+0.1	-0.1	-0.2	-0.3	-0.4	-0.3	-0.2
140	-0.1	+0.1	+0.2	+0.3	+0.4	+0.4	+0.2	+0.1	-0.1	-0.3	-0.4	-0.4	-0.4
160	-0.1	0.0	+0.1	+0.3	+0.4	+0.4	+0.3	+0.2	0.0	-0.2	-0.4	-0.5	-0.5
180	-0.1	-0.1	0.0	+0.2	+0.3	+0.4	+0.4	+0.3	+0.1	-0.1	-0.3	-0.4	-0.5
200	-0.2	-0.2	-0.1	0.0	+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	+0.3	+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	-0.4	-0.3	-0.2	0.0	+0.2	+0.3	+0.3	+0.3	+0.2	+0.1
300	0.0	-0.1	-0.3	-0.4	-0.4	-0.3	-0.1	+0.1	+0.2	+0.3	+0.4	+0.3	+0.2
320	+0.1	-0.1	-0.2	-0.3	-0.4	-0.4	-0.2	-0.1	+0.1	+0.3	+0.4	+0.4	+0.4
340	+0.1	0.0	-0.1	-0.3	-0.4	-0.4	-0.3	-0.2	0.0	+0.2	+0.4	+0.5	+0.5
360	+0.1	+0.1	0.0	-0.2	-0.3	-0.4	-0.4	-0.3	-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	+0.2	+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	-0.1	-0.2	-0.2	-0.2	-0.2	50
60	-0.2	-0.2	-0.2	-0.2	-0.3	-0.3	-0.3	-0.3	-0.3	-0.4	-0.4	-0.5	60
70	-0.3	-0.3	-0.3	-0.4	-0.4	-0.4	-0.4	-0.5	-0.5	-0.6	-0.7	-0.8	70
80	-0.4	-0.4	-0.5	-0.5	-0.5	-0.5	-0.6	-0.6	-0.7	-0.8	-0.9	-1.0	80
90	-0.5	-0.5	-0.5	-0.6	-0.6	-0.6	-0.7	-0.7	-0.8	-0.9	-1.0	-1.2	90
100	-0.6	-0.6	-0.6	-0.6	-0.7	-0.7	-0.8	-0.8	-0.9	-1.0	-1.2	-1.4	100
110	-0.6	-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	-0.7	-0.8	-0.8	-0.9	-1.0	-1.0	-1.2	-1.3	-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	-0.7	-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	-0.7	-0.8	-0.8	-0.9	-1.0	-1.1	-1.3	-1.5	150
160	-0.6	-0.6	-0.6	-0.7	-0.7	-0.7	-0.8	-0.8	-0.9	-1.0	-1.2	-1.4	160
170	-0.5	-0.6	-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	-0.6	-0.6	-0.6	-0.7	-0.8	-0.9	-1.1	180
190	-0.4	-0.4	-0.4	-0.4	-0.4	-0.4	-0.5	-0.5	-0.6	-0.6	-0.7	-0.8	190
200	-0.3	-0.3	-0.3	-0.3	-0.3	-0.3	-0.3	-0.4	-0.4	-0.4	-0.5	-0.6	200
210	-0.1	-0.1	-0.1	-0.2	-0.2	-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	+0.1	+0.2	+0.2	+0.2	+0.2	230
240	+0.2	+0.2	+0.2	+0.2	+0.2	+0.3	+0.3	+0.3	+0.3	+0.4	+0.4	+0.5	240
250	+0.3	+0.3	+0.3	+0.4	+0.4	+0.4	+0.4	+0.5	+0.5	+0.6	+0.6	+0.8	250
260	+0.4	+0.4	+0.5	+0.5	+0.5	+0.5	+0.6	+0.6	+0.7	+0.7	+0.8	+1.0	260
270	+0.5	+0.5	+0.5	+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	+0.6	+0.7	+0.7	+0.8	+0.8	+0.9	+1.0	+1.2	+1.4	280
290	+0.6	+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	+0.9	+1.0	+1.2	+1.3	+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	+0.7	+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, 2011**

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TABLA A				TABLA B = SOL (LIMBO INFERIOR)									
Depresión del horizonte				Semidiámetro, refracción y paralaje									
Elevación del observador	Corrección	Elevación del observador	Corrección	Altura apte. ⊙	Corrección	Altura apte. ⊙	Corrección	Altura apte. ⊙	Corrección	Altura apte. ⊙	Corrección	Correc. adicional (2011)	
°	'	°	'	°	'	°	'	°	'	°	'		
1.6	-2.3	12.7	-6.4	6 15	+8.2	8 45	+10.2	13 23	+12.2	25 59	+14.2	Ene 1	+0/3
1.7	-2.4	13.1	-6.5	6 21	+8.3	8 54	+10.3	13 44	+12.3	27 12	+14.3	Ene 23	+0/2
1.9	-2.5	13.6	-6.6	6 27	+8.4	9 05	+10.4	14 06	+12.4	28 32	+14.4	Feb 27	+0/1
2.0	-2.6	14.0	-6.7	6 33	+8.5	9 15	+10.5	14 29	+12.5	29 59	+14.5	Mar 23	0/0
2.2	-2.7	14.4	-6.8	6 40	+8.6	9 26	+10.6	14 53	+12.6	31 34	+14.6	Abr 13	-0/1
2.3	-2.8	14.8	-6.9	6 46	+8.7	9 37	+10.7	15 18	+12.7	33 19	+14.7	May 7	-0/2
2.5	-2.9	15.3	-7.0	6 53	+8.8	9 47	+10.8	15 45	+12.8	35 16	+14.8	Jun 12	-0/3
2.7	-3.0	15.7	-7.1	7 00	+8.9	10 00	+10.9	16 13	+12.9	37 25	+14.9	Jul 28	-0/2
2.9	-3.1	16.2	-7.2	7 06	+9.0	10 12	+11.0	16 43	+13.0	39 49	+15.0	Sep 2	-0/1
3.1	-3.2	16.6	-7.3	7 14	+9.1	10 25	+11.1	17 14	+13.1	42 30	+15.1	Sep 26	0/0
3.3	-3.3	17.1	-7.4	7 21	+9.2	10 38	+11.2	17 47	+13.2	45 30	+15.2	Oct 18	+0/1
3.5	-3.4	17.6	-7.5	7 28	+9.3	10 52	+11.3	18 23	+13.3	48 53	+15.3	Nov 10	+0/2
3.7	-3.5	18.0	-7.6	7 36	+9.4	11 06	+11.4	19 01	+13.4	52 43	+15.4	Dic 15	+0/3
3.9	-3.6	18.5	-7.7	7 44	+9.5	11 21	+11.5	19 41	+13.5	57 01	+15.5	Dic 31	
4.2	-3.7	19.0	-7.8	7 52	+9.6	11 36	+11.6	20 24	+13.6	61 51	+15.6		
4.4	-3.8	19.5	-7.9	8 00	+9.7	11 52	+11.7	21 10	+13.7	67 16	+15.7		
4.7	-3.9	20.0	-8.0	8 08	+9.8	12 09	+11.8	21 59	+13.8	73 14	+15.8		
4.9	-4.0	20.5	-8.1	8 17	+9.9	12 26	+11.9	22 53	+13.9	79 42	+15.9		
5.2	-4.1	21.0	-8.2	8 26	+10.0	12 44	+12.0	23 50	+14.0	86 30	+16.0		
5.4	-4.2	21.5	-8.3	8 35	+10.1	13 03	+12.1	24 52	+14.1	90 00			
5.7	-4.3	22.1	-8.4	8 45	+10.2	13 23	+12.2	25 59					
6.0	-4.4	22.6	-8.5										
6.2	-4.5	23.1	-8.6										
6.5	-4.6	23.7	-8.7										
6.8	-4.7	24.2	-8.8										
7.1	-4.8	24.8	-8.9										
7.4	-4.9	25.4	-9.0										
7.7	-5.0	25.9	-9.1										
8.0	-5.1	26.5	-9.2										
8.4	-5.2	27.1	-9.3										
8.7	-5.3	27.7	-9.4										
9.0	-5.4	28.3	-9.5										
9.4	-5.5	28.9	-9.6										
9.7	-5.6	29.5	-9.7										
10.1	-5.7	30.1	-9.8										
10.4	-5.8	30.7	-9.9										
10.8	-5.9	31.3	-10.0										
11.2	-6.0	32.0	-10.1										
11.6	-6.1	32.6	-10.2										
11.9	-6.2	33.3	-10.3										
12.3	-6.3	33.9	-10.4										
12.7		34.6											

TABLA C = PLANETAS Y ESTRELLAS									
Refracción					Paralaje (2011)				
Altura apte.	Corrección	Altura apte.	Corrección		Fechas	Venus para cualquier altura	Marte Altura aparente		
°	'	°	'				< 30°	> 30° < 60°	> 60°
6 30	-7.8	14 00	-3.8		Ene 1				
6 40	-7.6	15 00	-3.6						
6 50	-7.5	16 00	-3.3						
7 00	-7.3	17 00	-3.1						
7 15	-7.1	18 00	-3.0		Feb 5	+0/2	+0/1	0/0	0/0
7 30	-6.9	19 00	-2.8						
7 45	-6.7	20 00	-2.6						
8 00	-6.5	21 00	-2.5			+0/1	+0/1	0/0	0/0
8 15	-6.3	22 00	-2.4		Ago 14				
8 30	-6.2	24 00	-2.2			+0/1	+0/1	+0/1	0/0
8 45	-6.0	26 00	-2.0						
9 00	-5.9	28 00	-1.8		Dic 31				
9 20	-5.7	32 00	-1.6						
9 40	-5.5	36 00	-1.3						
10 00	-5.3	40 00	-1.2						
10 30	-5.1	45 00	-1.0						
11 00	-4.8	50 00	-0.8						
11 30	-4.6	60 00	-0.6						
12 00	-4.5	70 00	-0.4						
12 30	-4.3	80 00	-0.2						
13 00	-4.1	90 00	0.0						

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