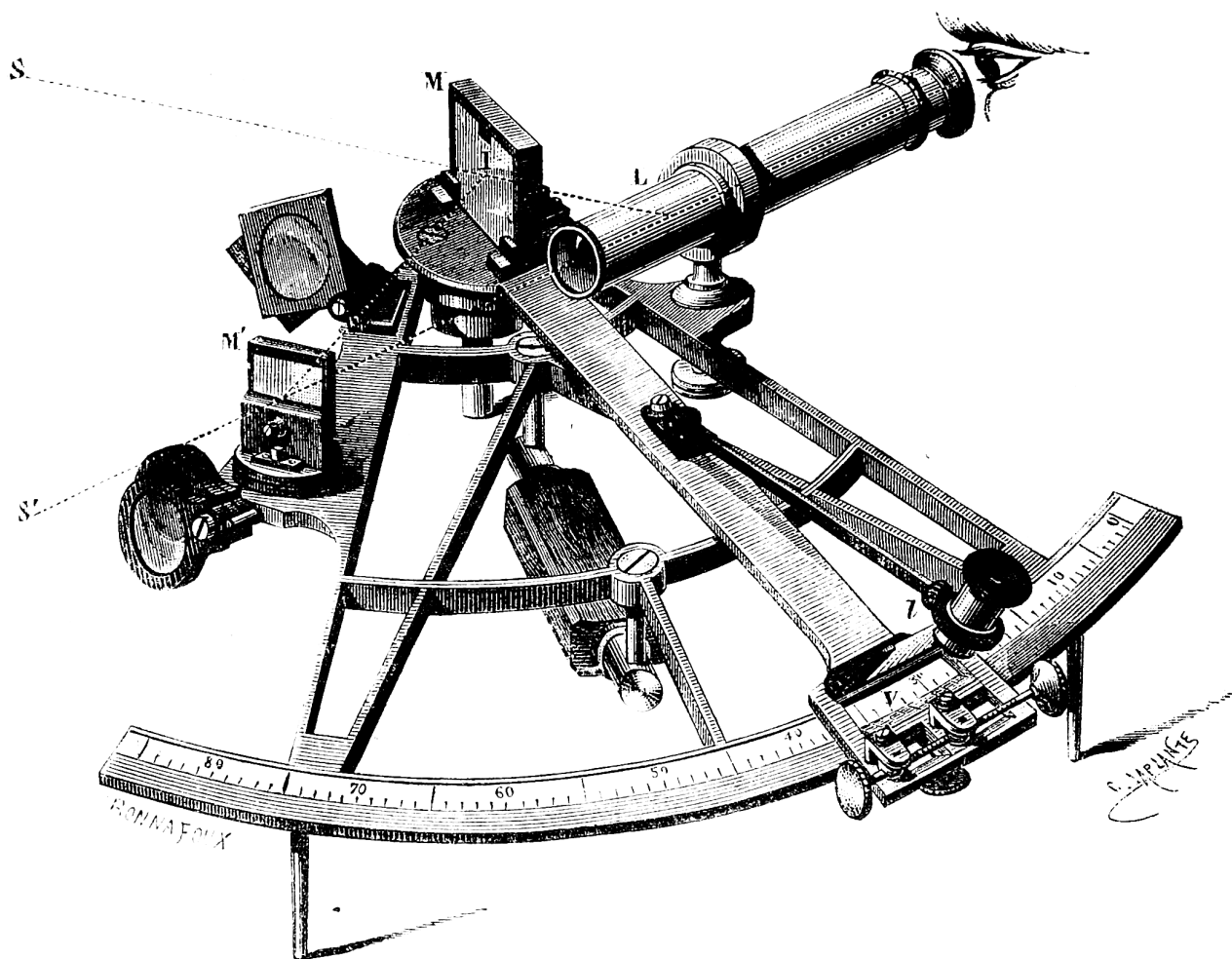




ALMANAQUE NÁUTICO PERSEIS 2006

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

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Introducción

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

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

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

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

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

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

UT	SOL				● LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna			Puesta de Luna			
	SD: 16'3 PMG: 12 ^h 03 ^m 6				Edad: 0 ^d 9 PHE { SD: 16'5 PMG: 13 ^h 32 ^m 4 ^h : 60'5 12 ^h : 60'6 20 ^h : 60'6 R°: 60 ^m														
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	m	h	m	m
0	179	10.3	-23	01.9	165	26.3	-26	22.4	60 N	7 09	8 06	9 02	11 02	5	16	14	119		
1	194	10.0		01.7	179	48.1	28	15.3	58	7 02	7 54	8 46	10 40	12	36	111			
2	209	09.7		01.5	194	10.0	29	08.0	56	6 56	44	31	21	19	16	54	105		
3	224	09.4		01.3	208	32.0	30	-26 00.5	54	50	36	19	10 05	24	17	09	100		
4	239	09.1		01.1	222	54.0	30	-25 52.8	52	44	28	8 08	9 52	27	22	96			
5	254	08.8	-23	00.9	237	16.1	31	-25 44.9	50	6 39	7 20	7 59	9 40	30	17	34	92		
6	269	08.5	-23	00.7	251	38.3	32	-25 36.8	45	6 28	7 05	7 38	9 15	36	17	57	86		
7	284	08.2		00.5	266	00.6	33	28.5	40	18	6 51	22	8 55	41	18	16	81		
8	299	07.9		00.3	280	23.0	34	20.1	35	08	40	7 08	38	45	32	77			
9	314	07.6	-23	00.1	294	45.5	35	11.5	30	6 00	30	6 56	8 24	47	18	46	73		
10	329	07.3	-22	59.9	309	08.0	35	-25 02.7	20	5 44	6 11	35	7 59	53	19	09	67		
11	344	07.0	-22	59.7	323	30.7	37	-24 53.7	10 N	5 28	5 54	6 17	7 37	57	19	28	63		
12	359	06.7	-22	59.5	337	53.4	37	-24 44.5	0	5 11	5 37	6 00	7 17	61	19	47	58		
13	14	06.4		59.3	352	16.2	38	35.2	10 S	4 53	5 20	5 43	6 57	65	20	05	54		
14	29	06.1		59.0	6	39.2	40	25.7	20	30	4 59	24	36	68	24	50			
15	44	05.8		58.8	21	02.2	40	16.0	30	4 02	35	5 02	6 11	73	20	47	43		
16	59	05.5		58.6	35	25.3	41	-24 06.1	35	3 43	20	4 50	5 56	76	21	00	40		
17	74	05.2	-22	58.4	49	48.5	42	-23 56.1	40	3 21	4 02	4 35	5 39	80	21	14	37		
18	89	04.9	-22	58.2	64	11.8	43	-23 45.9	45	2 51	3 40	4 17	5 18	85	21	32	32		
19	104	04.6		58.0	78	35.3	45	35.6	50	2 07	3 11	3 55	4 52	91	21	53	26		
20	119	04.3		57.8	92	58.8	45	25.0	52	1 41	2 56	45	39	94	22	04	22		
21	134	04.0		57.5	107	22.4	46	14.4	54	1 00	39	33	24	98	15	19			
22	149	03.7		57.3	121	46.1	47	-23 03.5	56	** ** *	2 18	19	4 07	103	28	15			
23	164	03.5		57.1	136	10.0	49	-22 52.5	58	** ** *	1 50	3 02	3 46	110	22	43	10		
24	179	03.2	-22	56.9	150	33.9	49	-22 41.4	60 S	** ** *	1 06	2 43	3 19	120	23	01	3		

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

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16:3 PMG: 12 ^h 04 ^m 0			Edad: 1 ^d 9	PHE { 4 ^h : 60'6 12 ^h : 60'6 20 ^h : 60'5 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	h m m
0	179	03.2	-22 56.9	150	33.9	-22 41.4		60 N	15 06	16 03	16 59	11 07 1	18 13 112		
1	194	02.9		164	58.0	51 30.1	113	58	23	14	17 06	10 52 7	27 106		
2	209	02.6		179	22.2	52 18.6	115	56	37	24	13	40 11	39 100		
3	224	02.3		193	46.4	52 -22 07.0	116	54	15 49	33	19	29 15	49 97		
4	239	02.0		208	10.8	54 -21 55.3	117	52	16 00	41	24	19 18	18 58 93		
5	254	01.7	-22 55.8	222	35.3	55 -21 43.4	119	50	16 10	16 48	17 29	10 10 22	19 06 90		
6	269	01.4	-22 55.6	236	59.9	56 -21 31.3	121	45	16 30	17 03	17 41	9 51 28	19 23 84		
7	284	01.1		251	24.6	57 19.2	121	40	16 46	17	17 50	36 32	37 78		
8	299	00.8		265	49.5	59 -21 06.9	123	35	17 00	28	18 00	23 36	49 74		
9	314	00.5		280	14.4	59 -20 54.4	125	30	12	38	08	9 11 40	19 59 70		
10	329	00.2		294	39.5	61 41.8	126	20	33	17 57	24	8 52 46	20 16 64		
11	343	59.9	-22 54.4	309	04.6	61 -20 29.1	127	10 N	17 51	18 13	18 40	8 34 52	20 31 59		
12	358	59.6	-22 54.2	323	29.9	63 -20 16.3	128	0	18 08	18 30	18 56	8 18 56	20 45 54		
13	13	59.4		337	55.3	64 -20 03.3	130	10 S	25	18 48	19 15	8 02 61	20 59 49		
14	28	59.1		352	20.8	65 -19 50.2	131	20	18 43	19 08	19 37	7 44 66	21 14 43		
15	43	58.8		6	46.4	66 37.0	132	30	19 05	32	20 05	24 72	30 38		
16	58	58.5		21	12.2	68 23.7	133	35	18	19 47	23	7 12 76	40 34		
17	73	58.2	-22 53.1	35	38.0	68 -19 10.2	135	40	19 32	20 05	20 46	6 59 79	21 51 30		
18	88	57.9	-22 52.8	50	04.0	70 -18 56.6	136	45	19 50	20 27	21 15	6 43 84	22 04 25		
19	103	57.6		64	30.0	70 42.9	137	50	20 11	20 55	21 59	23 91	19 19		
20	118	57.3		78	56.2	72 29.1	138	52	22	21 10	22 24	13 94	26 17		
21	133	57.0		93	22.5	73 15.2	139	54	34	27	23 03	6 02 98	34 13		
22	148	56.7		107	48.9	74 -18 01.2	140	56	20 47	21 48	** **	5 50 103	43 10		
23	163	56.4		117	15.4	75 -17 47.1	141	58	21 03	22 15	** **	36 108	22 53 6		
24	178	56.2	-22 51.4	136	42.0	76 -17 32.8	143	60 S	21 23	22 57	** **	5 19 114	23 04 1		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG		Mag: -4.5			Mag: -0.6			Mag: -1.9			Mag: -0.1			
	17 ^h 11 ^m 2		PMG: 13 ^h 17 ^m			PMG: 19 ^h 45 ^m			PMG: 7 ^h 58 ^m			PMG: 2 ^h 04 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	°	'	°	'	°	°	'	°	°	'	°	
0	101	29.5	159	56.4	-17 38.3	63	06.1	+16 42.7	240	08.7	-14 50.0	329	00.9	+18 23.2	
1	116	32.0	174	59.9		78	08.0	42.9	255	10.7		344	03.5	23.3	
2	131	34.4	190	03.4		93	09.8	43.1	270	12.8		359	06.1	23.3	
3	146	36.9	205	06.9		108	11.7	43.4	285	14.9		14	08.7	23.4	
4	161	39.4	220	10.4		123	13.5	43.6	300	16.9		29	11.4	23.4	
5	176	41.8	235	13.9	-17 36.0	138	15.4	+16 43.8	315	19.0	-14 50.6	44	14.0	+18 23.5	
6	191	44.3	250	17.5	-17 35.6	153	17.2	+16 44.1	330	21.1	-14 50.7	59	16.6	+18 23.5	
7	206	46.8	265	21.0		168	19.0	44.3	345	23.2		74	19.3	23.6	
8	221	49.2	280	24.5		183	20.9	44.5	0	25.2		89	21.9	23.6	
9	236	51.7	295	28.1		198	22.7	44.8	15	27.3		104	24.5	23.7	
10	251	54.2	310	31.6		213	24.6	45.0	30	29.4		119	27.2	23.7	
11	266	56.6	325	35.2	-17 33.3	228	26.4	+16 45.2	45	31.4	-14 51.3	134	29.8	+18 23.8	
12	281	59.1	340	38.7	-17 32.9	243	28.2	+16 45.4	60	33.5	-14 51.4	149	32.4	+18 23.8	
13	297	01.6	355	42.3		258	30.1	45.7	75	35.6		164	35.1	23.9	
14	312	04.0	10	45.8		273	31.9	45.9	90	37.7		179	37.7	23.9	
15	327	06.5	25	49.4		288	33.7	46.1	105	39.7		194	40.3	24.0	
16	342	08.9	40	53.0		303	35.6	46.4	120	41.8		209	43.0	24.0	
17	357	11.4	55	56.5	-17 30.7	318	37.4	+16 46.6	135	43.9	-14 51.9	224	45.6	+18 24.1	
18	12	13.9	71	00.1	-17 30.2	333	39.2	+16 46.8	150	45.9	-14 52.1	239	48.2	+18 24.1	
19	27	16.3	86	03.7		348	41.1	47.1	165	48.0		254	50.9	24.2	
20	42	18.8	101	07.3		3	42.9	47.3	180	50.1		269	53.5	24.2	
21	57	21.3	116	10.8		18	44.7	47.5	195	52.2		284	56.1	24.3	
22	72	23.7	131	14.4		33	46.5	47.8	210	54.2		299	58.8	24.3	
23	87	26.2	146	18.0		48	48.4	48.0	225	56.3		315	01.4	24.4	
24	102	28.7	161	21.6	-17 27.6	63	50.2	+16 48.3	240	58.4	-14 52.7	330	04.0	+18 24.4	
Dif	—		+36 +4			+18 +2			+21 -1			+26 +1			

UT	SOL				● LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16'3 PMG: 12 ^h 04 ^m 5				Edad: 2 ^d 9 PHE { SD: 16'5 PMG: 15 ^h 27 ^m R°: 50 ^m													
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m
0	178	56.2	-22	51.4	136	42.0	-17	32.8	60 N	7 09	8 05	9 01	11 08	0	20 05	104		
1	193	55.9		51.2	151	08.8	78	18.5	58	7 02	7 54	8 45	10 59	4	13 99			
2	208	55.6		50.9	165	35.6	78	-17 04.1	56	6 55	44	31	51	8	19 96			
3	223	55.3		50.7	180	02.6	80	-16 49.6	54	50	35	19	44	11	26 92			
4	238	55.0		50.5	194	29.6	80	34.9	52	44	27	8 08	37	15	31 89			
5	253	54.7	-22	50.2	208	56.8	82	-16 20.2	50	6 39	7 20	7 58	10 32	16	20 36	86		
6	268	54.4	-22	50.0	223	24.1	83	-16 05.4	45	6 28	7 05	7 38	10 19	23	20 47	80		
7	283	54.1		49.7	237	51.4	83	-15 50.5	40	18	6 52	22	10 08	28	20 55	75		
8	298	53.8		49.5	252	18.9	85	35.6	35	09	40	7 08	9 59	32	21 03	70		
9	313	53.6		49.3	266	46.5	86	20.5	30	6 00	30	6 56	51	36	09 67			
10	328	53.3		49.0	281	14.2	87	-15 05.4	20	5 44	6 12	36	38	41	20 61			
11	343	53.0	-22	48.8	295	42.0	88	-14 50.1	10 N	5 29	5 55	6 18	9 26	46	21 30	55		
12	358	52.7	-22	48.5	310	09.9	89	-14 34.8	0	5 12	5 38	6 01	9 14	52	21 39	50		
13	13	52.4		48.3	324	37.9	90	19.4	10 S	4 54	21	5 44	9 03	56	48	45		
14	28	52.1		48.0	339	05.9	90	-14 04.0	20	32	5 01	25	8 50	62	21 57	40		
15	43	51.8		47.8	353	34.1	92	-13 48.5	30	4 03	4 36	5 04	36	69	22 08	33		
16	58	51.5		47.5	8	02.4	93	32.9	35	3 45	22	4 51	28	72	14 30			
17	73	51.2	-22	47.3	22	30.8	94	-13 17.2	40	3 23	4 04	4 36	8 18	77	22 21	26		
18	88	51.0	-22	47.0	36	59.3	95	-13 01.5	45	2 53	3 42	4 19	8 07	82	22 29	21		
19	103	50.7		46.8	51	27.8	95	-12 45.7	50	2 10	3 13	3 57	7 54	88	38 16			
20	118	50.4		46.5	65	56.5	97	29.8	52	1 45	2 59	47	47	91	43 13			
21	133	50.1		46.3	80	25.3	98	-12 13.9	54	1 06	42	35	40	95	47 11			
22	148	49.8		46.0	94	54.1	98	-11 58.0	56	** **	2 21	21	33	97	53 7			
23	163	49.5		45.8	109	23.0	99	41.9	58	** **	1 54	3 05	24	102	22 59	3		
24	178	49.2	-22	45.5	123	52.1	101	-11 25.9	60 S	** **	1 12	2 46	7 13	108	23 05	0		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 17 ^h 07 ^m 3		Mag: -4.4 PMG: 13 ^h 11 ^m		Mag: -0.5 PMG: 19 ^h 42 ^m		Mag: -1.9 PMG: 7 ^h 55 ^m		Mag: -0.1 PMG: 1 ^h 59 ^m	
	hG ♀	Dec	hG ♀	Dec	hG ♂	Dec	hG ♀	Dec	hG ♀	Dec
h	°	'	°	'	°	'	°	'	°	'
0	102	28.7	161	21.6	-17	27.6	63	50.2	+16	48.3
1	117	31.1	176	25.2		27.1	78	52.0		48.5
2	132	33.6	191	28.8		26.7	93	53.8		48.7
3	147	36.1	206	32.4		26.3	108	55.7		49.0
4	162	38.5	221	36.0		25.8	123	57.5		49.2
5	177	41.0	236	39.7	-17	25.4	138	59.3	+16	49.4
6	192	43.4	251	43.3	-17	25.0	154	01.1	+16	49.7
7	207	45.9	266	46.9		24.5	169	02.9		49.9
8	222	48.4	281	50.5		24.1	184	04.8		50.1
9	237	50.8	296	54.2		23.7	199	06.6		50.4
10	252	53.3	311	57.8		23.2	214	08.4		50.6
11	267	55.8	327	01.4	-17	22.8	229	10.2	+16	50.8
12	282	58.2	342	05.1	-17	22.4	244	12.0	+16	51.1
13	298	00.7	357	08.7		21.9	259	13.8		51.3
14	313	03.2	12	12.4		21.5	274	15.6		51.6
15	328	05.6	27	16.0		21.1	289	17.5		51.8
16	343	08.1	42	19.7		20.7	304	19.3		52.0
17	358	10.6	57	23.3	-17	20.2	319	21.1	+16	52.3
18	13	13.0	72	27.0	-17	19.8	334	22.9	+16	52.5
19	28	15.5	87	30.7		19.4	349	24.7		52.7
20	43	17.9	102	34.4		18.9	4	26.5		53.0
21	58	20.4	117	38.0		18.5	19	28.3		53.2
22	73	22.9	132	41.7		18.1	34	30.1		53.5
23	88	25.3	147	45.4		17.7	49	31.9		53.7
24	103	27.8	162	49.1	-17	17.3	64	33.7	+16	53.9
Dif	—		+36		+4		+18		+2	
							+21		-1	
									+26	
									+1	

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna					
	SD: 16:3 PMG: 12 ^h 04 ^m 9			Edad: 3 ^d 9 PHE { SD: 16:4 PMG: 16 ^h 17 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	m			
0	178	49.2	-22	45.5	123	52.1	-11	25.9	60 N	15 10	16 06	17 02	11 08	**	21 49 100			
1	193	49.0		45.2	138	21.2 ¹⁰¹	-11	09.7 ¹⁶²	58	26	17	09	11 03	3	52 96			
2	208	48.7		45.0	152	50.4 ¹⁰²	-10	53.5 ¹⁶²	56	40	26	15	10 59	6	55 92			
3	223	48.4		44.7	167	19.7 ¹⁰³		37.3 ¹⁶²	54	15 52	35	21	55	9	21 58 88			
4	238	48.1		44.5	181	49.0 ¹⁰³		21.0 ¹⁶³	52	16 02	43	26	52	12	22 00 85			
5	253	47.8	-22	44.2	196	18.5 ¹⁰⁵	-10	04.7 ¹⁶³	50	16 12	16 50	17 31	10 48	15	22 02 83			
6	268	47.5	-22	43.9	210	48.0 ¹⁰⁵	-9	48.3 ¹⁶⁴	45	16 32	17 05	17 42	10 42	20	22 07 77			
7	283	47.2		43.7	225	17.6 ¹⁰⁶		31.9 ¹⁶⁴	40	16 48	18	17 52	36	24	10 72			
8	298	47.0		43.4	239	47.3 ¹⁰⁷	-9	15.5 ¹⁶⁴	35	17 02	30	18 01	31	28	13 68			
9	313	46.7		43.2	254	17.0 ¹⁰⁷	-8	59.0 ¹⁶⁵	30	13	40	09	27	31	16 65			
10	328	46.4		42.9	268	46.9 ¹⁰⁹		42.5 ¹⁶⁵	20	34	17 58	25	19	38	21 58			
11	343	46.1	-22	42.6	283	16.8 ¹⁰⁹	-8	25.9 ¹⁶⁶	10 N	17 52	18 15	18 41	10 12	44	22 25 53			
12	358	45.8	-22	42.4	297	46.7 ¹⁰⁹	-8	09.4 ¹⁶⁵	0	18 09	18 31	18 57	10 06	48	22 29 48			
13	13	45.5		42.1	312	16.8 ¹¹¹	-7	52.8 ¹⁶⁶	10 S	26	18 49	19 16	9 59	54	33 42			
14	28	45.3		41.8	326	46.9 ¹¹¹		36.1 ¹⁶⁷	20	18 44	19 08	19 37	52	60	37 37			
15	43	45.0		41.6	341	17.1 ¹¹²		19.4 ¹⁶⁷	30	19 05	32	20 05	45	65	41 31			
16	58	44.7		41.3	355	47.4 ¹¹³	-7	02.8 ¹⁶⁶	35	18	19 47	23	40	69	44 28			
17	73	44.4	-22	41.0	10	17.7 ¹¹³	-6	46.0 ¹⁶⁸	40	19 32	20 05	20 46	9 35	73	22 47 24			
18	88	44.1	-22	40.8	24	48.1 ¹¹⁴	-6	29.3 ¹⁶⁷	45	19 50	20 26	21 15	9 29	78	22 50 19			
19	103	43.8		40.5	39	18.5 ¹¹⁴	-6	12.6 ¹⁶⁷	50	20 11	20 55	21 57	22	84	54 14			
20	118	43.6		40.2	53	49.0 ¹¹⁵	-5	55.8 ¹⁶⁸	52	21	21 09	22 22	18	87	56 11			
21	133	43.3		39.9	68	19.6 ¹¹⁶		39.0 ¹⁶⁸	54	33	26	22 58	15	89	22 58 9			
22	148	43.0		39.7	82	50.2 ¹¹⁶		22.2 ¹⁶⁸	56	20 46	21 46	** ** *	10	94	23 00 6			
23	163	42.7		39.4	97	20.9 ¹¹⁷	-5	05.4 ¹⁶⁸	58	21 02	22 13	** ** *	06	97	02 3			
24	178	42.4	-22	39.1	111	51.6 ¹¹⁷	-4	48.5 ¹⁶⁹	60 S	21 21	22 52	** ** *	9 01	101	23 05 **			
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 17 ^h 03 ^m 3		Mag: -4.4 PMG: 13 ^h 05 ^m			Mag: -0.5 PMG: 19 ^h 39 ^m			Mag: -1.9 PMG: 7 ^h 52 ^m			Mag: -0.1 PMG: 1 ^h 55 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♎	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	103	27.8	162	49.1	-17	17.3	64	33.7	+16	53.9	241	48.2	-14	55.4	331	07.3	+18	25.7
1	118	30.3	177	52.8		16.8	79	35.5		54.2	256	50.3		55.5	346	09.9		25.7
2	133	32.7	192	56.5		16.4	94	37.3		54.4	271	52.3		55.6	1	12.6		25.8
3	148	35.2	208	00.2		16.0	109	39.1		54.7	286	54.4		55.8	16	15.2		25.8
4	163	37.7	223	03.9		15.6	124	40.9		54.9	301	56.5		55.9	31	17.9		25.9
5	178	40.1	238	07.6	-17	15.1	139	42.7	+16	55.1	316	58.6	-14	56.0	46	20.5	+18	25.9
6	193	42.6	253	11.3	-17	14.7	154	44.5	+16	55.4	332	00.6	-14	56.1	61	23.1	+18	26.0
7	208	45.0	268	15.0		14.3	169	46.3		55.6	347	02.7		56.2	76	25.8		26.0
8	223	47.5	283	18.7		13.9	184	48.1		55.9	2	04.8		56.3	91	28.4		26.1
9	238	50.0	298	22.4		13.5	199	49.9		56.1	17	06.9		56.4	106	31.0		26.1
10	253	52.4	313	26.1		13.1	214	51.7		56.3	32	09.0		56.5	121	33.7		26.2
11	268	54.9	328	29.9	-17	12.6	229	53.5	+16	56.6	47	11.0	-14	56.6	136	36.3	+18	26.2
12	283	57.4	343	33.6	-17	12.2	244	55.3	+16	56.8	62	13.1	-14	56.8	151	39.0	+18	26.3
13	298	59.8	358	37.3		11.8	259	57.1		57.1	77	15.2		56.9	166	41.6		26.3
14	314	02.3	13	41.1		11.4	274	58.8		57.3	92	17.3		57.0	181	44.2		26.4
15	329	04.8	28	44.8		11.0	290	00.6		57.6	107	19.4		57.1	196	46.9		26.4
16	344	07.2	43	48.5		10.6	305	02.4		57.8	122	21.4		57.2	211	49.5		26.5
17	359	09.7	58	52.3	-17	10.2	320	04.2	+16	58.0	137	23.5	-14	57.3	226	52.2	+18	26.5
18	14	12.2	73	56.0	-17	09.7	335	06.0	+16	58.3	152	25.6	-14	57.4	241	54.8	+18	26.6
19	29	14.6	88	59.8		09.3	350	07.8		58.5	167	27.7		57.5	256	57.4		26.6
20	44	17.1	104	03.5		08.9	5	09.6		58.8	182	29.8		57.6	272	00.1		26.7
21	59	19.5	119	07.3		08.5	20	11.4		59.0	197	31.8		57.7	287	02.7		26.7
22	74	22.0	134	11.1		08.1	35	13.1		59.3	212	33.9		57.9	302	05.4		26.8
23	89	24.5	149	14.8		07.7	50	14.9		59.5	227	36.0		58.0	317	08.0		26.9
24	104	26.9	164	18.6	-17	07.3	65	16.7	+16	59.7	242	38.1	-14	58.1	332	10.6	+18	26.9
Dif	—		+37			+4	+18		+2	+21		-1		+26		+1		

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna														
	SD: 16/3 PMG: 12 ^h 05 ^m 4			Edad: 4 ^d 9 SD: 16/2 PMG: 17 ^h 05 ^m	PHE { 4 ^h : 59/5 12 ^h : 59/3 20 ^h : 59/1 R°: 47 ^m																						
	hG ☉	Dec				hG ☾		Dif	Dec		Dif	Náutico	Civil	Hora	R°	Hora	R°										
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	m												
0	178	42.4	-22	39.1	111	51.6	-4	48.5	60 N	7 08	8 04	9 00	11 07	**	23 29 97												
1	193	42.2		38.8	126	22.4 ¹¹⁸		31.7 ¹⁶⁸	58	7 01	7 53	8 44	06	3	28 93												
2	208	41.9		38.6	140	53.2 ¹¹⁸	-4	14.9 ¹⁶⁸	56	6 55	43	30	05	6	27 90												
3	223	41.6		38.3	155	24.1 ¹¹⁹	-3	58.0 ¹⁶⁹	54	49	35	18	04	9	26 8												
4	238	41.3		38.0	169	55.1 ¹²⁰		41.1 ¹⁶⁹	52	44	27	8 07	04	11	25 84												
5	253	41.0	-22	37.7	184	26.1 ¹²⁰	-3	24.3 ¹⁶⁸	50	6 39	7 20	7 58	11 03	14	23 25 81												
6	268	40.8	-22	37.5	198	57.1 ¹²⁰	-3	07.4 ¹⁶⁹	45	6 28	7 05	7 38	11 02	19	23 24 75												
7	283	40.5		37.2	213	28.2 ¹²¹	-2	50.5 ¹⁶⁹	40	18	6 52	22	11 00	24	22 71												
8	298	40.2		36.9	227	59.3 ¹²¹		33.7 ¹⁶⁸	35	09	41	7 09	10 59	28	21 67												
9	313	39.9		36.6	242	30.5 ¹²²	-2	16.8 ¹⁶⁹	30	6 01	31	6 57	58	31	21 63												
10	328	39.6		36.3	257	01.7 ¹²²	-2	00.0 ¹⁶⁸	20	5 45	6 12	36	57	37	19 57												
11	343	39.4	-22	36.0	271	32.9 ¹²²	-1	43.1 ¹⁶⁹	10 N	5 30	5 56	6 18	10 56	41	23 18 51												
12	358	39.1	-22	35.8	286	04.2 ¹²³	-1	26.3 ¹⁶⁸	0	5 13	5 39	6 02	10 54	47	23 17 46												
13	13	38.8		35.5	300	35.6 ¹²⁴	-1	09.4 ¹⁶⁹	10 S	4 55	22	5 45	53	52	15 42												
14	28	38.5		35.2	315	06.9 ¹²³	-0	52.6 ¹⁶⁸	20	33	5 02	26	52	57	14 37												
15	43	38.2		34.9	329	38.3 ¹²⁴		35.8 ¹⁶⁸	30	4 05	4 38	5 05	50	64	12 31												
16	58	38.0		34.6	344	09.7 ¹²⁴		19.0 ¹⁶⁸	35	3 47	23	4 53	49	67	12 27												
17	73	37.7	-22	34.3	358	41.2 ¹²⁵	-0	02.2 ¹⁶⁸	40	3 25	4 06	4 38	10 48	71	23 11 23												
18	88	37.4	-22	34.0	13	12.7 ¹²⁵	+0	14.6 ¹⁶⁸	45	2 56	3 44	4 21	10 47	76	23 09 20												
19	103	37.1		33.8	27	44.2 ¹²⁵		31.4 ¹⁶⁸	50	2 13	16	4 00	46	81	08 14												
20	118	36.9		33.5	42	15.7 ¹²⁵	+0	48.1 ¹⁶⁷	52	1 49	3 02	3 49	45	84	07 12												
21	133	36.6		33.2	56	47.3 ¹²⁶	+1	04.8 ¹⁶⁷	54	1 12	2 45	38	44	88	07 9												
22	148	36.3		32.9	71	18.9 ¹²⁶		21.5 ¹⁶⁷	56	** **	2 25	24	44	90	06 6												
23	163	36.0		32.6	85	50.5 ¹²⁶		38.2 ¹⁶⁷	58	** **	1 58	3 08	43	94	05 3												
24	178	35.7	-22	32.3	100	22.1 ¹²⁶	+1	54.9 ¹⁶⁷	60 S	** **	1 19	2 50	10 42	98	23 04 **												
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO														
	PMG 16 ^h 59 ^m 4			Mag: -4.3 PMG: 12 ^h 59 ^m			Mag: -0.5 PMG: 19 ^h 37 ^m			Mag: -1.9 PMG: 7 ^h 48 ^m			Mag: -0.1 PMG: 1 ^h 51 ^m														
	hG ♈		Dec	hG ♀		Dec	hG ♂		Dec	hG ♃		Dec	hG ♄		Dec												
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°												
0	104	26.9	164	18.6	-17	07.3	65	16.7	+16	59.7	242	38.1	-14	58.1	332	10.6	+18	26.9									
1	119	29.4	179	22.4		06.9	80	18.5	+17	00.0	257	40.2		58.2	347	13.3		27.0									
2	134	31.9	194	26.2		06.5	95	20.3	+17	00.2	272	42.3		58.3	2	15.9		27.0									
3	149	34.3	209	29.9		06.1	110	22.0		00.5	287	44.3		58.4	17	18.6		27.1									
4	164	36.8	224	33.7		05.7	125	23.8		00.7	302	46.4		58.5	32	21.2		27.1									
5	179	39.3	239	37.5	-17	05.3	140	25.6	+17	01.0	317	48.5	-14	58.6	47	23.8	+18	27.2									
6	194	41.7	254	41.3	-17	04.8	155	27.4	+17	01.2	332	50.6	-14	58.7	62	26.5	+18	27.2									
7	209	44.2	269	45.1		04.4	170	29.1		01.5	347	52.7		58.8	77	29.1		27.3									
8	224	46.7	284	48.9		04.0	185	30.9		01.7	2	54.7		58.9	92	31.8		27.3									
9	239	49.1	299	52.7		03.6	200	32.7		01.9	17	56.8		59.1	107	34.4		27.4									
10	254	51.6	314	56.5		03.2	215	34.5		02.2	32	58.9		59.2	122	37.0		27.4									
11	269	54.0	330	00.3	-17	02.8	230	36.2	+17	02.4	48	01.0	-14	59.3	137	39.7	+18	27.5									
12	284	56.5	345	04.1	-17	02.4	245	38.0	+17	02.7	63	03.1	-14	59.4	152	42.3	+18	27.5									
13	299	59.0	0	07.9		02.0	260	39.8		02.9	78	05.2		59.5	167	45.0		27.6									
14	315	01.4	15	11.7		01.6	275	41.5		03.2	93	07.3		59.6	182	47.6		27.6									
15	330	03.9	30	15.5		01.2	290	43.3		03.4	108	09.3		59.7	197	50.2		27.7									
16	345	06.4	45	19.4		00.8	305	45.1		03.7	123	11.4		59.8	212	52.9		27.7									
17	0	08.8	60	23.2	-17	00.4	320	46.8	+17	03.9	138	13.5	-14	59.9	227	55.5	+18	27.8									
18	15	11.3	75	27.0	-17	00.0	335	48.6	+17	04.2	153	15.6	-15	00.0	242	58.2	+18	27.8									
19	30	13.8	90	30.9	-16	59.7	350	50.4		04.4	168	17.7	-15	00.1	258	00.8		27.9									
20	45	16.2	105	34.7		59.3	5	52.1		04.7	183	19.8		00.3	273	03.5		28.0									
21	60	18.7	120	38.5		58.9	20	53.9		04.9	198	21.8		00.4	288	06.1		28.0									
22	75	21.1	135	42.4		58.5	35	55.6		05.2	213	23.9		00.5	303	08.7		28.1									
23	90	23.6	150	46.2		58.1	50	57.4		05.4	228	26.0		00.6	318	11.4		28.1									
24	105	26.1	165	50.1	-16	57.7	65	59.2	+17	05.6	243	28.1	-15	00.7	333	14.0	+18	28.2									
Dif	—			+38			+4			+18			+2			+21			-1			+26			+1		

UT	SOL			 LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 16:3 PMG: 12 ^h 05 ^m 8			Edad: 5 ^d 9 PHE { 4 ^h : 58'9 12 ^h : 58'6 20 ^h : 58'4 R°: 47 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m	m	h m	m
0	178	35.7	-22	32.3	100	22.1	+1	54.9	60 N	15 13	16 09	17 04	11 06	**	**
1	193	35.5		32.0	114	53.7 ¹²⁶	+2	11.5 ¹⁶⁶	58	29	19	11	09	3	**
2	208	35.2		31.7	129	25.4 ¹²⁷		28.1 ¹⁶⁶	56	43	29	17	11	6	**
3	223	34.9		31.4	143	57.1 ¹²⁷	+2	44.7 ¹⁶⁶	54	15 55	37	23	13	9	**
4	238	34.6		31.1	158	28.8 ¹²⁷	+3	01.2 ¹⁶⁵	52	16 05	45	28	15	12	**
5	253	34.4	-22	30.8	173	00.5 ¹²⁷	+3	17.7 ¹⁶⁵	50	16 14	16 52	17 33	11 17	14	**
6	268	34.1	-22	30.5	187	32.2 ¹²⁷	+3	34.2 ¹⁶⁵	45	16 34	17 07	17 44	11 21	19	**
7	283	33.8		30.2	202	03.9 ¹²⁷	+3	50.7 ¹⁶⁵	40	16 50	20	17 54	24	24	**
8	298	33.5		29.9	216	35.7 ¹²⁸	+4	07.1 ¹⁶⁴	35	17 03	31	18 03	27	27	**
9	313	33.3		29.6	231	07.4 ¹²⁷		23.5 ¹⁶⁴	30	15	41	11	29	31	**
10	328	33.0		29.3	245	39.2 ¹²⁸		39.8 ¹⁶³	20	35	17 59	26	34	36	**
11	343	32.7	-22	29.0	260	10.9 ¹²⁷	+4	56.1 ¹⁶³	10 N	17 53	18 16	18 42	11 37	42	**
12	358	32.4	-22	28.7	274	42.7 ¹²⁸	+5	12.4 ¹⁶³	0	18 10	18 32	18 58	11 41	47	**
13	13	32.2		28.4	289	14.5 ¹²⁸		28.6 ¹⁶²	10 S	26	18 49	19 16	45	52	23 57 43
14	28	31.9		28.1	303	46.2 ¹²⁷	+5	44.8 ¹⁶²	20	18 44	19 09	19 38	49	57	51 37
15	43	31.6		27.8	318	18.0 ¹²⁸	+6	01.0 ¹⁶²	30	19 05	33	20 05	54	62	43 32
16	58	31.3		27.5	332	49.8 ¹²⁸		17.1 ¹⁶¹	35	18	19 47	23	56	67	39 29
17	73	31.1	-22	27.2	347	21.6 ¹²⁸	+6	33.1 ¹⁶⁰	40	19 32	20 04	20 45	11 59	71	23 34 25
18	88	30.8	-22	26.9	1	53.3 ¹²⁷	+6	49.1 ¹⁶⁰	45	19 49	20 26	21 14	12 03	75	23 29 20
19	103	30.5		26.6	16	25.1 ¹²⁸	+7	05.1 ¹⁶⁰	50	20 10	20 54	21 55	07	81	22 15
20	118	30.3		26.3	30	56.8 ¹²⁷		21.0 ¹⁵⁹	52	21	21 08	22 19	09	84	19 13
21	133	30.0		26.0	45	28.6 ¹²⁸		36.9 ¹⁵⁹	54	32	24	22 54	12	86	16 10
22	148	29.7		25.6	60	00.3 ¹²⁷	+7	52.7 ¹⁵⁸	56	20 45	21 44	** ** *	14	90	12 7
23	163	29.4		25.3	74	32.0 ¹²⁷	+8	08.5 ¹⁵⁸	58	21 01	22 10	** ** *	17	93	08 3
24	178	29.2	-22	25.0	89	03.7 ¹²⁷	+8	24.2 ¹⁵⁷	60 S	21 19	22 47	** ** *	12 20	97	23 03 0

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 16 ^h 55 ^m 5		Mag: -4.3 PMG: 12 ^h 53 ^m		Mag: -0.4 PMG: 19 ^h 34 ^m		Mag: -1.9 PMG: 7 ^h 45 ^m		Mag: -0.1 PMG: 1 ^h 47 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	105	26.1	165	50.1	-16	57.7	65	59.2	243	28.1
1	120	28.5	180	53.9		57.3	81	00.9	258	30.2
2	135	31.0	195	57.8		56.9	96	02.7	273	32.3
3	150	33.5	211	01.6		56.5	111	04.4	288	34.4
4	165	35.9	226	05.5		56.1	126	06.2	303	36.5
5	180	38.4	241	09.3	-16	55.7	141	07.9	318	38.5
6	195	40.9	256	13.2	-16	55.3	156	09.7	333	40.6
7	210	43.3	271	17.1		55.0	171	11.5	348	42.7
8	225	45.8	286	20.9		54.6	186	13.2	3	44.8
9	240	48.3	301	24.8		54.2	201	15.0	18	46.9
10	255	50.7	316	28.7		53.8	216	16.7	33	49.0
11	270	53.2	331	32.6	-16	53.4	231	18.5	48	51.1
12	285	55.6	346	36.4	-16	53.0	246	20.2	63	53.2
13	300	58.1	1	40.3		52.6	261	22.0	78	55.2
14	316	00.6	16	44.2		52.3	276	23.7	93	57.3
15	331	03.0	31	48.1		51.9	291	25.5	108	59.4
16	346	05.5	46	52.0		51.5	306	27.2	124	01.5
17	1	08.0	61	55.9	-16	51.1	321	28.9	139	03.6
18	16	10.4	76	59.8	-16	50.7	336	30.7	154	05.7
19	31	12.9	92	03.7		50.4	351	32.4	169	07.8
20	46	15.4	107	07.6		50.0	6	34.2	184	09.9
21	61	17.8	122	11.5		49.6	21	35.9	199	12.0
22	76	20.3	137	15.4		49.2	36	37.7	214	14.0
23	91	22.7	152	19.3		48.9	51	39.4	229	16.1
24	106	25.2	167	23.2	-16	48.5	66	41.1	244	18.2
Dif	—		+39		+4		+17		+3	

UT	SOL				☾ LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16 ^h 3				Edad: 6 ^d 9	PHE { 4 ^h : 58 ^m /2 12 ^h : 58 ^m /0 20 ^h : 57 ^m /8	SD: 15 ^h 9	PMG: 18 ^h 39 ^m		R ^o : 48 ^m								
	PMG: 12 ^h 06 ^m 3																	
	hG ☉		Dec		hG ☾		Dif				Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m	m	
0	178	29.2	-22	25.0	89	03.7	+8	24.2	60 N	7	07	8	03	8	58	11	05	0
1	193	28.9		24.7	103	35.4 ¹²⁷		39.8 ¹⁵⁶	58	7	00	7	52	42		12	4	1
2	208	28.6		24.4	118	07.1 ¹²⁷	+8	55.4 ¹⁵⁶	56	6	54	43	29		17	8	0	57
3	223	28.4		24.1	132	38.8 ¹²⁷	+9	11.0 ¹⁵⁶	54		49	34	17		22	11	53	
4	238	28.1		23.8	147	10.5 ¹²⁷		26.4 ¹⁵⁴	52		43	27	8	07		27	14	49
5	253	27.8	-22	23.5	161	42.1 ¹²⁶	+9	41.9 ¹⁵⁵	50	6	39	7	20	7	57	11	31	17
6	268	27.5	-22	23.1	176	13.7 ¹²⁶	+9	57.2 ¹⁵³	45	6	28	7	05	7	38	11	40	22
7	283	27.3		22.8	190	45.3 ¹²⁶	+10	12.5 ¹⁵³	40		18	6	52	22		48	26	33
8	298	27.0		22.5	205	16.9 ¹²⁶		27.8 ¹⁵³	35		09	41	7	09		11	54	30
9	313	26.7		22.2	219	48.5 ¹²⁶		43.0 ¹⁵²	30	6	01	31	6	57		12	00	33
10	328	26.5		21.9	234	20.0 ¹²⁵	+10	58.1 ¹⁵¹	20	5	46	6	13	37		10	39	
11	343	26.2	-22	21.5	248	51.5 ¹²⁵	+11	13.1 ¹⁵⁰	10 N	5	30	5	56	6	19	12	19	44
12	358	25.9	-22	21.2	263	23.0 ¹²⁵	+11	28.1 ¹⁵⁰	0	5	14	5	40	6	03	12	28	48
13	13	25.7		20.9	277	54.4 ¹²⁴		43.0 ¹⁴⁹	10 S	4	56	23	5	46		37	52	**
14	28	25.4		20.6	292	25.9 ¹²⁵	+11	57.8 ¹⁴⁸	20		35	5	03	28		46	57	**
15	43	25.1		20.3	306	57.3 ¹²⁴	+12	12.6 ¹⁴⁸	30	4	07	4	40	5	07	12	56	63
16	58	24.9		19.9	321	28.7 ¹²⁴		27.3 ¹⁴⁷	35	3	49	25	4	54		13	03	66
17	73	24.6	-22	19.6	336	00.0 ¹²³	+12	41.9 ¹⁴⁶	40	3	27	4	08	4	40	13	10	70
18	88	24.3	-22	19.3	350	31.3 ¹²³	+12	56.5 ¹⁴⁶	45	2	58	3	47	4	23	13	18	75
19	103	24.1		19.0	5	02.6 ¹²³	+13	11.0 ¹⁴⁵	50	2	17	19	4	02		28	80	
20	118	23.8		18.6	19	33.8 ¹²²		25.4 ¹⁴⁴	52	1	53	3	05	3	52	33	83	
21	133	23.5		18.3	34	05.0 ¹²²		39.7 ¹⁴³	54	1	19	2	48	40		38	86	
22	148	23.3		18.0	48	36.2 ¹²²	+13	53.9 ¹⁴²	56	**	**	28	27			44	90	
23	163	23.0		17.6	63	07.4 ¹²²	+14	08.1 ¹⁴²	58	**	**	2	03	3	12	50	94	
24	178	22.7	-22	17.3	77	38.5 ¹²¹	+14	22.2 ¹⁴¹	60 S	**	**	1	26	2	53	13	57	100

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 16 ^h 51 ^m 5		Mag: -4.2 PMG: 12 ^h 47 ^m		Mag: -0.4 PMG: 19 ^h 31 ^m		Mag: -1.9 PMG: 7 ^h 42 ^m		Mag: -0.1 PMG: 1 ^h 43 ^m	
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄	
h	°	'	°	'	°	'	°	'	°	'
0	106	25.2	167	23.2	-16	48.5	66	41.1	+17	11.7
1	121	27.7	182	27.2		48.1	81	42.9		11.9
2	136	30.1	197	31.1		47.7	96	44.6		12.2
3	151	32.6	212	35.0		47.4	111	46.3		12.4
4	166	35.1	227	38.9		47.0	126	48.1		12.7
5	181	37.5	242	42.9	-16	46.6	141	49.8	+17	12.9
6	196	40.0	257	46.8	-16	46.2	156	51.5	+17	13.2
7	211	42.5	272	50.7		45.9	171	53.3		13.4
8	226	44.9	287	54.7		45.5	186	55.0		13.7
9	241	47.4	302	58.6		45.1	201	56.7		13.9
10	256	49.9	318	02.5		44.8	216	58.5		14.2
11	271	52.3	333	06.5	-16	44.4	232	00.2	+17	14.4
12	286	54.8	348	10.4	-16	44.0	247	01.9	+17	14.7
13	301	57.2	3	14.4		43.7	262	03.7		14.9
14	316	59.7	18	18.3		43.3	277	05.4		15.2
15	332	02.2	33	22.3		42.9	292	07.1		15.4
16	347	04.6	48	26.3		42.6	307	08.8		15.7
17	2	07.1	63	30.2	-16	42.2	322	10.6	+17	16.0
18	17	09.6	78	34.2	-16	41.8	337	12.3	+17	16.2
19	32	12.0	93	38.1		41.5	352	14.0		16.5
20	47	14.5	108	42.1		41.1	7	15.7		16.7
21	62	17.0	123	46.1		40.8	22	17.4		17.0
22	77	19.4	138	50.0		40.4	37	19.2		17.2
23	92	21.9	153	54.0		40.0	52	20.9		17.5
24	107	24.4	168	58.0	-16	39.7	67	22.6	+17	17.7
Dif	—		+39		+4		+17		+3	
							+21		-1	
									+26	
									+1	

UT	SOL			☾ LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16:3 PMG: 12 ^h 06 ^m 7			Edad: 7 ^d 9 PHE { 4 ^h : 57/6 12 ^h : 57/3 20 ^h : 57/1 PMG: 19 ^h 27 ^m R°: 51 ^m						Civil			Náutico	Hora R°	Hora R°	
	hG ☉	Dec		hG ☾	Dif	Dec	Dif									
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m	m	h m	m
0	178	22.7	-22	17.3	77	38.5	+14	22.2	60 N	15 17	16 12	17 07	11 05	2	2 44	100
1	193	22.5		17.0	92	09.5 ¹²⁰		36.2 ¹⁴⁰	58	32	22	14	16	7	35	94
2	208	22.2		16.6	106	40.6 ¹²¹	+14	50.1 ¹³⁹	56	46	32	20	25	11	26	90
3	223	21.9		16.3	121	11.6 ¹²⁰	+15	04.0 ¹³⁹	54	15 57	40	25	33	15	19	86
4	238	21.7		16.0	135	42.5 ¹¹⁹		17.7 ¹³⁷	52	16 08	48	31	41	18	12	83
5	253	21.4	-22	15.6	150	13.4 ¹¹⁹	+15	31.4 ¹³⁷	50	16 17	16 54	17 35	11 48	20	2 06	81
6	268	21.1	-22	15.3	164	44.3 ¹¹⁹	+15	45.0 ¹³⁶	45	16 36	17 09	17 46	12 02	26	1 54	74
7	283	20.9		15.0	179	15.1 ¹¹⁸	+15	58.5 ¹³⁵	40	16 52	22	17 56	14	30	43	70
8	298	20.6		14.6	193	45.9 ¹¹⁸	+16	11.9 ¹³⁴	35	17 05	33	18 04	24	34	34	67
9	313	20.3		14.3	208	16.6 ¹¹⁷		25.2 ¹³³	30	17	17 43	12	33	37	26	64
10	328	20.1		14.0	222	47.3 ¹¹⁷		38.4 ¹³²	20	37	18 00	28	12 49	42	13	58
11	343	19.8	-22	13.6	237	17.9 ¹¹⁶	+16	51.5 ¹³¹	10 N	17 54	18 17	18 43	13 03	46	1 01	53
12	358	19.5	-22	13.3	251	48.5 ¹¹⁶	+17	04.6 ¹³¹	0	18 10	18 33	18 59	13 16	50	0 51	48
13	13	19.3		13.0	266	19.1 ¹¹⁶		17.5 ¹²⁹	10 S	27	18 50	19 17	29	54	40	44
14	28	19.0		12.6	280	49.6 ¹¹⁵		30.4 ¹²⁹	20	18 45	19 09	19 38	43	58	28	40
15	43	18.8		12.3	295	20.0 ¹¹⁴		43.1 ¹²⁷	30	19 06	33	20 05	13 59	63	15	35
16	58	18.5		11.9	309	50.4 ¹¹⁴	+17	55.8 ¹²⁷	35	18	19 47	23	14 09	66	0 08	31
17	73	18.2	-22	11.6	324	20.8 ¹¹⁴	+18	08.3 ¹²⁵	40	19 32	20 04	20 45	14 20	70	**	**
18	88	18.0	-22	11.2	338	51.1 ¹¹³	+18	20.8 ¹²⁵	45	19 49	20 25	21 13	14 33	74	**	**
19	103	17.7		10.9	353	21.3 ¹¹²		33.2 ¹²⁴	50	20 10	20 52	21 53	48	80	23	55
20	118	17.5		10.5	7	51.5 ¹¹²		45.4 ¹²²	52	20	21 06	22 16	14 56	83	47	21
21	133	17.2		10.2	22	21.7 ¹¹²	+18	57.6 ¹²²	54	31	22	22 49	15 04	87	38	18
22	148	16.9		09.9	36	51.8 ¹¹¹	+19	09.6 ¹²⁰	56	44	21 42	**	**	**	14	90
23	163	16.7		09.5	51	21.8 ¹¹⁰		21.6 ¹²⁰	58	20 59	22 06	**	**	**	24	96
24	178	16.4	-22	09.2	65	51.8 ¹¹⁰	+19	33.4 ¹¹⁸	60 S	21 17	22 41	**	**	**	15 37	102

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 16 ^h 47 ^m 6	Mag: -4.3 PMG: 12 ^h 41 ^m	Mag: -0.4 PMG: 19 ^h 28 ^m	Mag: -1.9 PMG: 7 ^h 38 ^m	Mag: -0.1 PMG: 1 ^h 38 ^m					
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	°	°	°	°	°	°	°	°	
0	107	24.4	168 58.0	-16 39.7	67 22.6	+17 17.7	245 08.5	-15 05.8	335 21.0	+18 30.7
1	122	26.8	184 02.0	39.3	82 24.3	18.0	260 10.6	05.9	350 23.6	30.8
2	137	29.3	199 06.0	39.0	97 26.0	18.3	275 12.6	06.0	5 26.3	30.8
3	152	31.7	214 09.9	38.6	112 27.8	18.5	290 14.7	06.1	20 28.9	30.9
4	167	34.2	229 13.9	38.3	127 29.5	18.8	305 16.8	06.2	35 31.6	30.9
5	182	36.7	244 17.9	-16 37.9	142 31.2	+17 19.0	320 18.9	-15 06.3	50 34.2	+18 31.0
6	197	39.1	259 21.9	-16 37.5	157 32.9	+17 19.3	335 21.0	-15 06.4	65 36.9	+18 31.0
7	212	41.6	274 25.9	37.2	172 34.6	19.5	350 23.1	06.5	80 39.5	31.1
8	227	44.1	289 29.9	36.8	187 36.3	19.8	5 25.2	06.6	95 42.2	31.2
9	242	46.5	304 33.9	36.5	202 38.0	20.1	20 27.3	06.7	110 44.8	31.2
10	257	49.0	319 37.9	36.1	217 39.7	20.3	35 29.4	06.8	125 47.5	31.3
11	272	51.5	334 41.9	-16 35.8	232 41.4	+17 20.6	50 31.5	-15 06.9	140 50.1	+18 31.3
12	287	53.9	349 45.9	-16 35.4	247 43.2	+17 20.8	65 33.6	-15 07.0	155 52.8	+18 31.4
13	302	56.4	4 49.9	35.1	262 44.9	21.1	80 35.7	07.1	170 55.4	31.4
14	317	58.9	19 53.9	34.7	277 46.6	21.3	95 37.8	07.2	185 58.1	31.5
15	333	01.3	34 57.9	34.4	292 48.3	21.6	110 39.9	07.3	201 00.7	31.5
16	348	03.8	50 01.9	34.0	307 50.0	21.9	125 42.0	07.4	216 03.4	31.6
17	3 06.2	65 05.9	-16 33.7	322 51.7	+17 22.1	140 44.1	-15 07.5	231 06.0	+18 31.6	
18	18 08.7	80 09.9	-16 33.3	337 53.4	+17 22.4	155 46.2	-15 07.6	246 08.7	+18 31.7	
19	33 11.2	95 14.0	33.0	352 55.1	22.6	170 48.3	07.7	261 11.3	31.8	
20	48 13.6	110 18.0	32.7	7 56.8	22.9	185 50.4	07.8	276 14.0	31.8	
21	63 16.1	125 22.0	32.3	22 58.5	23.2	200 52.5	07.9	291 16.6	31.9	
22	78 18.6	140 26.0	32.0	38 00.2	23.4	215 54.6	08.0	306 19.3	31.9	
23	93 21.0	155 30.0	31.6	53 01.9	23.7	230 56.7	08.1	321 21.9	32.0	
24	108 23.5	170 34.1	-16 31.3	68 03.6	+17 23.9	245 58.8	-15 08.2	336 24.6	+18 32.0	
Dif	—	+40	+3	+17	+3	+21	-1	+26	+1	

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16 ^h 3 PMG: 12 ^h 07 ^m 1			Edad: 8 ^d 9 PHE { SD: 15 ^h 5 PMG: 20 ^h 18 ^m										
	hG ☉	Dec		hG ☾	Dif			Náutico	Civil		Hora	Rº	Hora	Rº
h	°	'	°	°	'	°	°	h	m	h	m	h	m	m
0	178	16.4	-22 09.2	65	51.8	+19 33.4	60 N	7 06	8 01	8 56	11 07	5	4 24	103
1	193	16.1	08.8	80	21.8 ¹¹⁰	45.1 ¹¹⁷	58	6 59	7 51	40	23 12		4 09	95
2	208	15.9	08.5	94	51.7 ¹⁰⁹	+19 56.8 ¹¹⁷	56	53	41	27	36 18		3 56	90
3	223	15.6	08.1	109	21.5 ¹⁰⁸	+20 08.3 ¹¹⁵	54	48	33	16	48 21		45	85
4	238	15.4	07.8	123	51.3 ¹⁰⁸	19.7 ¹¹⁴	52	43	26	8 06	11 59	24	35	82
5	253	15.1	-22 07.4	138	21.0 ¹⁰⁷	+20 31.0 ¹¹³	50	6 38	7 19	7 57	12 08	27	3 27	79
6	268	14.8	-22 07.1	152	50.7 ¹⁰⁷	+20 42.2 ¹¹²	45	6 27	7 04	7 37	12 28	32	3 08	74
7	283	14.6	06.7	167	20.3 ¹⁰⁶	+20 53.2 ¹¹⁰	40	18	6 52	22	44 36		2 53	69
8	298	14.3	06.3	181	49.8 ¹⁰⁵	+21 04.2 ¹¹⁰	35	09	41	7 09	12 58	39	41	66
9	313	14.1	06.0	196	19.3 ¹⁰⁵	15.0 ¹⁰⁸	30	6 01	31	6 57	13 10	41	30	63
10	328	13.8	05.6	210	48.8 ¹⁰⁵	25.8 ¹⁰⁸	20	5 46	6 13	37	31 45		2 11	58
11	343	13.6	-22 05.3	225	18.2 ¹⁰⁴	+21 36.4 ¹⁰⁶	10 N	5 31	5 57	6 20	13 49	49	1 54	55
12	358	13.3	-22 04.9	239	47.5 ¹⁰³	+21 46.9 ¹⁰⁵	0	5 15	5 41	6 03	14 06	52	1 39	51
13	13	13.0	04.6	254	16.8 ¹⁰³	+21 57.3 ¹⁰⁴	10 S	4 57	24	5 47	23 55		24	48
14	28	12.8	04.2	268	46.1 ¹⁰³	+22 07.5 ¹⁰²	20	36	5 05	29	14 41	59	1 08	44
15	43	12.5	03.8	283	15.2 ¹⁰¹	17.7 ¹⁰²	30	4 09	4 41	5 08	15 02	63	0 50	39
16	58	12.3	03.5	297	44.3 ¹⁰¹	27.7 ¹⁰⁰	35	3 51	27	4 56	15 65		39	36
17	73	12.0	-22 03.1	312	13.4 ¹⁰¹	+22 37.6 ⁹⁹	40	3 30	4 10	4 42	15 30	68	0 27	33
18	88	11.8	-22 02.8	326	42.4 ¹⁰⁰	+22 47.3 ⁹⁷	45	3 01	3 49	4 25	15 47	72	0 13	28
19	103	11.5	02.4	341	11.4 ¹⁰⁰	+22 57.0 ⁹⁷	50	2 21	22	4 05	16 08	78	** ** *	**
20	118	11.2	02.0	355	40.3 ⁹⁹	+23 06.5 ⁹⁵	52	1 58	3 08	3 55	19 80		** ** *	**
21	133	11.0	01.7	10	09.1 ⁹⁸	15.9 ⁹⁴	54	1 25	2 52	43	31 83		23 56	25
22	148	10.7	01.3	24	37.9 ⁹⁸	25.2 ⁹³	56	** ** *	33	30	16 44	87	42	21
23	163	10.5	00.9	39	06.7 ⁹⁸	34.3 ⁹¹	58	** ** *	2 08	3 15	17 00	93	25	16
24	178	10.2	-22 00.6	53	35.3 ⁹⁶	+23 43.3 ⁹⁰	60 S	** ** *	1 33	2 57	17 19	102	23 06	7

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG 16 ^h 43 ^m 7		Mag: -4.3 PMG: 12 ^h 34 ^m		Mag: -0.4 PMG: 19 ^h 26 ^m		Mag: -1.9 PMG: 7 ^h 35 ^m		Mag: -0.1 PMG: 1 ^h 34 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	108	23.5	170	34.1	-16 31.3	68	03.6	+17 23.9	245	58.8	-15 08.2	336	24.6	+18 32.0
1	123	26.0	185	38.1	31.0	83	05.3	24.2	261	00.9	08.4	351	27.2	32.1
2	138	28.4	200	42.1	30.6	98	07.0	24.4	276	03.0	08.5	6	29.9	32.1
3	153	30.9	215	46.2	30.3	113	08.7	24.7	291	05.1	08.6	21	32.5	32.2
4	168	33.3	230	50.2	29.9	128	10.4	25.0	306	07.2	08.7	36	35.2	32.2
5	183	35.8	245	54.2	-16 29.6	143	12.1	+17 25.2	321	09.3	-15 08.8	51	37.8	+18 32.3
6	198	38.3	260	58.3	-16 29.3	158	13.8	+17 25.5	336	11.4	-15 08.9	66	40.5	+18 32.3
7	213	40.7	276	02.3	28.9	173	15.5	25.7	351	13.5	09.0	81	43.1	32.4
8	228	43.2	291	06.4	28.6	188	17.2	26.0	6	15.6	09.1	96	45.8	32.5
9	243	45.7	306	10.4	28.3	203	18.8	26.3	21	17.7	09.2	111	48.4	32.5
10	258	48.1	321	14.4	27.9	218	20.5	26.5	36	19.8	09.3	126	51.1	32.6
11	273	50.6	336	18.5	-16 27.6	233	22.2	+17 26.8	51	21.9	-15 09.4	141	53.7	+18 32.6
12	288	53.1	351	22.5	-16 27.3	248	23.9	+17 27.1	66	24.0	-15 09.5	156	56.4	+18 32.7
13	303	55.5	6	26.6	26.9	263	25.6	27.3	81	26.1	09.6	171	59.0	32.7
14	318	58.0	21	30.6	26.6	278	27.3	27.6	96	28.2	09.7	187	01.7	32.8
15	334	00.5	36	34.7	26.3	293	29.0	27.8	111	30.3	09.8	202	04.3	32.8
16	349	02.9	51	38.8	25.9	308	30.7	28.1	126	32.4	09.9	217	07.0	32.9
17	4	05.4	66	42.8	-16 25.6	323	32.3	+17 28.4	141	34.5	-15 10.0	232	09.6	+18 32.9
18	19	07.8	81	46.9	-16 25.3	338	34.0	+17 28.6	156	36.6	-15 10.1	247	12.3	+18 33.0
19	34	10.3	96	50.9	25.0	353	35.7	28.9	171	38.7	10.2	262	14.9	33.1
20	49	12.8	111	55.0	24.6	8	37.4	29.1	186	40.8	10.3	277	17.6	33.1
21	64	15.2	126	59.1	24.3	23	39.1	29.4	201	42.9	10.4	292	20.2	33.2
22	79	17.7	142	03.1	24.0	38	40.8	29.7	216	45.0	10.5	307	22.9	33.2
23	94	20.2	157	07.2	23.7	53	42.4	29.9	231	47.2	10.6	322	25.5	33.3
24	109	22.6	172	11.3	-16 23.3	68	44.1	+17 30.2	246	49.3	-15 10.7	337	28.2	+18 33.3
Dif	—		+40		+3	+17		+3	+21		-1	+27		+1

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 16'3			Edad: 9 ^d 9 PHE { 4 ^h : 56'4 12 ^h : 56'2 20 ^h : 56'0	SD: 15'4				Civil		Náutico		Hora R°		
	PMG: 12 ^h 07 ^m 5				PMG: 21 ^h 11 ^m R°: 54 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec	Dif								
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	
0	178	10.2	-22 00.6	53	35.3	+23 43.3	89	60 N	15 21	16 15	17 10	11 12 13	6 07 98		
1	193	10.0	-22 00.2	68	04.0	+23 52.2	89	58	36	25	17	35 22	5 44 89		
2	208	09.7	-21 59.8	82	32.6	+24 01.0	88	56	15 49	35	23	11 54 27	26 83		
3	223	09.5	59.5	97	01.1	09.6	86	54	16 00	43	28	12 09 32	5 10 80		
4	238	09.2	59.1	111	29.6	18.1	85	52	10	50	33	23 34	4 57 77		
5	253	09.0	-21 58.7	125	58.0	+24 26.4	83	50	16 19	16 57	17 38	12 35 37	4 46 74		
6	268	08.7	-21 58.4	140	26.4	+24 34.7	83	45	16 38	17 11	17 48	13 00 41	4 22 69		
7	283	08.5	58.0	154	54.7	42.8	81	40	16 54	24	17 57	20 43	4 02 67		
8	298	08.2	57.6	169	23.0	50.7	79	35	17 07	35	18 06	37 45	3 47 63		
9	313	07.9	57.2	183	51.2	+24 58.5	78	30	18	17 44	14	13 51 47	33 62		
10	328	07.7	56.9	198	19.4	+25 06.2	77	20	38	18 02	29	14 16 50	3 09 59		
11	343	07.4	-21 56.5	212	47.5	+25 13.8	76	10 N	17 55	18 18	18 44	14 38 52	2 49 56		
12	358	07.2	-21 56.1	227	15.6	+25 21.2	74	0	18 11	18 34	18 59	14 58 54	2 30 54		
13	13	06.9	55.7	241	43.6	28.5	73	10 S	28	18 50	19 17	15 18 56	2 12 50		
14	28	06.7	55.4	256	11.6	35.6	71	20	18 45	19 09	19 38	15 40 58	1 52 47		
15	43	06.4	55.0	270	39.5	42.6	70	30	19 06	33	20 05	16 05 61	29 44		
16	58	06.2	54.6	285	07.4	49.4	68	35	18	19 47	22	20 62	15 42		
17	73	05.9	-21 54.2	299	35.3	+25 56.2	68	40	19 31	20 03	20 44	16 38 64	1 00 39		
18	88	05.7	-21 53.9	314	03.1	+26 02.7	65	45	19 48	20 24	21 11	16 59 66	0 41 36		
19	103	05.4	53.5	328	30.9	09.2	65	50	20 08	20 51	21 51	17 26 69	19 31		
20	118	05.2	53.1	342	58.6	15.4	62	52	18	21 04	22 13	39 71	0 08 29		
21	133	04.9	52.7	357	26.3	21.6	62	54	29	20	22 44	17 54 74	** ** *		
22	148	04.7	52.3	11	54.0	27.6	60	56	42	21 39	** ** *	18 11 78	** ** *		
23	163	04.4	51.9	26	21.6	33.4	58	58	20 57	22 03	** ** *	18 33 83	23 41 30		
24	178	04.2	-21 51.6	40	49.2	+26 39.1	57	60 S	21 14	22 36	** ** *	19 01 93	23 13 20		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 16 ^h 39 ^m 8		Mag: -4.3 PMG: 12 ^h 28 ^m		Mag: -0.3 PMG: 19 ^h 23 ^m		Mag: -1.9 PMG: 7 ^h 32 ^m		Mag: -0.1 PMG: 1 ^h 30 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	109	22.6	172 11.3	-16 23.3	68 44.1	+17 30.2	246 49.3	-15 10.7	337 28.2	+18 33.3
1	124	25.1	187 15.3	23.0	83 45.8	30.5	261 51.4	10.8	352 30.8	33.4
2	139	27.6	202 19.4	22.7	98 47.5	30.7	276 53.5	10.9	7 33.5	33.4
3	154	30.0	217 23.5	22.4	113 49.1	31.0	291 55.6	11.0	22 36.1	33.5
4	169	32.5	232 27.5	22.1	128 50.8	31.2	306 57.7	11.1	37 38.8	33.5
5	184	35.0	247 31.6	-16 21.7	143 52.5	+17 31.5	321 59.8	-15 11.2	52 41.4	+18 33.6
6	199	37.4	262 35.7	-16 21.4	158 54.2	+17 31.8	337 01.9	-15 11.3	67 44.1	+18 33.7
7	214	39.9	277 39.8	21.1	173 55.8	32.0	352 04.0	11.4	82 46.7	33.7
8	229	42.3	292 43.9	20.8	188 57.5	32.3	7 06.1	11.5	97 49.4	33.8
9	244	44.8	307 47.9	20.5	203 59.2	32.6	22 08.2	11.6	112 52.0	33.8
10	259	47.3	322 52.0	20.2	219 00.9	32.8	37 10.3	11.7	127 54.7	33.9
11	274	49.7	337 56.1	-16 19.8	234 02.5	+17 33.1	52 12.4	-15 11.8	142 57.3	+18 33.9
12	289	52.2	353 00.2	-16 19.5	249 04.2	+17 33.4	67 14.5	-15 11.9	158 00.0	+18 34.0
13	304	54.7	8 04.3	19.2	264 05.9	33.6	82 16.6	12.0	173 02.7	34.0
14	319	57.1	23 08.4	18.9	279 07.5	33.9	97 18.7	12.1	188 05.3	34.1
15	334	59.6	38 12.5	18.6	294 09.2	34.2	112 20.8	12.2	203 08.0	34.2
16	350	02.1	53 16.5	18.3	309 10.9	34.4	127 23.0	12.3	218 10.6	34.2
17	5	04.5	68 20.6	-16 18.0	324 12.5	+17 34.7	142 25.1	-15 12.4	233 13.3	+18 34.3
18	20	07.0	83 24.7	-16 17.7	339 14.2	+17 34.9	157 27.2	-15 12.5	248 15.9	+18 34.3
19	35	09.5	98 28.8	17.3	354 15.9	35.2	172 29.3	12.6	263 18.6	34.4
20	50	11.9	113 32.9	17.0	9 17.5	35.5	187 31.4	12.7	278 21.2	34.4
21	65	14.4	128 37.0	16.7	24 19.2	35.7	202 33.5	12.8	293 23.9	34.5
22	80	16.8	143 41.1	16.4	39 20.9	36.0	217 35.6	12.9	308 26.5	34.5
23	95	19.3	158 45.2	16.1	54 22.5	36.3	232 37.7	13.0	323 29.2	34.6
24	110	21.8	173 49.3	-16 15.8	69 24.2	+17 36.5	247 39.8	-15 13.1	338 31.8	+18 34.6
Dif	—		+41	+3	+17	+3	+21	-1	+27	+1

UT	SOL			O LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16/3 PMG: 12 ^h 07 ^m 9			Edad: 10 ^d 9 PHE { 4 ^h : 55/9 12 ^h : 55/7 20 ^h : 55/6 R°: 54 ^m SD: 15/2 PMG: 22 ^h 05 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico		Civil	Hora		R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	178	04.2	-21	51.6	40	49.2	+26	39.1	60 N	7	05	7	59	8	54	11	25
1	193	03.9		51.2	55	16.7		44.7	58	6	58		49	38	11	57	42
2	208	03.7		50.8	69	44.3		86	56		52		40	26	12	21	45
3	223	03.5		50.4	84	11.7		84	54		47		32	14		41	46
4	238	03.2		50.0	98	39.2		85	52		42		25	8	04	12	57
5	253	03.0	-21	49.6	113	06.6		84	50		6	37	7	18	7	55	13
6	268	02.7	-21	49.2	127	34.0		84	45		6	27	7	04	7	37	13
7	283	02.5		48.9	142	01.4		84	40		18		6	51	21	14	03
8	298	02.2		48.5	156	28.7		83	35		09		41	7	08	22	52
9	313	02.0		48.1	170	56.0		83	30		6	02	31	6	57	14	38
10	328	01.7		47.7	185	23.3		83	20		5	47	6	14	37	15	06
11	343	01.5	-21	47.3	199	50.6		83	10 N		5	32	5	58	6	20	15
12	358	01.2	-21	46.9	214	17.8		82	0		5	16	5	42	6	04	15
13	13	01.0		46.5	228	45.1		83	10 S		4	58		25	5	48	16
14	28	00.7		46.1	243	12.3		82	20		37		5	06	30	16	38
15	43	00.5		45.7	257	39.5		82	30		4	10	4	43	5	10	17
16	58	00.3		45.3	272	06.6		81	35		3	53		29	4	58	22
17	73	00.0	-21	44.9	286	33.8		82	40		3	32	4	12	4	44	17
18	87	59.8	-21	44.5	301	00.9		81	45		3	04	3	52	4	28	18
19	102	59.5		44.1	315	28.1		82	50		2	25		25	4	07	35
20	117	59.3		43.7	329	55.2		81	52		2	03	3	11	3	58	18
21	132	59.0		43.3	344	22.3		81	54		1	32	2	56	47	19	08
22	147	58.8		42.9	358	49.5		82	56		0	30		37	34	29	59
23	162	58.5		42.5	13	16.6		81	58		**	**		2	13	19	19
24	177	58.3	-21	42.1	27	43.7		81	60 S		**	**		1	40	3	02

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 16 ^h 35 ^m 8		Mag: -4.4 PMG: 12 ^h 21 ^m		Mag: -0.3 PMG: 19 ^h 20 ^m		Mag: -1.9 PMG: 7 ^h 28 ^m		Mag: -0.1 PMG: 1 ^h 26 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	110	21.8	173	49.3	-16	15.8	69	24.2	+17	36.5
1	125	24.2	188	53.4		15.5	84	25.8		36.8
2	140	26.7	203	57.5		15.2	99	27.5		37.1
3	155	29.2	219	01.6		14.9	114	29.2		37.3
4	170	31.6	234	05.7		14.6	129	30.8		37.6
5	185	34.1	249	09.8	-16	14.3	144	32.5	+17	37.9
6	200	36.6	264	13.9	-16	14.0	159	34.1	+17	38.1
7	215	39.0	279	18.0		13.7	174	35.8		38.4
8	230	41.5	294	22.1		13.4	189	37.4		38.7
9	245	44.0	309	26.2		13.1	204	39.1		38.9
10	260	46.4	324	30.4		12.8	219	40.7		39.2
11	275	48.9	339	34.5	-16	12.5	234	42.4	+17	39.5
12	290	51.3	354	38.6	-16	12.2	249	44.0	+17	39.7
13	305	53.8	9	42.7		11.9	264	45.7		40.0
14	320	56.3	24	46.8		11.6	279	47.3		40.3
15	335	58.7	39	50.9		11.4	294	49.0		40.5
16	351	01.2	54	55.0		11.1	309	50.6		40.8
17	6	03.7	69	59.1	-16	10.8	324	52.3	+17	41.1
18	21	06.1	85	03.2	-16	10.5	339	53.9	+17	41.3
19	36	08.6	100	07.4		10.2	354	55.6		41.6
20	51	11.1	115	11.5		09.9	9	57.2		41.9
21	66	13.5	130	15.6		09.6	24	58.9		42.2
22	81	16.0	145	19.7		09.3	40	00.5		42.4
23	96	18.4	160	23.8		09.0	55	02.1		42.7
24	111	20.9	175	28.0	-16	08.8	70	03.8	+17	43.0
Dif	—		+41		+3		+17		+3	
							+21		-1	
									+27	
									+1	

UT	SOL		☉ LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna					
	SD: 16/3 PMG: 12 ^h 08 ^m 3		Edad: 11 ^d 9 PHE { 4 ^h : 55 ^m 4 12 ^h : 55 ^m 3 20 ^h : 55 ^m 1 PMG: 22 ^h 59 ^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	h m	m	h m	m			
0	177	58.3	-21	42.1	27	43.7	+28	11.3	60 N	15 25	16 19	17 13	12 00	70	9 04	42		
1	192	58.1		41.7	42	10.8	81	13.2	58	40	29	20	12 39	65	8 25	47		
2	207	57.8		41.3	56	37.9	81	15.0	56	15 52	38	25	13 06	63	7 58	48		
3	222	57.6		40.9	71	05.0	81	16.7	54	16 04	46	31	27	62	37	49		
4	237	57.3		40.5	85	32.1	81	18.1	52	13	53	35	13 45	61	19	50		
5	252	57.1	-21	40.1	99	59.2	81	+28	19.5	50	16 22	16 59	17 40	14 00	60	7 04	51	
6	267	56.9	-21	39.7	114	26.3	81	+28	20.7	45	16 41	17 14	17 50	14 31	59	6 33	52	
7	282	56.6		39.3	128	53.5	82	21.7	40	16 56	26	17 59	14 54	58	6 10	52		
8	297	56.4		38.9	143	20.6	81	22.6	35	17 09	36	18 07	15 14	57	5 50	53		
9	312	56.1		38.5	157	47.8	82	23.3	30	20	17 46	15	31	56	33	53		
10	327	55.9		38.1	172	14.9	81	23.8	20	39	18 03	30	15 59	56	5 05	54		
11	342	55.7	-21	37.7	186	42.1	82	+28	24.3	10 N	17 56	18 19	18 45	16 24	54	4 41	54	
12	357	55.4	-21	37.3	201	09.3	82	+28	24.5	0	18 12	18 34	19 00	16 46	54	4 18	54	
13	12	55.2		36.8	215	36.5	82	24.6	10 S	28	18 51	17	17 09	52	3 55	55		
14	27	54.9		36.4	230	03.7	82	24.6	20	18 45	19 10	19 38	17 33	52	31	55		
15	42	54.7		36.0	244	31.0	83	24.4	30	19 05	32	20 05	18 02	50	3 03	55		
16	57	54.5		35.6	258	58.3	83	24.1	35	17	19 46	22	19 49		2 46	55		
17	72	54.2	-21	35.2	273	25.6	83	+28	23.6	40	19 31	20 03	20 43	18 38	48	2 26	55	
18	87	54.0	-21	34.8	287	52.9	83	+28	22.9	45	19 47	20 23	21 10	19 02	47	2 03	55	
19	102	53.8		34.4	302	20.2	83	22.1	50	20 07	20 49	21 48	33	44	1 32	55		
20	117	53.5		33.9	316	47.6	84	21.2	52	17	21 02	22 10	19 48	43	17	55		
21	132	53.3		33.5	331	15.0	84	20.1	54	28	18	22 38	20 06	41	1 00	54		
22	147	53.0		33.1	345	42.5	85	18.9	56	40	36	23 29	28	38	0 38	55		
23	162	52.8		32.7	0	09.9	84	17.5	58	20 54	21 59	** **	20 55	34	0 11	54		
24	177	52.6	-21	32.3	14	37.5	86	+28	15.9	60 S	21 11	22 30	** **	21 35	25	** **	**	
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 16 ^h 31 ^m 9		Mag: -4.4 PMG: 12 ^h 15 ^m		Mag: -0.3 PMG: 19 ^h 18 ^m		Mag: -1.9 PMG: 7 ^h 25 ^m		Mag: -0.1 PMG: 1 ^h 21 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	111	20.9	175	28.0	-16	08.8	70	03.8	+17	43.0	248	30.5	-15	15.4	339	35.6	+18	36.0
1	126	23.4	190	32.1		08.5	85	05.4		43.2	263	32.6		15.5	354	38.2		36.0
2	141	25.8	205	36.2		08.2	100	07.1		43.5	278	34.7		15.6	9	40.9		36.1
3	156	28.3	220	40.3		07.9	115	08.7		43.8	293	36.9		15.7	24	43.5		36.1
4	171	30.8	235	44.4		07.6	130	10.3		44.0	308	39.0		15.8	39	46.2		36.2
5	186	33.2	250	48.6	-16	07.3	145	12.0	+17	44.3	323	41.1	-15	15.9	54	48.8	+18	36.3
6	201	35.7	265	52.7	-16	07.1	160	13.6	+17	44.6	338	43.2	-15	16.0	69	51.5	+18	36.3
7	216	38.2	280	56.8		06.8	175	15.3		44.8	353	45.3		16.1	84	54.2		36.4
8	231	40.6	296	00.9		06.5	190	16.9		45.1	8	47.4		16.2	99	56.8		36.4
9	246	43.1	311	05.0		06.2	205	18.5		45.4	23	49.5		16.3	114	59.5		36.5
10	261	45.6	326	09.2		06.0	220	20.2		45.7	38	51.7		16.4	130	02.1		36.5
11	276	48.0	341	13.3	-16	05.7	235	21.8	+17	45.9	53	53.8	-15	16.5	145	04.8	+18	36.6
12	291	50.5	356	17.4	-16	05.4	250	23.4	+17	46.2	68	55.9	-15	16.6	160	07.4	+18	36.6
13	306	52.9	11	21.5		05.1	265	25.1		46.5	83	58.0		16.7	175	10.1		36.7
14	321	55.4	26	25.7		04.8	280	26.7		46.7	99	00.1		16.8	190	12.8		36.8
15	336	57.9	41	29.8		04.6	295	28.3		47.0	114	02.2		16.9	205	15.4		36.8
16	352	00.3	56	33.9		04.3	310	30.0		47.3	129	04.4		17.0	220	18.1		36.9
17	7	02.8	71	38.0	-16	04.0	325	31.6	+17	47.5	144	06.5	-15	17.1	235	20.7	+18	36.9
18	22	05.3	86	42.2	-16	03.8	340	33.2	+17	47.8	159	08.6	-15	17.2	250	23.4	+18	37.0
19	37	07.7	101	46.3		03.5	355	34.8		48.1	174	10.7		17.3	265	26.0		37.0
20	52	10.2	116	50.4		03.2	10	36.5		48.4	189	12.8		17.4	280	28.7		37.1
21	67	12.7	131	54.6		03.0	25	38.1		48.6	204	15.0		17.5	295	31.4		37.1
22	82	15.1	146	58.7		02.7	40	39.7		48.9	219	17.1		17.6	310	34.0		37.2
23	97	17.6	162	02.8		02.4	55	41.3		49.2	234	19.2		17.7	325	36.7		37.3
24	112	20.1	177	06.9	-16	02.2	70	43.0	+17	49.4	249	21.3	-15	17.8	340	39.3	+18	37.3
Dif	—		+41		+3		+16		+3		+21		-1		+27		+1	

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16:3 PMG: 12 ^h 08 ^m 7			Edad: 12 ^d 9 PHE { 4 ^h : 55:0 12 ^h : 54:9 20 ^h : 54:8 PMG: 23 ^h 52 ^m R°: 51 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico		Civil	Hora		R°	Hora	R°	
h	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m
0	177	52.6	-21	32.3	14	37.5	+28	15.9	60 N	7 03	7 57	8 51	13 10	92	9 46	16
1	192	52.3		31.9	29	05.0		14.2	58	6 57	47	36	13 44	82	9 12	25
2	207	52.1		31.4	43	32.6		12.4	56	51	39	24	14 09	77	8 46	31
3	222	51.9		31.0	58	00.2		10.4	54	46	31	13	29 74		26	34
4	237	51.6		30.6	72	27.9		08.3	52	41	24	8 03	14 46	71	8 09	36
5	252	51.4	-21	30.2	86	55.6	+28	06.0	50	6 37	7 17	7 54	15 00	69	7 55	38
6	267	51.2	-21	29.7	101	23.3	+28	03.6	45	6 26	7 03	7 36	15 30	64	7 25	41
7	282	50.9		29.3	115	51.1	+28	01.0	40	17	6 51	21	15 52	63	7 02	44
8	297	50.7		28.9	130	19.0	+27	58.3	35	09	40	7 08	16 11	60	6 43	45
9	312	50.5		28.5	144	46.8		55.5	30	6 02	31	6 57	27 59		6 26	47
10	327	50.2		28.0	159	14.8		52.5	20	5 47	6 14	38	16 55	55	5 59	49
11	342	50.0	-21	27.6	173	42.8	+27	49.4	10 N	5 32	5 58	6 21	17 18	53	5 35	50
12	357	49.8	-21	27.2	188	10.8	+27	46.1	0	5 17	5 43	6 05	17 40	51	5 12	53
13	12	49.5		26.8	202	38.9		42.7	10 S	5 00	26	5 49	18 01	49	4 50	54
14	27	49.3		26.3	217	07.0		39.1	20	4 39	5 08	32	25 46		4 26	55
15	42	49.1		25.9	231	35.2		35.4	30	4 12	4 45	12	18 52	43	3 58	57
16	57	48.8		25.5	246	03.5		31.6	35	3 55	31	5 00	19 08	41	41	59
17	72	48.6	-21	25.0	260	31.8	+27	27.6	40	3 35	4 15	4 46	19 26	39	3 21	61
18	87	48.4	-21	24.6	275	00.2	+27	23.5	45	3 08	3 54	4 30	19 49	36	2 58	62
19	102	48.1		24.2	289	28.6		19.3	50	2 29	28	10	20 17	32	27	65
20	117	47.9		23.7	303	57.1		14.9	52	2 08	15	4 01	31 30		2 12	67
21	132	47.7		23.3	318	25.7		10.4	54	1 39	3 00	3 50	20 47	27	1 54	69
22	147	47.5		22.9	332	54.3		05.7	56	0 49	2 41	38	21 06	23	33	71
23	162	47.2		22.4	347	23.0	+27	00.9	58	** **	2 19	23	21 29	18	1 05	76
24	177	47.0	-21	22.0	1	51.7	+26	56.0	60 S	** **	1 48	3 06	22 00	9	0 26	85

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 16 ^h 28 ^m 0		Mag: -4.4 PMG: 12 ^h 08 ^m		Mag: -0.3 PMG: 19 ^h 15 ^m		Mag: -1.9 PMG: 7 ^h 22 ^m		Mag: -0.1 PMG: 1 ^h 17 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	112	20.1	177	06.9	-16	02.2	70	43.0	+17	49.4
1	127	22.5	192	11.1		01.9	85	44.6		49.7
2	142	25.0	207	15.2		01.6	100	46.2		50.0
3	157	27.4	222	19.3		01.4	115	47.8		50.3
4	172	29.9	237	23.4		01.1	130	49.5		50.5
5	187	32.4	252	27.6	-16	00.8	145	51.1	+17	50.8
6	202	34.8	267	31.7	-16	00.6	160	52.7	+17	51.1
7	217	37.3	282	35.8		00.3	175	54.3		51.4
8	232	39.8	297	40.0	-16	00.1	190	55.9		51.6
9	247	42.2	312	44.1	-15	59.8	205	57.5		51.9
10	262	44.7	327	48.2		59.5	220	59.2		52.2
11	277	47.2	342	52.3	-15	59.3	236	00.8	+17	52.4
12	292	49.6	357	56.5	-15	59.0	251	02.4	+17	52.7
13	307	52.1	13	00.6		58.8	266	04.0		53.0
14	322	54.6	28	04.7		58.5	281	05.6		53.3
15	337	57.0	43	08.9		58.3	296	07.2		53.5
16	352	59.5	58	13.0		58.0	311	08.8		53.8
17	8	01.9	73	17.1	-15	57.8	326	10.5	+17	54.1
18	23	04.4	88	21.2	-15	57.5	341	12.1	+17	54.4
19	38	06.9	103	25.4		57.3	356	13.7		54.6
20	53	09.3	118	29.5		57.0	11	15.3		54.9
21	68	11.8	133	33.6		56.8	26	16.9		55.2
22	83	14.3	148	37.7		56.5	41	18.5		55.4
23	98	16.7	163	41.9		56.3	56	20.1		55.7
24	113	19.2	178	46.0	-15	56.0	71	21.7	+17	56.0
Dif	—		+41		+3		+16		+3	
							+21		-1	
									+27	
									+	

UT	SOL			☉ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna				
	SD: 16:3 PMG: 12 ^h 09 ^m 1			Edad: 13 ^d 9 PHE { 4 ^h : 54:7 12 ^h : 54:6 20 ^h : 54:5 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					
0	177	47.0	-21	22.0	1	51.7	+26 56.0	60 N	15 29	16 22	17 17	14 42 94	10 02 6					
1	192	46.8		21.6	16	20.5 ⁹⁸	51.0 ⁵⁰	58	44	32	23	15 06 87	9 37 13					
2	207	46.5		21.1	30	49.4 ⁹⁹	45.8 ⁵²	56	15 56	41	28	26 82	17 18					
3	222	46.3		20.7	45	18.4 ¹⁰⁰	40.5 ⁵³	54	16 07	49	33	43 77	9 00 22					
4	237	46.1		20.3	59	47.4 ¹⁰⁰	35.1 ⁵⁴	52	16	16 56	38	15 57 74	8 45 25					
5	252	45.9	-21	19.8	74	16.5 ¹⁰¹	+26 29.5 ⁵⁶	50	16 25	17 02	17 42	16 09 72	8 33 27					
6	267	45.6	-21	19.4	88	45.6 ¹⁰¹	+26 23.8 ⁵⁷	45	16 43	17 16	17 52	16 34 68	8 06 33					
7	282	45.4		18.9	103	14.8 ¹⁰²	18.0 ⁵⁸	40	16 58	28	18 01	16 55 63	7 46 35					
8	297	45.2		18.5	117	44.1 ¹⁰³	12.1 ⁵⁹	35	17 10	38	09	17 11 61	28 38					
9	312	44.9		18.0	132	13.5 ¹⁰⁴	+26 06.0 ⁶¹	30	21	17 47	07	26 58	7 13 40					
10	327	44.7		17.6	146	43.0 ¹⁰⁵	+25 59.8 ⁶²	20	40	18 04	31	17 50 54	6 48 43					
11	342	44.5	-21	17.2	161	12.5 ¹⁰⁵	+25 53.5 ⁶³	10 N	17 57	18 20	18 46	18 11 51	6 25 47					
12	357	44.3	-21	16.7	175	42.1 ¹⁰⁶	+25 47.1 ⁶⁴	0	18 13	18 35	19 01	18 31 47	6 05 49					
13	12	44.0		16.3	190	11.7 ¹⁰⁶	40.5 ⁶⁶	10 S	28	18 51	18	18 50 45	5 44 52					
14	27	43.8		15.8	204	41.5 ¹⁰⁸	33.9 ⁶⁶	20	18 46	19 10	19 38	19 11 41	5 21 55					
15	42	43.6		15.4	219	11.3 ¹⁰⁸	27.1 ⁶⁸	30	19 05	32	20 04	35 37	4 55 59					
16	57	43.4		14.9	233	41.2 ¹⁰⁹	20.2 ⁶⁹	35	17	19 46	21	19 49 35	40 61					
17	72	43.1	-21	14.5	248	11.2 ¹¹⁰	+25 13.1 ⁷¹	40	19 30	20 02	20 42	20 05 32	4 22 63					
18	87	42.9	-21	14.0	262	41.2 ¹¹⁰	+25 06.0 ⁷¹	45	19 46	20 22	21 08	20 25 28	4 00 67					
19	102	42.7		13.6	277	11.3 ¹¹¹	+24 58.8 ⁷²	50	20 06	20 47	21 45	20 49 23	3 32 71					
20	117	42.5		13.1	291	41.5 ¹¹²	51.4 ⁷⁴	52	15	21 00	22 06	21 01 20	19 73					
21	132	42.2		12.7	306	11.8 ¹¹³	43.9 ⁷⁵	54	26	15	22 33	14 18	3 03 77					
22	147	42.0		12.2	320	42.2 ¹¹⁴	36.3 ⁷⁶	56	38	33	23 16	29 14	2 44 81					
23	162	41.8		11.8	335	12.6 ¹¹⁴	28.6 ⁷⁷	58	20 52	21 55	** **	21 47 9	2 21 86					
24	177	41.6	-21	11.3	349	43.2 ¹¹⁶	+24 20.8 ⁷⁸	60 S	21 08	22 24	** **	22 09 2	1 51 95					
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO					
	PMG: 16 ^h 24 ^m 0			Mag: -4.4 PMG: 12 ^h 02 ^m			Mag: -0.2 PMG: 19 ^h 13 ^m			Mag: -1.9 PMG: 7 ^h 18 ^m			Mag: -0.2 PMG: 1 ^h 13 ^m					
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec							
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	113	19.2	178	46.0	-15	56.0	71	21.7	+17	56.0	250	12.2	-15	20.0	341	43.1	+18	38.7
1	128	21.7	193	50.1		55.8	86	23.3		56.3	265	14.4		20.1	356	45.8		38.7
2	143	24.1	208	54.2		55.5	101	24.9		56.5	280	16.5		20.2	11	48.5		38.8
3	158	26.6	223	58.4		55.3	116	26.5		56.8	295	18.6		20.3	26	51.1		38.8
4	173	29.1	239	02.5		55.0	131	28.1		57.1	310	20.7		20.4	41	53.8		38.9
5	188	31.5	254	06.6	-15	54.8	146	29.7	+17	57.4	325	22.9	-15	20.5	56	56.4	+18	38.9
6	203	34.0	269	10.7	-15	54.6	161	31.3	+17	57.6	340	25.0	-15	20.6	71	59.1	+18	39.0
7	218	36.4	284	14.8		54.3	176	32.9		57.9	355	27.1		20.7	87	01.8		39.0
8	233	38.9	299	19.0		54.1	191	34.5		58.2	10	29.2		20.8	102	04.4		39.1
9	248	41.4	314	23.1		53.8	206	36.1		58.5	25	31.4		20.9	117	07.1		39.2
10	263	43.8	329	27.2		53.6	221	37.7		58.7	40	33.5		21.0	132	09.7		39.2
11	278	46.3	344	31.3	-15	53.4	236	39.3	+17	59.0	55	35.6	-15	21.0	147	12.4	+18	39.3
12	293	48.8	359	35.4	-15	53.1	251	40.9	+17	59.3	70	37.7	-15	21.1	162	15.1	+18	39.3
13	308	51.2	14	39.6		52.9	266	42.5		59.6	85	39.9		21.2	177	17.7		39.4
14	323	53.7	29	43.7		52.7	281	44.1	+17	59.8	100	42.0		21.3	192	20.4		39.4
15	338	56.2	44	47.8		52.4	296	45.7	+18	00.1	115	44.1		21.4	207	23.0		39.5
16	353	58.6	59	51.9		52.2	311	47.3		00.4	130	46.2		21.5	222	25.7		39.6
17	9	01.1	74	56.0	-15	52.0	326	48.9	+18	00.7	145	48.4	-15	21.6	237	28.4	+18	39.6
18	24	03.6	90	00.1	-15	51.7	341	50.5	+18	00.9	160	50.5	-15	21.7	252	31.0	+18	39.7
19	39	06.0	105	04.3		51.5	356	52.1		01.2	175	52.6		21.8	267	33.7		39.7
20	54	08.5	120	08.4		51.3	11	53.7		01.5	190	54.8		21.9	282	36.3		39.8
21	69	10.9	135	12.5		51.0	26	55.3		01.8	205	56.9		22.0	297	39.0		39.8
22	84	13.4	150	16.6		50.8	41	56.9		02.1	220	59.0		22.1	312	41.7		39.9
23	99	15.9	165	20.7		50.6	56	58.5		02.3	236	01.1		22.2	327	44.3		39.9
24	114	18.3	180	24.8	-15	50.4	72	00.0	+18	02.6	251	03.3	-15	22.2	342	47.0	+18	40.0
Dif	—			+41	+2	+16			+3	+21			-1	+27			+1	

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16'3 PMG: 12 ^h 09 ^m 4			Edad: 14 ^d 9 PHE { SD: 14'8 PMG: 0 ^h 43 ^m R°: 46 ^m 4 ^h : 54'4 12 ^h : 54'3 20 ^h : 54'2												
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico		Civil	Hora		R°	Hora	R°	
h	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m
0	177	41.6	-21	11.3	349	43.2	+24	20.8	79	60 N	7	01	7	55	8	48
1	192	41.4		10.9	4	13.8 ¹¹⁶		12.9	79	58	6	55		45	34	86
2	207	41.1		10.4	18	44.4 ¹¹⁶	+24	04.9	80	56		50		37	21	81
3	222	40.9		10.0	33	15.2 ¹¹⁸	+23	56.7	82	54		45		29	11	78
4	237	40.7		09.5	47	46.0 ¹¹⁸		48.5	82	52		40		22	8	75
5	252	40.5	-21	09.0	62	17.0 ¹²⁰	+23	40.2	83	50	6	36	7	16	7	72
6	267	40.3	-21	08.6	76	48.0 ¹²⁰	+23	31.7	85	45	6	26	7	02	7	66
7	282	40.0		08.1	91	19.0 ¹²⁰		23.2	85	40		17		50	20	63
8	297	39.8		07.7	105	50.2 ¹²²		14.5	87	35		09		40	7	59
9	312	39.6		07.2	120	21.4 ¹²²	+23	05.8	87	30	6	01	31		6	57
10	327	39.4		06.8	134	52.8 ¹²⁴	+22	56.9	89	20	5	47	6	14	38	52
11	342	39.2	-21	06.3	149	24.2 ¹²⁴	+22	48.0	89	10 N	5	33	5	59	6	48
12	357	38.9	-21	05.8	163	55.7 ¹²⁵	+22	39.0	90	0	5	18	5	44	6	45
13	12	38.7		05.4	178	27.2 ¹²⁵		29.8	92	10 S	5	01	27	5	50	41
14	27	38.5		04.9	192	58.9 ¹²⁷		20.6	92	20	4	40	5	09	33	37
15	42	38.3		04.4	207	30.6 ¹²⁷		11.3	93	30	4	14	4	47	13	33
16	57	38.1		04.0	222	02.4 ¹²⁸	+22	01.8	95	35	3	58		33	5	30
17	72	37.8	-21	03.5	236	34.3 ¹²⁹	+21	52.3	95	40	3	37	4	17	4	27
18	87	37.6	-21	03.0	251	06.2 ¹²⁹	+21	42.7	96	45	3	11	3	57	4	23
19	102	37.4		02.6	265	38.3 ¹³¹		33.0	97	50	2	34		31	13	18
20	117	37.2		02.1	280	10.4 ¹³¹		23.3	97	52	2	13		19	4	16
21	132	37.0		01.6	294	42.6 ¹³²		13.4	99	54	1	46	3	04	3	12
22	147	36.8		01.2	309	14.9 ¹³³	+21	03.4	100	56	1	02	2	46	41	9
23	162	36.5		00.7	323	47.2 ¹³³	+20	53.4	100	58	** *	2	24	27	21	5
24	177	36.3	-21	00.2	338	19.7 ¹³⁵	+20	43.3	101	60 S	** *	1	55	3	11	22

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 16 ^h 20 ^m 1		Mag: -4.4 PMG: 11 ^h 55 ^m		Mag: -0.2 PMG: 19 ^h 10 ^m		Mag: -1.9 PMG: 7 ^h 15 ^m		Mag: -0.2 PMG: 1 ^h 09 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	114	18.3	180	24.8	-15	50.4	72	00.0	+18	02.6
1	129	20.8	195	28.9		50.1	87	01.6		02.9
2	144	23.3	210	33.0		49.9	102	03.2		03.2
3	159	25.7	225	37.2		49.7	117	04.8		03.4
4	174	28.2	240	41.3		49.5	132	06.4		03.7
5	189	30.7	255	45.4	-15	49.2	147	08.0	+18	04.0
6	204	33.1	270	49.5	-15	49.0	162	09.6	+18	04.3
7	219	35.6	285	53.6		48.8	177	11.1		04.5
8	234	38.0	300	57.7		48.6	192	12.7		04.8
9	249	40.5	316	01.8		48.4	207	14.3		05.1
10	264	43.0	331	05.9		48.2	222	15.9		05.4
11	279	45.4	346	10.0	-15	47.9	237	17.5	+18	05.7
12	294	47.9	1	14.1	-15	47.7	252	19.1	+18	05.9
13	309	50.4	16	18.2		47.5	267	20.6		06.2
14	324	52.8	31	22.3		47.3	282	22.2		06.5
15	339	55.3	46	26.4		47.1	297	23.8		06.8
16	354	57.8	61	30.5		46.9	312	25.4		07.0
17	10	00.2	76	34.6	-15	46.6	327	26.9	+18	07.3
18	25	02.7	91	38.7	-15	46.4	342	28.5	+18	07.6
19	40	05.2	106	42.7		46.2	357	30.1		07.9
20	55	07.6	121	46.8		46.0	12	31.7		08.2
21	70	10.1	136	50.9		45.8	27	33.2		08.4
22	85	12.5	151	55.0		45.6	42	34.8		08.7
23	100	15.0	166	59.1		45.4	57	36.4		09.0
24	115	17.5	182	03.2	-15	45.2	72	38.0	+18	09.3
Dif	—		+41		+2		+16		+3	
							+21		-1	
									+27	
									+1	

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16'3			Edad: 15 ^d 9 PHE { 4 ^h : 54'2 12 ^h : 54'1 20 ^h : 54'1											
	PMG: 12 ^h 09 ^m 8			SD: 14'8 PMG: 1 ^h 29 ^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	h m	m	
0	177	36.3	-21 00.2	338	19.7	+20 43.3	60 N	15 34	16 26	17 20	17 47	87	10 10	0	
1	192	36.1	-20 59.8	352	52.2 ¹³⁵	33.1 ¹⁰²	58	15 48	36	26	17 59	82	9 57	5	
2	207	35.9	59.3	7	24.8 ¹³⁶	22.8 ¹⁰³	56	16 00	44	31	18 09	79	46	8	
3	222	35.7	58.8	21	57.4 ¹³⁶	12.4 ¹⁰⁴	54	10	52	36	18 75		37	11	
4	237	35.5	58.3	36	30.2 ¹³⁸	+20 01.9 ¹⁰⁵	52	20	16 58	41	26 73		28	14	
5	252	35.3	-20 57.9	51	03.0 ¹³⁸	+19 51.4 ¹⁰⁵	50	16 28	17 05	17 45	18 33	70	9 20	16	
6	267	35.0	-20 57.4	65	35.9 ¹³⁹	+19 40.8 ¹⁰⁶	45	16 46	17 18	17 55	18 48	66	9 04	20	
7	282	34.8	56.9	80	08.8 ¹³⁹	30.1 ¹⁰⁷	40	17 00	30	18 03	19 01	61	8 50	24	
8	297	34.6	56.4	94	41.9 ¹⁴¹	19.4 ¹⁰⁷	35	12	40	11	11 58		38	28	
9	312	34.4	56.0	109	15.0 ¹⁴¹	+19 08.5 ¹⁰⁹	30	23	17 49	18	21 54		28	30	
10	327	34.2	55.5	123	48.2 ¹⁴²	+18 57.6 ¹⁰⁹	20	42	18 05	32	36 50		8 10	35	
11	342	34.0	-20 55.0	138	21.4 ¹⁴²	+18 46.6 ¹¹⁰	10 N	17 58	18 20	18 46	19 50	46	7 55	39	
12	357	33.8	-20 54.5	152	54.7 ¹⁴³	+18 35.5 ¹¹¹	0	18 13	18 36	19 01	20 03	42	7 40	43	
13	12	33.6	54.1	167	28.2 ¹⁴⁵	24.4 ¹¹¹	10 S	29	18 51	18	16 37		26	46	
14	27	33.3	53.6	182	01.6 ¹⁴⁴	13.2 ¹¹²	20	18 46	19 10	19 38	29 34		7 10	51	
15	42	33.1	53.1	196	35.2 ¹⁴⁶	+18 01.9 ¹¹³	30	19 05	32	20 04	45 28		6 51	56	
16	57	32.9	52.6	211	08.8 ¹⁴⁶	+17 50.6 ¹¹³	35	16	19 45	20	20 54	25	41	58	
17	72	32.7	-20 52.1	225	42.5 ¹⁴⁷	+17 39.2 ¹¹⁴	40	19 29	20 01	20 40	21 04	22	6 28	62	
18	87	32.5	-20 51.7	240	16.2 ¹⁴⁷	+17 27.7 ¹¹⁵	45	19 45	20 20	21 06	21 16	18	6 14	66	
19	102	32.3	51.2	254	50.0 ¹⁴⁸	16.2 ¹¹⁵	50	20 04	45	21 42	30 14		5 56	71	
20	117	32.1	50.7	269	23.9 ¹⁴⁹	+17 04.6 ¹¹⁶	52	13	20 58	22 02	37 11		47	74	
21	132	31.9	50.2	283	57.9 ¹⁵⁰	+16 52.9 ¹¹⁷	54	23	21 12	22 28	44 9		38	77	
22	147	31.7	49.7	298	31.9 ¹⁵⁰	41.1 ¹¹⁸	56	35	29	23 06	21 52	7	27	80	
23	162	31.5	49.2	313	06.0 ¹⁵¹	29.3 ¹¹⁸	58	20 49	21 50	** ** *	22 01	4	15	84	
24	177	31.3	-20 48.7	327	40.1 ¹⁵¹	+16 17.5 ¹¹⁸	60 S	21 04	22 18	** ** *	22 12	**	5 00	89	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO		
	PMG: 16 ^h 16 ^m 2		Mag: -4.3 PMG: 11 ^h 49 ^m		Mag: -0.2 PMG: 19 ^h 07 ^m		Mag: -1.9 PMG: 7 ^h 11 ^m		Mag: -0.2 PMG: 1 ^h 04 ^m		
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	
0	115	17.5	182	03.2	-15 45.2	72 38.0	+18 09.3	251 54.4	-15 24.4	343 50.9	+18 41.4
1	130	19.9	197	07.3	45.0	87 39.5	09.6	266 56.6	24.5	358 53.5	41.4
2	145	22.4	212	11.4	44.8	102 41.1	09.8	281 58.7	24.6	13 56.2	41.5
3	160	24.9	227	15.4	44.6	117 42.7	10.1	297 00.8	24.7	28 58.9	41.5
4	175	27.3	242	19.5	44.4	132 44.2	10.4	312 03.0	24.8	44 01.5	41.6
5	190	29.8	257	23.6	-15 44.2	147 45.8	+18 10.7	327 05.1	-15 24.9	59 04.2	+18 41.6
6	205	32.3	272	27.7	-15 44.0	162 47.4	+18 10.9	342 07.3	-15 25.0	74 06.9	+18 41.7
7	220	34.7	287	31.8	43.8	177 48.9	11.2	357 09.4	25.1	89 09.5	41.8
8	235	37.2	302	35.8	43.6	192 50.5	11.5	12 11.5	25.1	104 12.2	41.8
9	250	39.7	317	39.9	43.4	207 52.1	11.8	27 13.7	25.2	119 14.8	41.9
10	265	42.1	332	44.0	43.2	222 53.6	12.1	42 15.8	25.3	134 17.5	41.9
11	280	44.6	347	48.0	-15 43.0	237 55.2	+18 12.3	57 17.9	-15 25.4	149 20.2	+18 42.0
12	295	47.0	2 52.1	-15 42.8	252 56.8	+18 12.6	72 20.1	-15 25.5	164 22.8	+18 42.0	
13	310	49.5	17 56.2	42.6	267 58.3	12.9	87 22.2	25.6	179 25.5	42.1	
14	325	52.0	33 00.2	42.4	282 59.9	13.2	102 24.3	25.7	194 28.2	42.2	
15	340	54.4	48 04.3	42.2	298 01.5	13.5	117 26.5	25.8	209 30.8	42.2	
16	355	56.9	63 08.4	42.0	313 03.0	13.7	132 28.6	25.9	224 33.5	42.3	
17	10	59.4	78 12.4	-15 41.8	328 04.6	+18 14.0	147 30.8	-15 25.9	239 36.2	+18 42.3	
18	26	01.8	93 16.5	-15 41.6	343 06.1	+18 14.3	162 32.9	-15 26.0	254 38.8	+18 42.4	
19	41	04.3	108 20.5	41.4	358 07.7	14.6	177 35.0	26.1	269 41.5	42.4	
20	56	06.8	123 24.6	41.2	13 09.3	14.9	192 37.2	26.2	284 44.1	42.5	
21	71	09.2	138 28.7	41.1	28 10.8	15.1	207 39.3	26.3	299 46.8	42.6	
22	86	11.7	153 32.7	40.9	43 12.4	15.4	222 41.5	26.4	314 49.5	42.6	
23	101	14.2	168 36.8	40.7	58 13.9	15.7	237 43.6	26.5	329 52.1	42.7	
24	116	16.6	183 40.8	-15 40.5	73 15.5	+18 16.0	252 45.7	-15 26.6	344 54.8	+18 42.7	
Dif	—		+41	+2	+16	+3	+21	-1	+27	+1	

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna							
	SD: 16:3 PMG: 12 ^h 10 ^m 1			Edad: 16 ^d 9 PHE { 4 ^h : 54:0 12 ^h : 54:0 20 ^h : 54:0 PMG: 2 ^h 13 ^m R ^o : 41 ^m																
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R ^o	Hora	R ^o					
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	h	m	h	m
0	177	31.3	-20	48.7	327	40.1	+16	17.5	60 N	6 59	7 53	8 45	19 14	83	10 10	**				
1	192	31.0		48.3	342	14.3 ¹⁵²	+16	05.6 ¹¹⁹	58	53	43	31	21	80	10 02	2				
2	207	30.8		47.8	356	48.6 ¹⁵³	+15	53.6 ¹²⁰	56	48	35	19	28	76	9 54	6				
3	222	30.6		47.3	11	22.9 ¹⁵³		41.5 ¹²¹	54	43	27	8 09	33	74	48	8				
4	237	30.4		46.8	25	57.3 ¹⁵⁴		29.4 ¹²¹	52	38	21	7 59	39	71	42	10				
5	252	30.2	-20	46.3	40	31.8 ¹⁵⁵	+15	17.3 ¹²¹	50	6 34	7 15	7 51	19 43	69	9 36	13				
6	267	30.0	-20	45.8	55	06.3 ¹⁵⁵	+15	05.1 ¹²²	45	6 25	7 01	7 34	19 54	63	9 24	18				
7	282	29.8		45.3	69	40.9 ¹⁵⁶	+14	52.8 ¹²³	40	16	6 50	19	20 02	60	14	22				
8	297	29.6		44.8	84	15.5 ¹⁵⁶		40.5 ¹²³	35	09	40	7 07	09 57		9 06	25				
9	312	29.4		44.3	98	50.2 ¹⁵⁷		28.1 ¹²⁴	30	6 01	31	6 56	15 54		8 58	28				
10	327	29.2		43.8	113	24.9 ¹⁵⁷		15.7 ¹²⁴	20	5 47	6 14	38	26 49		45	33				
11	342	29.0	-20	43.3	127	59.7 ¹⁵⁸	+14	03.2 ¹²⁵	10 N	5 33	5 59	6 22	20 36	44	8 34	37				
12	357	28.8	-20	42.9	142	34.6 ¹⁵⁹	+13	50.7 ¹²⁵	0	5 19	5 44	6 06	20 45	39	8 23	41				
13	12	28.6		42.4	157	09.5 ¹⁵⁹		38.1 ¹²⁶	10 S	5 02	28	5 51	20 53	36	12	45				
14	27	28.4		41.9	171	44.5 ¹⁶⁰		25.5 ¹²⁶	20	4 42	5 10	34	21 03	31	8 01	49				
15	42	28.2		41.4	186	19.5 ¹⁶⁰		12.8 ¹²⁷	30	16	4 48	15	13 27		7 47	54				
16	57	28.0		40.9	200	54.5 ¹⁶⁰	+13	00.1 ¹²⁷	35	4 00	35	5 04	19 24		39	58				
17	72	27.8	-20	40.4	215	29.6 ¹⁶¹	+12	47.3 ¹²⁸	40	3 40	4 19	4 51	21 26	21	7 30	61				
18	87	27.6	-20	39.9	230	04.8 ¹⁶²	+12	34.5 ¹²⁸	45	3 14	4 00	4 35	21 34	17	7 20	64				
19	102	27.4		39.4	244	40.0 ¹⁶²		21.7 ¹²⁸	50	2 38	3 35	16	44 12		07	70				
20	117	27.1		38.9	259	15.3 ¹⁶³	+12	08.8 ¹²⁹	52	2 18	22	4 07	48 10		7 01	72				
21	132	26.9		38.4	273	50.6 ¹⁶³	+11	55.8 ¹³⁰	54	1 53	3 08	3 57	53 8		6 55	74				
22	147	26.7		37.9	288	25.9 ¹⁶³		42.8 ¹³⁰	56	1 14	2 51	45	21 59	5	47	78				
23	162	26.5		37.4	303	01.3 ¹⁶⁴		29.8 ¹³⁰	58	** **	30	32	22 05	2	39	81				
24	177	26.3	-20	36.9	317	36.8 ¹⁶⁵	+11	16.7 ¹³¹	60 S	** **	2 03	3 16	22 11	**	6 29	85				

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO							
	PMG: 16 ^h 12 ^m 2		Mag: -4.3 PMG: 11 ^h 42 ^m			Mag: -0.1 PMG: 19 ^h 05 ^m			Mag: -2.0 PMG: 7 ^h 08 ^m			Mag: -0.2 PMG: 1 ^h 00 ^m							
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec						
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'					
0	116	16.6	183	40.8	-15	40.5	73	15.5	+18	16.0	252	45.7	-15	26.6	344	54.8	+18	42.7	
1	131	19.1	198	44.9		40.3	88	17.0		16.3	267	47.9		26.7	359	57.5		42.8	
2	146	21.5	213	48.9		40.1	103	18.6		16.5	282	50.0		26.7	15	00.1		42.8	
3	161	24.0	228	53.0		39.9	118	20.1		16.8	297	52.2		26.8	30	02.8		42.9	
4	176	26.5	243	57.0		39.8	133	21.7		17.1	312	54.3		26.9	45	05.5		43.0	
5	191	28.9	259	01.0	-15	39.6	148	23.3	+18	17.4	327	56.4	-15	27.0	60	08.1	+18	43.0	
6	206	31.4	274	05.1	-15	39.4	163	24.8	+18	17.7	342	58.6	-15	27.1	75	10.8	+18	43.1	
7	221	33.9	289	09.1		39.2	178	26.4		18.0	358	00.7		27.2	90	13.5		43.1	
8	236	36.3	304	13.1		39.0	193	27.9		18.2	13	02.9		27.3	105	16.1		43.2	
9	251	38.8	319	17.2		38.9	208	29.5		18.5	28	05.0		27.4	120	18.8		43.2	
10	266	41.3	334	21.2		38.7	223	31.0		18.8	43	07.1		27.4	135	21.4		43.3	
11	281	43.7	349	25.2	-15	38.5	238	32.5	+18	19.1	58	09.3	-15	27.5	150	24.1	+18	43.4	
12	296	46.2	4	29.3	-15	38.3	253	34.1	+18	19.4	73	11.4	-15	27.6	165	26.8	+18	43.4	
13	311	48.6	19	33.3		38.2	268	35.6		19.6	88	13.6		27.7	180	29.4		43.5	
14	326	51.1	34	37.3		38.0	283	37.2		19.9	103	15.7		27.8	195	32.1		43.5	
15	341	53.6	49	41.3		37.8	298	38.7		20.2	118	17.9		27.9	210	34.8		43.6	
16	356	56.0	64	45.4		37.6	313	40.3		20.5	133	20.0		28.0	225	37.4		43.6	
17	11	58.5	79	49.4	-15	37.5	328	41.8	+18	20.8	148	22.1	-15	28.1	240	40.1	+18	43.7	
18	27	01.0	94	53.4	-15	37.3	343	43.4	+18	21.1	163	24.3	-15	28.1	255	42.8	+18	43.7	
19	42	03.4	109	57.4		37.1	358	44.9		21.3	178	26.4		28.2	270	45.4		43.8	
20	57	05.9	125	01.4		37.0	13	46.4		21.6	193	28.6		28.3	285	48.1		43.9	
21	72	08.4	140	05.4		36.8	28	48.0		21.9	208	30.7		28.4	300	50.8		43.9	
22	87	10.8	155	09.4		36.6	43	49.5		22.2	223	32.9		28.5	315	53.4		44.0	
23	102	13.3	170	13.4		36.5	58	51.1		22.5	238	35.0		28.6	330	56.1		44.0	
24	117	15.8	185	17.4	-15	36.3	73	52.6	+18	22.7	253	37.2	-15	28.7	345	58.8	+18	44.1	
Dif	—		+40			+2	+15			+3	+21			-1	+27			+	

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna					
	SD: 16/3 PMG: 12 ^h 10 ^m 4			Edad: 17 ^d 9 PHE { SD: 14/7 PMG: 2 ^h 54 ^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	
0	177	26.3	-20	36.9	317	36.8	+11	16.7	60 N	15 38	16 30	17 24	20 37	82	10 09	**		
1	192	26.1		36.4	332	12.2 ¹⁶⁴	+11	03.6 ¹³¹	58	15 52	39	29	41 78		04	2		
2	207	25.9		35.9	346	47.8 ¹⁶⁶	+10	50.4 ¹³²	56	16 04	48	34	44 75		10 00	4		
3	222	25.7		35.4	1	23.3 ¹⁶⁵		37.3 ¹³¹	54	14	16 55	39	47 72		9 56	7		
4	237	25.5		34.8	15	58.9 ¹⁶⁶		24.0 ¹³³	52	23	17 01	44	50 70		52	10		
5	252	25.3	-20	34.3	30	34.6 ¹⁶⁷	+10	10.8 ¹³²	50	16 31	17 08	17 48	20 52	68	9 49	11		
6	267	25.1	-20	33.8	45	10.3 ¹⁶⁷	+9	57.5 ¹³³	45	16 48	17 21	17 57	20 57	64	9 42	16		
7	282	24.9		33.3	59	46.0 ¹⁶⁷		44.1 ¹³⁴	40	17 02	32	18 05	21 02	59	36	19		
8	297	24.7		32.8	74	21.7 ¹⁶⁷		30.7 ¹³⁴	35	14	42	13	06 55		31	22		
9	312	24.5		32.3	88	57.5 ¹⁶⁸		17.3 ¹³⁴	30	25	17 51	20	09 53		26	26		
10	327	24.3		31.8	103	33.3 ¹⁶⁸	+9	03.9 ¹³⁴	20	43	18 07	34	15 47		18	31		
11	342	24.2	-20	31.3	118	09.2 ¹⁶⁹	+8	50.4 ¹³⁵	10 N	17 59	18 21	18 47	21 20	43	9 11	35		
12	357	24.0	-20	30.8	132	45.1 ¹⁶⁹	+8	36.9 ¹³⁵	0	18 14	18 36	19 02	21 24	39	9 04	39		
13	12	23.8		30.3	147	21.0 ¹⁶⁹		23.4 ¹³⁵	10 S	29	18 52	18	29 35		8 57	44		
14	27	23.6		29.8	161	56.9 ¹⁶⁹	+8	09.8 ¹³⁶	20	18 46	19 09	19 38	34 30		50	48		
15	42	23.4		29.2	176	32.9 ¹⁷⁰	+7	56.2 ¹³⁶	30	19 04	31	20 03	40 25		41	53		
16	57	23.2		28.7	191	08.9 ¹⁷⁰		42.6 ¹³⁶	35	16	19 44	19	43 22		37	56		
17	72	23.0	-20	28.2	205	44.9 ¹⁷⁰	+7	28.9 ¹³⁷	40	19 28	20 00	20 39	21 47	19	8 31	59		
18	87	22.8	-20	27.7	220	21.0 ¹⁷¹	+7	15.2 ¹³⁷	45	19 44	20 19	21 04	21 51	15	8 24	64		
19	102	22.6		27.2	234	57.1 ¹⁷¹	+7	01.5 ¹³⁷	50	20 02	43	39	56 11		17	68		
20	117	22.4		26.7	249	33.2 ¹⁷¹	+6	47.8 ¹³⁷	52	11	20 55	21 58	21 58	9	13	70		
21	132	22.2		26.1	264	09.3 ¹⁷¹		34.0 ¹³⁸	54	21	21 09	22 22	22 01	7	09	73		
22	147	22.0		25.6	278	45.4 ¹⁷¹		20.2 ¹³⁸	56	32	26	22 57	04 4		05	75		
23	162	21.8		25.1	293	21.6 ¹⁷²	+6	06.4 ¹³⁸	58	20 45	21 46	** **	07 1		8 00	78		
24	177	21.6	-20	24.6	307	57.8 ¹⁷²	+5	52.6 ¹³⁸	60 S	21 01	22 11	** **	22 10	**	7 54	82		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 16 ^h 08 ^m 3		Mag: -4.3 PMG: 11 ^h 36 ^m			Mag: -0.1 PMG: 19 ^h 03 ^m			Mag: -2.0 PMG: 7 ^h 05 ^m			Mag: -0.2 PMG: 0 ^h 56 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		hG ♅	Dec		
h	°	'	°	'	°	'	'	'	°	'	°	'	'	'	°	'	'	
0	117	15.8	185	17.4	-15	36.3	73	52.6	+18	22.7	253	37.2	-15	28.7	345	58.8	+18	44.1
1	132	18.2	200	21.5		36.1	88	54.1		23.0	268	39.3		28.7	1	01.4		44.1
2	147	20.7	215	25.4		36.0	103	55.7		23.3	283	41.4		28.8	16	04.1		44.2
3	162	23.1	230	29.4		35.8	118	57.2		23.6	298	43.6		28.9	31	06.8		44.3
4	177	25.6	245	33.4		35.6	133	58.8		23.9	313	45.7		29.0	46	09.4		44.3
5	192	28.1	260	37.4	-15	35.5	149	00.3	+18	24.2	328	47.9	-15	29.1	61	12.1	+18	44.4
6	207	30.5	275	41.4	-15	35.3	164	01.8	+18	24.4	343	50.0	-15	29.2	76	14.8	+18	44.4
7	222	33.0	290	45.4		35.2	179	03.4		24.7	358	52.2		29.3	91	17.4		44.5
8	237	35.5	305	49.4		35.0	194	04.9		25.0	13	54.3		29.3	106	20.1		44.5
9	252	37.9	320	53.4		34.8	209	06.4		25.3	28	56.5		29.4	121	22.8		44.6
10	267	40.4	335	57.4		34.7	224	08.0		25.6	43	58.6		29.5	136	25.4		44.7
11	282	42.9	351	01.3	-15	34.5	239	09.5	+18	25.9	59	00.8	-15	29.6	151	28.1	+18	44.7
12	297	45.3	6	05.3	-15	34.4	254	11.0	+18	26.1	74	02.9	-15	29.7	166	30.7	+18	44.8
13	312	47.8	21	09.3		34.2	269	12.6		26.4	89	05.1		29.8	181	33.4		44.8
14	327	50.3	36	13.3		34.1	284	14.1		26.7	104	07.2		29.9	196	36.1		44.9
15	342	52.7	51	17.2		33.9	299	15.6		27.0	119	09.4		29.9	211	38.7		44.9
16	357	55.2	66	21.2		33.8	314	17.1		27.3	134	11.5		30.0	226	41.4		45.0
17	12	57.6	81	25.2	-15	33.6	329	18.7	+18	27.6	149	13.7	-15	30.1	241	44.1	+18	45.1
18	28	00.1	96	29.1	-15	33.5	344	20.2	+18	27.8	164	15.8	-15	30.2	256	46.7	+18	45.1
19	43	02.6	111	33.1		33.3	359	21.7		28.1	179	18.0		30.3	271	49.4		45.2
20	58	05.0	126	37.0		33.2	14	23.3		28.4	194	20.1		30.4	286	52.1		45.2
21	73	07.5	141	41.0		33.0	29	24.8		28.7	209	22.3		30.5	301	54.7		45.3
22	88	10.0	156	45.0		32.9	44	26.3		29.0	224	24.4		30.5	316	57.4		45.3
23	103	12.4	171	48.9		32.7	59	27.8		29.3	239	26.6		30.6	332	00.1		45.4
24	118	14.9	186	52.9	-15	32.6	74	29.3	+18	29.5	254	28.7	-15	30.7	347	02.7	+18	45.5
Dif	—		+40		+2		+15		+3		+21		-1		+27		+1	

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna														
	SD: 16:3 PMG: 12 ^h 10 ^m 7			Edad: 18 ^d 9 PHE { 4 ^h : 54:1 12 ^h : 54:2 20 ^h : 54:3 SD: 14:7 PMG: 3 ^h 34 ^m R°: 39 ^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	21.6	-20	24.6	307	57.8	+5	52.6	60 N	6 57	7 50	8 41	21 59	82	10 08	**											
1	192	21.4		24.1	322	34.0 ¹⁷²		38.7 ¹³⁹	58	51	41	28	59	79	06	2											
2	207	21.2		23.5	337	10.2 ¹⁷²		24.9 ¹³⁸	56	46	33	16	59	76	04	5											
3	222	21.0		23.0	351	46.4 ¹⁷²	+5	11.0 ¹³⁹	54	41	25	8 06	21 59	74	03												
4	237	20.8		22.5	6	22.7 ¹⁷³	+4	57.0 ¹⁴⁰	52	37	19	7 57	22 00	71	02	9											
5	252	20.6	-20	22.0	20	59.0 ¹⁷³	+4	43.1 ¹³⁹	50	6 33	7 13	7 49	22 00	69	10 00	11											
6	267	20.5	-20	21.5	35	35.2 ¹⁷²	+4	29.1 ¹⁴⁰	45	6 24	7 00	7 32	22 01	63	9 58	15											
7	282	20.3		20.9	50	11.5 ¹⁷³		15.2 ¹³⁹	40	16	6 49	18	01	60	55	19											
8	297	20.1		20.4	64	47.8 ¹⁷³	+4	01.2 ¹⁴⁰	35	08	39	7 06	01	57	53	23											
9	312	19.9		19.9	79	24.1 ¹⁷³	+3	47.1 ¹⁴¹	30	6 01	30	6 56	02	53	52	25											
10	327	19.7		19.4	94	00.4 ¹⁷³		33.1 ¹⁴⁰	20	5 47	14	38	02	48	49	30											
11	342	19.5	-20	18.8	108	36.8 ¹⁷⁴	+3	19.1 ¹⁴⁰	10 N	5 34	6 00	6 22	22 03	43	9 46	35											
12	357	19.3	-20	18.3	123	13.1 ¹⁷³	+3	05.0 ¹⁴¹	0	5 19	5 45	6 07	22 03	40	9 43	39											
13	12	19.1		17.8	137	49.4 ¹⁷³	+2	50.9 ¹⁴¹	10 S	5 03	29	5 52	04	35	41	43											
14	27	18.9		17.3	152	25.8 ¹⁷⁴		36.8 ¹⁴¹	20	4 43	5 12	36	04	31	38	47											
15	42	18.7		16.7	167	02.1 ¹⁷³		22.7 ¹⁴¹	30	18	4 50	17	05	26	34	53											
16	57	18.6		16.2	181	38.4 ¹⁷³	+2	08.6 ¹⁴¹	35	4 02	37	5 06	05	23	33	55											
17	72	18.4	-20	15.7	196	14.8 ¹⁷⁴	+1	54.5 ¹⁴¹	40	3 43	4 22	4 53	22 06	19	9 30	60											
18	87	18.2	-20	15.1	210	51.1 ¹⁷³	+1	40.3 ¹⁴²	45	3 18	4 03	4 38	22 06	16	9 28	63											
19	102	18.0		14.6	225	27.5 ¹⁷⁴		26.2 ¹⁴¹	50	2 43	3 38	19	07	11	25	68											
20	117	17.8		14.1	240	03.8 ¹⁷³	+1	12.0 ¹⁴²	52	24	26	10	07	9	23	71											
21	132	17.6		13.5	254	40.1 ¹⁷³	+0	57.9 ¹⁴¹	54	2 00	3 13	4 01	08	6	22	73											
22	147	17.4		13.0	269	16.4 ¹⁷³		43.7 ¹⁴²	56	1 25	2 56	3 49	08	4	20	76											
23	162	17.2		12.5	283	52.8 ¹⁷⁴		29.5 ¹⁴²	58	** **	36	36	08	2	18	79											
24	177	17.1	-20	11.9	298	29.1 ¹⁷³	+0	15.3 ¹⁴²	60 S	** **	2 10	3 21	22 09	**	9 16	82											
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO														
	PMG: 16 ^h 04 ^m 4			Mag: -4.2 PMG: 11 ^h 29 ^m			Mag: -0.1 PMG: 19 ^h 00 ^m			Mag: -2.0 PMG: 7 ^h 01 ^m			Mag: -0.2 PMG: 0 ^h 52 ^m														
	hG ♈		Dec	hG ♀		Dec	hG ♂		Dec	hG ♃		Dec	hG ♄		Dec												
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'											
0	118	14.9	186	52.9	-15	32.6	74	29.3	+18	29.5	254	28.7	-15	30.7	347	02.7	+18	45.5									
1	133	17.4	201	56.8		32.4	89	30.9		29.8	269	30.9		30.8	2	05.4		45.5									
2	148	19.8	217	00.7		32.3	104	32.4		30.1	284	33.0		30.9	17	08.1		45.6									
3	163	22.3	232	04.7		32.1	119	33.9		30.4	299	35.2		31.0	32	10.7		45.6									
4	178	24.7	247	08.6		32.0	134	35.4		30.7	314	37.3		31.0	47	13.4		45.7									
5	193	27.2	262	12.6	-15	31.9	149	37.0	+18	31.0	329	39.5	-15	31.1	62	16.1	+18	45.8									
6	208	29.7	277	16.5	-15	31.7	164	38.5	+18	31.3	344	41.6	-15	31.2	77	18.7	+18	45.8									
7	223	32.1	292	20.4		31.6	179	40.0		31.5	359	43.8		31.3	92	21.4		45.9									
8	238	34.6	307	24.3		31.4	194	41.5		31.8	14	45.9		31.4	107	24.1		45.9									
9	253	37.1	322	28.3		31.3	209	43.0		32.1	29	48.1		31.5	122	26.8		46.0									
10	268	39.5	337	32.2		31.2	224	44.5		32.4	44	50.2		31.6	137	29.4		46.0									
11	283	42.0	352	36.1	-15	31.0	239	46.1	+18	32.7	59	52.4	-15	31.6	152	32.1	+18	46.1									
12	298	44.5	7	40.0	-15	30.9	254	47.6	+18	33.0	74	54.5	-15	31.7	167	34.8	+18	46.2									
13	313	46.9	22	43.9		30.8	269	49.1		33.2	89	56.7		31.8	182	37.4		46.2									
14	328	49.4	37	47.8		30.6	284	50.6		33.5	104	58.8		31.9	197	40.1		46.3									
15	343	51.9	52	51.8		30.5	299	52.1		33.8	120	01.0		32.0	212	42.8		46.3									
16	358	54.3	67	55.7		30.4	314	53.6		34.1	135	03.1		32.1	227	45.4		46.4									
17	13	56.8	82	59.6	-15	30.2	329	55.1	+18	34.4	150	05.3	-15	32.1	242	48.1	+18	46.4									
18	28	59.2	98	03.5	-15	30.1	344	56.7	+18	34.7	165	07.4	-15	32.2	257	50.8	+18	46.5									
19	44	01.7	113	07.4		30.0	359	58.2		35.0	180	09.6		32.3	272	53.4		46.6									
20	59	04.2	128	11.3		29.8	14	59.7		35.2	195	11.8		32.4	287	56.1		46.6									
21	74	06.6	143	15.1		29.7	30	01.2		35.5	210	13.9		32.5	302	58.8		46.7									
22	89	09.1	158	19.0		29.6	45	02.7		35.8	225	16.1		32.5	318	01.4		46.7									
23	104	11.6	173	22.9		29.5	60	04.2		36.1	240	18.2		32.6	333	04.1		46.8									
24	119	14.0	188	26.8	-15	29.3	75	05.7	+18	36.4	255	20.4	-15	32.7	348	06.8	+18	46.8									
Dif	—			+39			+1			+15			+3			+22			-1			+27			+		

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16/3 PMG: 12 ^h 11 ^m 0			Edad: 19 ^d 9 PHE { SD: 14/8 PMG: 4 ^h 13 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m m	h m m	h m m
0	177	17.1	-20	11.9	298	29.1	+0	15.3	60 N	15 43	16 34	17 27	23 21 85	10 06 **
1	192	16.9		11.4	313	05.4 ¹⁷³	+0	01.1 ¹⁴²	58	15 56	43	33	18 82	08 1
2	207	16.7		10.9	327	41.7 ¹⁷³	-0	13.1 ¹⁴²	56	16 07	51	38	15 79	09 4
3	222	16.5		10.3	342	17.9 ¹⁷²		27.3 ¹⁴²	54	17	16 58	42	13 75	10 7
4	237	16.3		09.8	356	54.2 ¹⁷³		41.5 ¹⁴²	52	26	17 05	46	11 73	11 9
5	252	16.1	-20	09.2	11	30.5 ¹⁷³	-0	55.8 ¹⁴³	50	16 34	17 10	17 50	23 09 70	10 11 12
6	267	15.9	-20	08.7	26	06.7 ¹⁷²	-1	10.0 ¹⁴²	45	16 51	17 23	17 59	23 04 66	10 13 16
7	282	15.8		08.2	40	42.9 ¹⁷²		24.2 ¹⁴²	40	17 05	34	18 07	23 01 61	14 20
8	297	15.6		07.6	55	19.1 ¹⁷²		38.4 ¹⁴²	35	16	44	14	22 58 58	16 23
9	312	15.4		07.1	69	55.3 ¹⁷²	-1	52.7 ¹⁴³	30	27	17 52	21	55 55	17 26
10	327	15.2		06.5	84	31.5 ¹⁷²	-2	06.9 ¹⁴²	20	17 44	18 08	35	50 50	19 31
11	342	15.0	-20	06.0	99	07.6 ¹⁷¹	-2	21.1 ¹⁴²	10 N	18 00	18 22	18 48	22 46 45	10 21 35
12	357	14.8	-20	05.5	113	43.8 ¹⁷²	-2	35.3 ¹⁴²	0	18 15	18 37	19 02	22 43 40	10 22 40
13	12	14.7		04.9	128	19.9 ¹⁷¹	-2	49.6 ¹⁴³	10 S	29	18 52	18	39 36	24 44
14	27	14.5		04.4	142	55.9 ¹⁷⁰	-3	03.8 ¹⁴²	20	18 45	19 09	19 37	35 32	25 49
15	42	14.3		03.8	157	32.0 ¹⁷¹		18.0 ¹⁴²	30	19 04	30	20 02	31 27	27 54
16	57	14.1		03.3	172	08.0 ¹⁷⁰		32.2 ¹⁴²	35	15	43	18	28 24	28 57
17	72	13.9	-20	02.7	186	44.0 ¹⁷⁰	-3	46.4 ¹⁴²	40	19 27	19 58	20 37	22 25 21	10 30 60
18	87	13.8	-20	02.2	201	20.0 ¹⁷⁰	-4	00.7 ¹⁴³	45	19 42	20 17	21 02	22 22 17	10 31 65
19	102	13.6		01.6	215	55.9 ¹⁶⁹		14.9 ¹⁴²	50	20 00	41	35	18 12	33 69
20	117	13.4		01.1	230	31.8 ¹⁶⁹		29.1 ¹⁴²	52	09	20 52	21 54	16 10	34 71
21	132	13.2	-20	00.5	245	07.7 ¹⁶⁹		43.2 ¹⁴¹	54	19	21 06	22 16	14 8	35 74
22	147	13.0	-20	00.0	259	43.5 ¹⁶⁸	-4	57.4 ¹⁴²	56	29	22	22 48	12 5	36 76
23	162	12.9	-19	59.4	274	19.3 ¹⁶⁸	-5	11.6 ¹⁴²	58	42	21 41	** **	10 2	37 80
24	177	12.7	-19	58.9	288	55.1 ¹⁶⁸	-5	25.7 ¹⁴¹	60 S	20 57	22 05	** **	22 07 **	10 38 83
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 16 ^h 00 ^m 4		Mag: -4.2 PMG: 11 ^h 23 ^m		Mag: -0.1 PMG: 18 ^h 58 ^m		Mag: -2.0 PMG: 6 ^h 58 ^m		Mag: -0.2 PMG: 0 ^h 47 ^m					
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄					
h	°	'	°	'	°	'	°	'	°	'				
0	119	14.0	188	26.8	-15	29.3	75	05.7	+18	36.4				
1	134	16.5	203	30.7		29.2	90	07.2		36.7				
2	149	19.0	218	34.6		29.1	105	08.7		37.0				
3	164	21.4	233	38.4		29.0	120	10.2		37.2				
4	179	23.9	248	42.3		28.8	135	11.7		37.5				
5	194	26.3	263	46.2	-15	28.7	150	13.2	+18	37.8				
6	209	28.8	278	50.0	-15	28.6	165	14.7	+18	38.1				
7	224	31.3	293	53.9		28.5	180	16.2		38.4				
8	239	33.7	308	57.8		28.4	195	17.7		38.7				
9	254	36.2	324	01.6		28.2	210	19.3		39.0				
10	269	38.7	339	05.5		28.1	225	20.8		39.2				
11	284	41.1	354	09.3	-15	28.0	240	22.3	+18	39.5				
12	299	43.6	9	13.2	-15	27.9	255	23.8	+18	39.8				
13	314	46.1	24	17.0		27.8	270	25.3		40.1				
14	329	48.5	39	20.9		27.7	285	26.8		40.4				
15	344	51.0	54	24.7		27.6	300	28.2		40.7				
16	359	53.5	69	28.5		27.4	315	29.7		41.0				
17	14	55.9	84	32.4	-15	27.3	330	31.2	+18	41.3				
18	29	58.4	99	36.2	-15	27.2	345	32.7	+18	41.5				
19	45	00.8	114	40.0		27.1	0	34.2		41.8				
20	60	03.3	129	43.8		27.0	15	35.7		42.1				
21	75	05.8	144	47.7		26.9	30	37.2		42.4				
22	90	08.2	159	51.5		26.8	45	38.7		42.7				
23	105	10.7	174	55.3		26.7	60	40.2		43.0				
24	120	13.2	189	59.1	-15	26.6	75	41.7	+18	43.3				
Dif	—		+38		+1		+15		+3					

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'3 PMG: 12 ^h 11 ^m 3			Edad: 20 ^d 9 PHE { 4 ^h : 54'8 12 ^h : 55'0 20 ^h : 55'2 SD: 14'9 PMG: 4 ^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	177	12.7	-19 58.9	288	55.1	-5 25.7	60 N	6 54	7 47	8 38	*** ** *		10 05	**	
1	192	12.5	58.3	303	30.8 ¹⁶⁷	39.9 ¹⁴²	58	49	38	25	*** ** *		09	3	
2	207	12.3	57.8	318	06.5 ¹⁶⁷	-5 54.0 ¹⁴¹	56	44	30	14	*** ** *		13	6	
3	222	12.2	57.2	332	42.1 ¹⁶⁶	-6 08.2 ¹⁴²	54	39	23	8 04	*** ** *		17	8	
4	237	12.0	56.7	347	17.7 ¹⁶⁶	22.3 ¹⁴¹	52	35	17	7 55	*** ** *		20	11	
5	252	11.8	-19 56.1	1	53.3 ¹⁶⁶	-6 36.4 ¹⁴¹	50	6 31	7 11	7 47	*** ** *		10 23	13	
6	267	11.6	-19 55.6	16	28.8 ¹⁶⁵	-6 50.5 ¹⁴¹	45	6 23	6 59	7 31	*** ** *		10 29	18	
7	282	11.4	55.0	31	04.3 ¹⁶⁵	-7 04.5 ¹⁴⁰	40	15	48	17	*** ** *		34	22	
8	297	11.3	54.5	45	39.7 ¹⁶⁴	18.6 ¹⁴¹	35	08	38	7 06	23 56	61	39	25	
9	312	11.1	53.9	60	15.1 ¹⁶⁴	32.6 ¹⁴⁰	30	6 01	30	6 55	50	58	43	28	
10	327	10.9	53.3	74	50.4 ¹⁶³	-7 46.7 ¹⁴¹	20	5 47	14	38	40	53	50	33	
11	342	10.7	-19 52.8	89	25.6 ¹⁶²	-8 00.7 ¹⁴⁰	10 N	5 34	6 00	6 22	23 31	48	10 56	38	
12	357	10.6	-19 52.2	104	00.9 ¹⁶³	-8 14.7 ¹⁴⁰	0	5 20	5 46	6 08	23 23	44	11 02	42	
13	12	10.4	51.7	118	36.0 ¹⁶¹	28.6 ¹³⁹	10 S	5 04	30	5 53	15	40	08	46	
14	27	10.2	51.1	133	11.2 ¹⁶²	42.6 ¹⁴⁰	20	4 45	5 13	37	23 07	35	14	51	
15	42	10.0	50.5	147	46.2 ¹⁶⁰	-8 56.5 ¹³⁹	30	20	4 52	19	22 58	29	21	56	
16	57	09.9	50.0	162	21.2 ¹⁶⁰	-9 10.4 ¹³⁹	35	4 05	39	5 08	52	27	25	60	
17	72	09.7	-19 49.4	176	56.1 ¹⁵⁹	-9 24.3 ¹³⁹	40	3 46	4 24	4 55	22 46	23	11 30	63	
18	87	09.5	-19 48.9	191	31.0 ¹⁵⁹	-9 38.1 ¹³⁸	45	3 21	4 06	4 41	22 39	19	11 36	67	
19	102	09.4	48.3	206	05.8 ¹⁵⁸	-9 52.0 ¹³⁹	50	2 47	3 42	23	30	15	42	72	
20	117	09.2	47.7	220	40.6 ¹⁵⁸	-10 05.8 ¹³⁸	52	29	30	14	26	13	45	75	
21	132	09.0	47.2	235	15.3 ¹⁵⁷	19.6 ¹³⁸	54	2 06	17	4 04	22	10	49	77	
22	147	08.8	46.6	249	49.9 ¹⁵⁶	33.3 ¹³⁷	56	1 35	3 01	3 53	17	7	52	81	
23	162	08.7	46.0	264	24.5 ¹⁵⁶	-10 47.0 ¹³⁷	58	*** **	2 42	41	12	4	11 57	83	
24	177	08.5	-19 45.5	278	59.0 ¹⁵⁵	-11 00.7 ¹³⁷	60 S	*** **	2 18	3 26	22 06	0	12 01	88	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO		
	PMG: 15 ^h 56 ^m 5		Mag: -4.3 PMG: 11 ^h 17 ^m		Mag: 0.0 PMG: 18 ^h 55 ^m		Mag: -2.0 PMG: 6 ^h 54 ^m		Mag: -0.2 PMG: 0 ^h 43 ^m		
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	
0	120	13.2	189	59.1	-15 26.6	75 41.7	+18 43.3	256 12.2	-15 34.7	349 10.8	+18 48.2
1	135	15.6	205	02.9	26.5	90 43.2	43.5	271 14.4	34.8	4 13.5	48.3
2	150	18.1	220	06.7	26.4	105 44.7	43.8	286 16.5	34.8	19 16.1	48.3
3	165	20.6	235	10.5	26.3	120 46.2	44.1	301 18.7	34.9	34 18.8	48.4
4	180	23.0	250	14.3	26.2	135 47.7	44.4	316 20.8	35.0	49 21.5	48.4
5	195	25.5	265	18.1	-15 26.1	150 49.2	+18 44.7	331 23.0	-15 35.1	64 24.2	+18 48.5
6	210	28.0	280	21.9	-15 26.0	165 50.6	+18 45.0	346 25.2	-15 35.2	79 26.8	+18 48.6
7	225	30.4	295	25.7	25.9	180 52.1	45.3	1 27.3	35.2	94 29.5	48.6
8	240	32.9	310	29.5	25.8	195 53.6	45.6	16 29.5	35.3	109 32.2	48.7
9	255	35.3	325	33.2	25.7	210 55.1	45.8	31 31.7	35.4	124 34.8	48.7
10	270	37.8	340	37.0	25.6	225 56.6	46.1	46 33.8	35.5	139 37.5	48.8
11	285	40.3	355	40.8	-15 25.5	240 58.1	+18 46.4	61 36.0	-15 35.6	154 40.2	+18 48.8
12	300	42.7	10 44.6	-15 25.4	25.5	255 59.6	+18 46.7	76 38.1	-15 35.6	169 42.8	+18 48.9
13	315	45.2	25 48.3	25.3	25.3	271 01.0	47.0	91 40.3	35.7	184 45.5	49.0
14	330	47.7	40 52.1	25.2	25.2	286 02.5	47.3	106 42.5	35.8	199 48.2	49.0
15	345	50.1	55 55.8	25.1	25.1	301 04.0	47.6	121 44.6	35.9	214 50.8	49.1
16	0	52.6	70 59.6	25.0	25.0	316 05.5	47.9	136 46.8	36.0	229 53.5	49.1
17	15	55.1	86 03.4	-15 24.9	24.9	331 07.0	+18 48.1	151 49.0	-15 36.0	244 56.2	+18 49.2
18	30	57.5	101 07.1	-15 24.8	24.8	346 08.5	+18 48.4	166 51.1	-15 36.1	259 58.9	+18 49.3
19	46	00.0	116 10.9	24.7	24.7	1 09.9	48.7	181 53.3	36.2	275 01.5	49.3
20	61	02.4	131 14.6	24.6	24.6	16 11.4	49.0	196 55.5	36.3	290 04.2	49.4
21	76	04.9	146 18.3	24.6	24.6	31 12.9	49.3	211 57.6	36.3	305 06.9	49.4
22	91	07.4	161 22.1	24.5	24.5	46 14.4	49.6	226 59.8	36.4	320 09.5	49.5
23	106	09.8	176 25.8	24.4	24.4	61 15.9	49.9	242 02.0	36.5	335 12.2	49.5
24	121	12.3	191 29.5	-15 24.3	24.3	76 17.3	+18 50.2	257 04.1	-15 36.6	350 14.9	+18 49.6
Dif	—		+38	+1		+15	+3	+22	-1	+27	+1

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16:3 PMG: 12 ^h 11 ^m 6			Edad: 21 ^d 9 PHE { 4 ^h : 55 ⁴ / _{12^h: 55⁶/_{20^h: 55⁸} SD: 15:1 PMG: 5^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	177	08.5	-19 45.5	278	59.0	-11 00.7	60 N	15 48	16 39	17 31	0 46 92	10 04 0			
1	192	08.3		293	33.4 ¹⁵⁴	14.4 ¹³⁷	58	16 01	47	36	40 86	12 4			
2	207	08.2	44.3	308	07.8 ¹⁵⁴	28.0 ¹³⁶	56	12	16 55	41	34 83	19 7			
3	222	08.0	43.8	322	42.1 ¹⁵³	41.6 ¹³⁶	54	21	17 01	45	28 80	25 11			
4	237	07.8	43.2	337	16.3 ¹⁵²	-11 55.2 ¹³⁶	52	30	08	49	24 76	31 13			
5	252	07.6	-19 42.6	351	50.4 ¹⁵¹	-12 08.7 ¹³⁵	50	16 37	17 13	17 53	0 19 75	10 36 16			
6	267	07.5	-19 42.1	6	24.5 ¹⁵¹	-12 22.2 ¹³⁵	45	16 54	17 26	18 02	0 10 69	10 47 21			
7	282	07.3	41.5	20	58.4 ¹⁴⁹	35.7 ¹³⁵	40	17 07	36	09	0 02 65	10 56 25			
8	297	07.1	40.9	35	32.4 ¹⁵⁰	-12 49.1 ¹³⁴	35	18	46	16	** ** *	11 04 29			
9	312	07.0	40.3	50	06.2 ¹⁴⁸	-13 02.5 ¹³⁴	30	28	17 54	23	** ** *	11 32			
10	327	06.8	39.8	64	39.9 ¹⁴⁷	15.9 ¹³⁴	20	17 46	18 09	36	** ** *	23 37			
11	342	06.6	-19 39.2	79	13.6 ¹⁴⁷	-13 29.2 ¹³³	10 N	18 01	18 23	18 49	** ** *	11 34 41			
12	357	06.5	-19 38.6	93	47.2 ¹⁴⁶	-13 42.4 ¹³²	0	18 15	18 37	19 03	** ** *	11 44 45			
13	12	06.3	38.1	108	20.7 ¹⁴⁵	-13 55.7 ¹³³	10 S	30	18 52	18	23 55 44	11 54 50			
14	27	06.1	37.5	122	54.1 ¹⁴⁴	-14 08.8 ¹³¹	20	18 45	19 09	19 37	42 40	12 05 54			
15	42	06.0	36.9	137	27.4 ¹⁴³	22.0 ¹³²	30	19 03	30	20 01	27 35	17 60			
16	57	05.8	36.3	152	00.7 ¹⁴³	35.1 ¹³¹	35	14	42	17	19 32	25 62			
17	72	05.6	-19 35.7	166	33.8 ¹⁴¹	-14 48.1 ¹³⁰	40	19 26	19 57	20 35	23 09 29	12 33 66			
18	87	05.5	-19 35.2	181	06.9 ¹⁴¹	-15 01.1 ¹³⁰	45	19 40	20 15	20 59	22 58 24	12 43 70			
19	102	05.3	34.6	195	39.8 ¹³⁹	14.1 ¹³⁰	50	19 58	38	21 32	45 19	12 54 76			
20	117	05.1	34.0	210	12.7 ¹³⁹	26.9 ¹²⁸	52	20 06	20 49	21 49	39 16	13 00 79			
21	132	05.0	33.4	224	45.5 ¹³⁸	39.8 ¹²⁹	54	16	21 02	22 11	32 13	06 82			
22	147	04.8	32.9	239	18.1 ¹³⁶	-15 52.6 ¹²⁸	56	26	18	22 40	24 10	13 85			
23	162	04.7	32.3	253	50.7 ¹³⁶	-16 05.3 ¹²⁷	58	38	36	23 31	16 5	20 90			
24	177	04.5	-19 31.7	268	23.2 ¹³⁵	-16 18.0 ¹²⁷	60 S	20 53	21 59	** ** *	22 06 1	13 29 95			

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 15 ^h 52 ^m 6		Mag: -4.4 PMG: 11 ^h 11 ^m		Mag: 0.0 PMG: 18 ^h 53 ^m		Mag: -2.0 PMG: 6 ^h 51 ^m		Mag: -0.2 PMG: 0 ^h 39 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	121	12.3	191	29.5	76	17.3	257	04.1	350	14.9
1	136	14.8	206	33.3	91	18.8	272	06.3	5	17.5
2	151	17.2	221	37.0	106	20.3	287	08.5	20	20.2
3	166	19.7	236	40.7	121	21.8	302	10.6	35	22.9
4	181	22.2	251	44.4	136	23.2	317	12.8	50	25.6
5	196	24.6	266	48.1	151	24.7	332	15.0	65	28.2
6	211	27.1	281	51.8	166	26.2	347	17.1	80	30.9
7	226	29.6	296	55.5	181	27.7	2	19.3	95	33.6
8	241	32.0	311	59.2	196	29.1	17	21.5	110	36.2
9	256	34.5	327	02.9	211	30.6	32	23.7	125	38.9
10	271	36.9	342	06.6	226	32.1	47	25.8	140	41.6
11	286	39.4	357	10.3	241	33.5	62	28.0	155	44.2
12	301	41.9	12	14.0	256	35.0	77	30.2	170	46.9
13	316	44.3	27	17.7	271	36.5	92	32.3	185	49.6
14	331	46.8	42	21.4	286	37.9	107	34.5	200	52.3
15	346	49.3	57	25.0	301	39.4	122	36.7	215	54.9
16	1	51.7	72	28.7	316	40.9	137	38.8	230	57.6
17	16	54.2	87	32.4	331	42.3	152	41.0	246	00.3
18	31	56.7	102	36.0	346	43.8	167	43.2	261	02.9
19	46	59.1	117	39.7	1	45.3	182	45.4	276	05.6
20	62	01.6	132	43.4	16	46.7	197	47.5	291	08.3
21	77	04.1	147	47.0	31	48.2	212	49.7	306	10.9
22	92	06.5	162	50.7	46	49.7	227	51.9	321	13.6
23	107	09.0	177	54.3	61	51.1	242	54.0	336	16.3
24	122	11.4	192	58.0	76	52.6	257	56.2	351	19.0
Dif	—		+37	+1	+15	+3	+22	-1	+27	+1

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16/2 PMG: 12 ^h 11 ^m 8			Edad: 22 ^d 9 PHE { 4 ^h : 56/1 12 ^h : 56/4 20 ^h : 56/6 SD: 15/2 PMG: 6 ^h 18 ^m R°: 49 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°
h	°	'	°	°	'	°	°	h	m	h	m	h	m	h	m
0	177	04.5	-19 31.7	268	23.2	-16 18.0	60 N	6 51	7 44	8 34	2 18	99	10 04	1	
1	192	04.3	31.1	282	55.6 ¹³⁴	30.6 ¹²⁶	58	46	35	21	2 06	94	16	7	
2	207	04.2	30.5	297	27.9 ¹³³	43.2 ¹²⁶	56	42	28	11	1 57	88	26	12	
3	222	04.0	29.9	312	00.1 ¹³²	-16 55.7 ¹²⁵	54	37	21	8 01	48	84	36	15	
4	237	03.8	29.4	326	32.2 ¹³¹	-17 08.2 ¹²⁵	52	33	15	7 53	40	81	44	19	
5	252	03.7	-19 28.8	341	04.1 ¹²⁹	-17 20.6 ¹²⁴	50	6 30	7 09	7 45	1 34	78	10 52	21	
6	267	03.5	-19 28.2	355	36.0 ¹²⁹	-17 32.9 ¹²³	45	6 21	6 57	7 29	1 19	72	11 08	27	
7	282	03.4	27.6	10	07.8 ¹²⁸	45.2 ¹²³	40	14	47	16	1 07	68	21	32	
8	297	03.2	27.0	24	39.4 ¹²⁶	-17 57.4 ¹²²	35	07	38	7 05	0 57	64	33	34	
9	312	03.0	26.4	39	11.0 ¹²⁶	-18 09.5 ¹²¹	30	6 00	29	6 55	48	61	11 43	37	
10	327	02.9	25.8	53	42.4 ¹²⁴	21.6 ¹²¹	20	5 47	14	38	33	56	12 00	42	
11	342	02.7	-19 25.3	68	13.7 ¹²³	-18 33.6 ¹²⁰	10 N	5 35	6 00	6 22	0 19	52	12 15	47	
12	357	02.6	-19 24.7	82	44.9 ¹²²	-18 45.5 ¹¹⁹	0	5 21	5 46	6 08	0 07	48	12 29	51	
13	12	02.4	24.1	97	16.0 ¹²¹	-18 57.4 ¹¹⁹	10 S	5 05	31	5 54	** ** *	**	44	54	
14	27	02.2	23.5	111	47.0 ¹²⁰	-19 09.2 ¹¹⁸	20	4 47	5 15	38	** ** *	**	12 59	58	
15	42	02.1	22.9	126	17.9 ¹¹⁹	20.9 ¹¹⁷	30	22	4 54	20	** ** *	**	13 17	63	
16	57	01.9	22.3	140	48.7 ¹¹⁸	32.5 ¹¹⁶	35	4 07	42	5 10	23 51	38	27	66	
17	72	01.8	-19 21.7	155	19.3 ¹¹⁶	-19 44.1 ¹¹⁶	40	3 49	4 27	4 58	23 38	35	13 39	70	
18	87	01.6	-19 21.1	169	49.8 ¹¹⁵	-19 55.5 ¹¹⁴	45	3 25	4 09	4 44	23 22	32	13 53	74	
19	102	01.5	20.5	184	20.2 ¹¹⁴	-20 06.9 ¹¹⁴	50	2 52	3 46	26	23 04	26	14 10	80	
20	117	01.3	19.9	198	50.5 ¹¹³	18.2 ¹¹³	52	35	35	18	22 55	23	19	82	
21	132	01.1	19.3	213	20.7 ¹¹²	29.5 ¹¹³	54	2 13	22	4 08	45	20	28	85	
22	147	01.0	18.7	227	50.7 ¹¹⁰	40.6 ¹¹¹	56	1 44	3 06	3 58	34	16	38	90	
23	162	00.8	18.1	242	20.6 ¹⁰⁹	-20 51.7 ¹¹¹	58	0 53	2 48	46	21	11	14 50	95	
24	177	00.7	-19 17.5	256	50.4 ¹⁰⁸	-21 02.6 ¹⁰⁹	60 S	** ** *	2 25	3 31	22 07	4	15 04	102	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO		
	PMG: 15 ^h 48 ^m 6		Mag: -4.4 PMG: 11 ^h 05 ^m		Mag: 0.0 PMG: 18 ^h 51 ^m		Mag: -2.0 PMG: 6 ^h 47 ^m		Mag: -0.2 PMG: 0 ^h 35 ^m		
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	
0	122	11.4	192	58.0	-15 22.5	76 52.6	+18 57.1	257 56.2	-15 38.5	351 19.0	+18 51.0
1	137	13.9	208	01.6	22.4	91 54.1	57.4	272 58.4	38.5	6 21.6	51.0
2	152	16.4	223	05.2	22.3	106 55.5	57.7	288 00.6	38.6	21 24.3	51.1
3	167	18.8	238	08.9	22.3	121 57.0	58.0	303 02.7	38.7	36 27.0	51.1
4	182	21.3	253	12.5	22.2	136 58.4	58.3	318 04.9	38.8	51 29.6	51.2
5	197	23.8	268	16.1	-15 22.1	151 59.9	+18 58.5	333 07.1	-15 38.8	66 32.3	+18 51.3
6	212	26.2	283	19.7	-15 22.1	167 01.4	+18 58.8	348 09.3	-15 38.9	81 35.0	+18 51.3
7	227	28.7	298	23.4	22.0	182 02.8	59.1	3 11.4	39.0	96 37.7	51.4
8	242	31.2	313	27.0	22.0	197 04.3	59.4	18 13.6	39.1	111 40.3	51.4
9	257	33.6	328	30.6	21.9	212 05.7	+18 59.7	33 15.8	39.1	126 43.0	51.5
10	272	36.1	343	34.2	21.8	227 07.2	+19 00.0	48 18.0	39.2	141 45.7	51.6
11	287	38.5	358	37.8	-15 21.8	242 08.6	+19 00.3	63 20.1	-15 39.3	156 48.3	+18 51.6
12	302	41.0	13 41.4	-15 21.7	257 10.1	+19 00.6	78 22.3	-15 39.4	171 51.0	+18 51.7	
13	317	43.5	28 45.0	21.7	272 11.6	00.9	93 24.5	39.4	186 53.7	51.7	
14	332	45.9	43 48.6	21.6	287 13.0	01.2	108 26.7	39.5	201 56.3	51.8	
15	347	48.4	58 52.1	21.6	302 14.5	01.4	123 28.8	39.6	216 59.0	51.8	
16	2	50.9	73 55.7	21.5	317 15.9	01.7	138 31.0	39.7	232 01.7	51.9	
17	17	53.3	88 59.3	-15 21.4	332 17.4	+19 02.0	153 33.2	-15 39.7	247 04.4	+18 52.0	
18	32	55.8	104 02.9	-15 21.4	347 18.8	+19 02.3	168 35.4	-15 39.8	262 07.0	+18 52.0	
19	47	58.3	119 06.4	21.3	2 20.3	02.6	183 37.5	39.9	277 09.7	52.1	
20	63	00.7	134 10.0	21.3	17 21.7	02.9	198 39.7	40.0	292 12.4	52.1	
21	78	03.2	149 13.6	21.2	32 23.2	03.2	213 41.9	40.1	307 15.0	52.2	
22	93	05.7	164 17.1	21.2	47 24.6	03.5	228 44.1	40.1	322 17.7	52.2	
23	108	08.1	179 20.7	21.1	62 26.1	03.8	243 46.3	40.2	337 20.4	52.3	
24	123	10.6	194 24.2	-15 21.1	77 27.5	+19 04.1	258 48.4	-15 40.3	352 23.1	+18 52.4	
Dif	—		+36	+1	+15	+3	+22	-1	+27	+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 1				Edad: 23 ^d 9 PHE { SD: 15/5 PMG: 7 ^h 07 ^m 4 ^h : 56/9 12 ^h : 57/3 20 ^h : 57/6 R°: 55 ^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	177	00.7	-19	17.5	256	50.4	-21	02.6	60 N	15 53	16 43	17 35	3 57	107	10 05	5				
1	192	00.5		16.9	271	20.1 ¹⁰⁷		13.5 ¹⁰⁹	58	16 05	51	40	40	98	23	14				
2	207	00.4		16.4	285	49.6 ¹⁰⁵		24.3 ¹⁰⁸	56	16	16 58	44	25	92	38	20				
3	222	00.2		15.8	300	19.0 ¹⁰⁴		35.0 ¹⁰⁷	54	25	17 05	49	12	88	10	51				
4	237	00.1		15.2	314	48.3 ¹⁰³		45.6 ¹⁰⁶	52	33	11	52	3 01	84	11	03	28			
5	251	59.9	-19	14.6	329	17.5 ¹⁰²	-21	56.1 ¹⁰⁵	50	16 40	17 16	17 56	2 52	81	11	13	31			
6	266	59.8	-19	14.0	343	46.5 ¹⁰⁰	-22	06.5 ¹⁰⁴	45	16 56	17 28	18 04	2 31	76	11	35	36			
7	281	59.6		13.4	358	15.4 ⁹⁹		16.8 ¹⁰³	40	17 09	38	11	15	71	11	53	39			
8	296	59.5		12.8	12	44.2 ⁹⁸		27.0 ¹⁰²	35	20	47	18	2 01	68	12	07	43			
9	311	59.3		12.1	27	12.9 ⁹⁷		37.1 ¹⁰¹	30	30	17 56	25	1 49	65	20	46				
10	326	59.2		11.5	41	41.4 ⁹⁵		47.1 ¹⁰⁰	20	17 47	18 10	37	29	60	12	42	50			
11	341	59.0	-19	10.9	56	09.8 ⁹⁴	-22	57.0 ⁹⁹	10 N	18 02	18 24	18 50	1 11	57	13	02	52			
12	356	58.8	-19	10.3	70	38.0 ⁹²	-23	06.8 ⁹⁸	0	18 16	18 38	19 03	0 55	53	13	20	56			
13	11	58.7		09.7	85	06.2 ⁹²		16.5 ⁹⁷	10 S	30	18 52	18	39	49	38	59				
14	26	58.5		09.1	99	34.1 ⁸⁹		26.1 ⁹⁶	20	18 45	19 09	19 37	22	45	13	57	62			
15	41	58.4		08.5	114	02.0 ⁸⁹		35.5 ⁹⁴	30	19 02	29	20 00	0 02	41	14	20	66			
16	56	58.2		07.9	128	29.7 ⁸⁷		44.8 ⁹³	35	13	41	15	** ** *	**	33	69				
17	71	58.1	-19	07.3	142	57.3 ⁸⁶	-23	54.1 ⁹³	40	19 25	19 55	20 33	** ** *	**	14	49	71			
18	86	57.9	-19	06.7	157	24.8 ⁸⁵	-24	03.2 ⁹¹	45	19 39	20 13	20 56	23	54	42	15	07	75		
19	101	57.8		06.1	171	52.1 ⁸³		12.1 ⁸⁹	50	19 56	35	21 28	30	37	30	80				
20	116	57.7		05.5	186	19.3 ⁸²		21.0 ⁸⁹	52	20 04	46	21 45	18	35	41	83				
21	131	57.5		04.9	200	46.4 ⁸¹		29.7 ⁸⁷	54	13	20 59	22 05	23	05	32	15	53	87		
22	146	57.4		04.3	215	13.3 ⁷⁹		38.3 ⁸⁶	56	23	21 13	22 32	22	50	28	16	08	91		
23	161	57.2		03.7	229	40.1 ⁷⁸		46.8 ⁸⁵	58	35	31	23 14	32	22	25	97				
24	176	57.1	-19	03.0	244	06.8 ⁷⁷	-24	55.2 ⁸⁴	60 S	20 48	21 53	** ** *	22	11	12	16	46	107		
UT	ARIES				VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 15 ^h 44 ^m 7				Mag: -4.5 PMG: 11 ^h 00 ^m				Mag: 0.0 PMG: 18 ^h 48 ^m				Mag: -2.0 PMG: 6 ^h 44 ^m				Mag: -0.2 PMG: 0 ^h 30 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♊		Dec		hG ♉		Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	123	10.6	194	24.2	-15	21.1	77	27.5	+19	04.1	258	48.4	-15	40.3	352	23.1	+18	52.4		
1	138	13.0	209	27.8		21.0	92	29.0		04.3	273	50.6		40.4	7	25.7		52.4		
2	153	15.5	224	31.3		21.0	107	30.4		04.6	288	52.8		40.4	22	28.4		52.5		
3	168	18.0	239	34.9		20.9	122	31.9		04.9	303	55.0		40.5	37	31.1		52.5		
4	183	20.4	254	38.4		20.9	137	33.3		05.2	318	57.2		40.6	52	33.7		52.6		
5	198	22.9	269	41.9	-15	20.9	152	34.7	+19	05.5	333	59.3	-15	40.6	67	36.4	+18	52.6		
6	213	25.4	284	45.4	-15	20.8	167	36.2	+19	05.8	349	01.5	-15	40.7	82	39.1	+18	52.7		
7	228	27.8	299	49.0		20.8	182	37.6		06.1	4	03.7		40.8	97	41.8		52.8		
8	243	30.3	314	52.5		20.7	197	39.1		06.4	19	05.9		40.9	112	44.4		52.8		
9	258	32.8	329	56.0		20.7	212	40.5		06.7	34	08.1		40.9	127	47.1		52.9		
10	273	35.2	344	59.5		20.6	227	42.0		07.0	49	10.2		41.0	142	49.8		52.9		
11	288	37.7	0	03.0	-15	20.6	242	43.4	+19	07.2	64	12.4	-15	41.1	157	52.4	+18	53.0		
12	303	40.2	15	06.5	-15	20.6	257	44.8	+19	07.5	79	14.6	-15	41.2	172	55.1	+18	53.0		
13	318	42.6	30	10.0		20.5	272	46.3		07.8	94	16.8		41.2	187	57.8		53.1		
14	333	45.1	45	13.5		20.5	287	47.7		08.1	109	19.0		41.3	203	00.5		53.2		
15	348	47.5	60	17.0		20.5	302	49.2		08.4	124	21.1		41.4	218	03.1		53.2		
16	3	50.0	75	20.5		20.4	317	50.6		08.7	139	23.3		41.5	233	05.8		53.3		
17	18	52.5	90	24.0	-15	20.4	332	52.0	+19	09.0	154	25.5	-15	41.5	248	08.5	+18	53.3		
18	33	54.9	105	27.4	-15	20.3	347	53.5	+19	09.3	169	27.7	-15	41.6	263	11.1	+18	53.4		
19	48	57.4	120	30.9		20.3	2	54.9		09.6	184	29.9		41.7	278	13.8		53.4		
20	63	59.9	135	34.4		20.3	17	56.3		09.9	199	32.1		41.8	293	16.5		53.5		
21	79	02.3	150	37.9		20.2	32	57.8		10.2	214	34.2		41.8	308	19.2		53.6		
22	94	04.8	165	41.3		20.2	47	59.2		10.4	229	36.4		41.9	323	21.8		53.6		
23	109	07.3	180	44.8		20.2	63	00.6		10.7	244	38.6		42.0	338	24.5		53.7		
24	124	09.7	195	48.2	-15	20.2	78	02.1	+19	11.0	259	40.8	-15	42.1	353	27.2	+18	53.7		
Dif	—		+35		0		+14		+3		+22		-1		+27		+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 3			Edad: 24 ^d 9 PHE { 4 ^h : 57'9 12 ^h : 58'2 20 ^h : 58'5 SD: 15'7 PMG: 8 ^h 02 ^m R°: 60 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m
0	176	57.1	-19	03.0	244	06.8	-24	55.2	60 N	6 48	7 40	8 30	5 44	106	10 10	19
1	191	56.9		02.4	258	33.3	75	-25 03.4	58	43	32	18	5 18	94	37	31
2	206	56.8		01.8	272	59.7	74	11.5	56	39	25	8 08	4 57	88	10 58	37
3	221	56.6		01.2	287	26.0	73	19.4	54	35	19	7 58	40	84	11 16	40
4	236	56.5	-19	00.6	301	52.1	71	27.3	52	31	13	50	25	81	31	43
5	251	56.3	-19	00.0	316	18.1	70	-25 34.9	50	6 28	7 07	7 43	4 13	78	11 44	46
6	266	56.2	-18	59.4	330	44.0	69	-25 42.5	45	6 20	6 56	7 27	3 47	74	12 11	49
7	281	56.0		58.7	345	09.7	67	49.9	40	13	45	15	26	71	32	52
8	296	55.9		58.1	359	35.4	67	-25 57.1	35	06	37	7 04	3 09	69	12 50	54
9	311	55.8		57.5	14	00.8	64	-26 04.2	30	6 00	29	6 54	2 54	67	13 06	55
10	326	55.6		56.9	28	26.2	64	11.2	20	5 47	14	37	29	64	32	57
11	341	55.5	-18	56.3	42	51.4	62	-26 18.0	10 N	5 35	6 00	6 23	2 08	61	13 54	60
12	356	55.3	-18	55.7	57	16.5	61	-26 24.6	0	5 21	5 47	6 09	1 48	59	14 16	61
13	11	55.2		55.0	71	41.5	60	31.2	10 S	5 06	32	5 55	28	57	37	62
14	26	55.0		54.4	86	06.3	58	37.5	20	4 48	5 16	40	1 07	54	14 59	65
15	41	54.9		53.8	100	31.1	58	43.7	30	25	4 56	22	0 43	51	15 26	66
16	56	54.8		53.2	114	55.7	56	49.7	35	4 10	44	12	29	48	15 42	67
17	71	54.6	-18	52.6	129	20.1	54	-26 55.6	40	3 52	4 30	5 00	0 13	46	16 00	69
18	86	54.5	-18	51.9	143	44.5	54	-27 01.3	45	3 28	4 12	4 46	** ** *	**	16 22	71
19	101	54.3		51.3	158	08.7	52	06.9	50	2 57	3 50	29	** ** *	**	16 50	74
20	116	54.2		50.7	172	32.9	52	12.3	52	40	39	21	23	53 54	17 04	75
21	131	54.1		50.1	186	56.9	50	17.5	54	2 20	26	12	37	52	20	77
22	146	53.9		49.4	201	20.8	49	22.5	56	1 53	3 12	4 02	23	18 50	17 39	79
23	161	53.8		48.8	215	44.5	47	27.4	58	1 11	2 54	3 50	22	54 46	18 02	84
24	176	53.6	-18	48.2	230	08.2	47	-27 32.1	60 S	** ** *	2 33	3 37	22	23 38	18 33	92

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 15 ^h 40 ^m 8		Mag: -4.5 PMG: 10 ^h 54 ^m		Mag: +0.1 PMG: 18 ^h 46 ^m		Mag: -2.0 PMG: 6 ^h 40 ^m		Mag: -0.2 PMG: 0 ^h 26 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	124	09.7	195	48.2	-15	20.2	78	02.1	+19	11.0
1	139	12.2	210	51.7		20.1	93	03.5		11.3
2	154	14.7	225	55.1		20.1	108	04.9		11.6
3	169	17.1	240	58.6		20.1	123	06.4		11.9
4	184	19.6	256	02.0		20.0	138	07.8		12.2
5	199	22.0	271	05.4	-15	20.0	153	09.2	+19	12.5
6	214	24.5	286	08.8	-15	20.0	168	10.7	+19	12.8
7	229	27.0	301	12.3		20.0	183	12.1		13.1
8	244	29.4	316	15.7		19.9	198	13.5		13.4
9	259	31.9	331	19.1		19.9	213	15.0		13.6
10	274	34.4	346	22.5		19.9	228	16.4		13.9
11	289	36.8	1	25.9	-15	19.9	243	17.8	+19	14.2
12	304	39.3	16	29.3	-15	19.8	258	19.2	+19	14.5
13	319	41.8	31	32.7		19.8	273	20.7		14.8
14	334	44.2	46	36.1		19.8	288	22.1		15.1
15	349	46.7	61	39.5		19.8	303	23.5		15.4
16	4	49.1	76	42.9		19.8	318	24.9		15.7
17	19	51.6	91	46.3	-15	19.7	333	26.4	+19	16.0
18	34	54.1	106	49.7	-15	19.7	348	27.8	+19	16.3
19	49	56.5	121	53.0		19.7	3	29.2		16.6
20	64	59.0	136	56.4		19.7	18	30.6		16.9
21	80	01.5	151	59.8		19.7	33	32.1		17.1
22	95	03.9	167	03.1		19.7	48	33.5		17.4
23	110	06.4	182	06.5		19.6	63	34.9		17.7
24	125	08.9	197	09.8	-15	19.6	78	36.3	+19	18.0
Dif	—		+34		0		+14		+3	
									+22	
									-1	
									+27	
									+	

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: 25 ^d 9 PHE { 4 ^h : 58/9 12 ^h : 59/2 20 ^h : 59/5 SD: 16:0 PMG: 9 ^h 02 ^m R°: 64 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	h m	h m	h m	h m	h m	h m	h m	
0	176	53.6	-18 48.2	230	08.2	-27 32.1	45	60 N	15 58	16 47	17 39	7 30 73	10 29 61		
1	191	53.5		244	31.7		45	58	16 10	16 55	44	6 52 70	11 08 63		
2	206	53.4		258	55.2		44	56	20	17 02	48	25 69	35 64		
3	221	53.2		273	18.5		42	54	29	08	52	6 04 68	11 56 65		
4	236	53.1		287	41.7		40	52	37	14	55	5 46 68	12 14 65		
5	251	52.9	-18 45.0	302	04.9	-27 53.0	38	50	16 44	17 19	17 59	5 31 68	12 30 64		
6	266	52.8	-18 44.4	316	27.9	-27 56.7	37	45	16 59	17 31	18 07	5 01 67	13 00 65		
7	281	52.7		330	50.8	-28 00.1	34	40	17 12	41	13	4 37 66	24 65		
8	296	52.5		345	13.6		33	35	22	49	20	18 65	13 44 65		
9	311	52.4		359	36.4		31	30	32	17 57	26	4 01 65	14 01 65		
10	326	52.3		13	59.0		29	20	17 48	18 11	38	3 33 65	29 65		
11	341	52.1	-18 41.3	28	21.5	-28 12.1	27	10 N	18 03	18 25	18 50	3 09 64	14 54 64		
12	356	52.0	-18 40.6	42	44.0	-28 14.6	25	0	18 16	18 38	19 03	2 47 63	15 17 64		
13	11	51.9		57	06.4		23	10 S	30	18 52	18	25 62	15 39 64		
14	26	51.7		71	28.6		22	20	18 45	19 08	36	2 01 62	16 04 64		
15	41	51.6		85	50.9		19	30	19 02	28	19 59	1 34 60	32 63		
16	56	51.5		100	13.0		18	35	12	40	20 13	1 17 60	16 49 63		
17	71	51.3	-18 37.5	114	35.0	-28 24.3	15	40	19 23	19 54	20 31	0 59 58	17 09 62		
18	86	51.2	-18 36.8	128	57.0	-28 25.7	14	45	19 37	20 11	20 54	0 36 57	17 33 61		
19	101	51.1		143	18.9		11	50	19 53	32	21 24	0 07 55	18 04 60		
20	116	50.9		157	40.8		10	52	20 01	43	40	** ** *	19 59		
21	131	50.8		172	02.5		7	54	10	20 55	21 59	** ** *	37 58		
22	146	50.7		186	24.2		6	56	20	21 09	22 24	** ** *	18 58 57		
23	161	50.5		200	45.9		4	58	31	26	23 01	23 40 82	19 26 53		
24	176	50.4	-18 33.0	215	07.5	-28 29.6	1	60 S	20 44	21 46	** ** *	23 01 88	20 05 48		
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG: 15 ^h 36 ^m 8		Mag: -4.5 PMG: 10 ^h 49 ^m		Mag: +0.1 PMG: 18 ^h 44 ^m		Mag: -2.0 PMG: 6 ^h 37 ^m		Mag: -0.2 PMG: 0 ^h 22 ^m						
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'					
0	125	08.9	197	09.8	78	36.3	+19 18.0	260	33.3	-15 43.8	354	31.3	+18 55.1		
1	140	11.3	212	13.2	93	37.7	18.3	275	35.5	43.9	9	34.0	55.2		
2	155	13.8	227	16.5	108	39.2	18.6	290	37.7	43.9	24	36.6	55.2		
3	170	16.3	242	19.9	123	40.6	18.9	305	39.9	44.0	39	39.3	55.3		
4	185	18.7	257	23.2	138	42.0	19.2	320	42.1	44.1	54	42.0	55.3		
5	200	21.2	272	26.5	153	43.4	+19 19.5	335	44.3	-15 44.1	69	44.7	+18 55.4		
6	215	23.6	287	29.9	168	44.8	+19 19.8	350	46.5	-15 44.2	84	47.3	+18 55.5		
7	230	26.1	302	33.2	183	46.2	20.1	5	48.6	44.3	99	50.0	55.5		
8	245	28.6	317	36.5	198	47.6	20.4	20	50.8	44.3	114	52.7	55.6		
9	260	31.0	332	39.8	213	49.1	20.6	35	53.0	44.4	129	55.4	55.6		
10	275	33.5	347	43.1	228	50.5	20.9	50	55.2	44.5	144	58.0	55.7		
11	290	36.0	2	46.4	243	51.9	+19 21.2	65	57.4	-15 44.6	160	00.7	+18 55.7		
12	305	38.4	17	49.7	258	53.3	+19 21.5	80	59.6	-15 44.6	175	03.4	+18 55.8		
13	320	40.9	32	53.0	273	54.7	21.8	96	01.8	44.7	190	06.0	55.9		
14	335	43.4	47	56.3	288	56.1	22.1	111	04.0	44.8	205	08.7	55.9		
15	350	45.8	62	59.6	303	57.5	22.4	126	06.2	44.8	220	11.4	56.0		
16	5	48.3	78	02.9	318	58.9	22.7	141	08.4	44.9	235	14.1	56.0		
17	20	50.8	93	06.2	334	00.4	+19 23.0	156	10.6	-15 45.0	250	16.7	+18 56.1		
18	35	53.2	108	09.4	349	01.8	+19 23.3	171	12.8	-15 45.0	265	19.4	+18 56.1		
19	50	55.7	123	12.7	4	03.2	23.6	186	15.0	45.1	280	22.1	56.2		
20	65	58.1	138	16.0	19	04.6	23.9	201	17.2	45.2	295	24.7	56.3		
21	81	00.6	153	19.2	34	06.0	24.1	216	19.4	45.3	310	27.4	56.3		
22	96	03.1	168	22.5	49	07.4	24.4	231	21.6	45.3	325	30.1	56.4		
23	111	05.5	183	25.7	64	08.8	24.7	246	23.8	45.4	340	32.8	56.4		
24	126	08.0	198	29.0	79	10.2	+19 25.0	261	26.0	-15 45.5	355	35.4	+18 56.5		
Dif	—		+33	0	+14	+3		+22		-1		+27	+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 7			Edad: 26 ^d 9 SD: 16:2 PMG: 10 ^h 06 ^m	PHE { 4 ^h : 59/8 12 ^h : 60/1 20 ^h : 60/3 R°: 64 ^m																			
	hG ☉	Dec				hG ☾		Dif	Dec		Dif	Náutico	Civil	Hora	R°	Hora	R°							
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	h	m						
0	176	50.4	-18	33.0	215	07.5	-28	29.6	60 N	6 45	7 37	8 25	8 43	26	11 30	11								
1	191	50.3		32.3	229	29.0		29.5	58	41	29	14	8 02	38	12 11	98								
2	206	50.1		31.7	243	50.5		29.3	56	36	22	8 04	7 34	44	12 39	92								
3	221	50.0		31.1	258	11.9		28.8	54	33	16	7 55	7 12	48	13 01	88								
4	236	49.9		30.4	272	33.3		28.1	52	29	10	48	6 54	50	19	85								
5	251	49.8	-18	29.8	286	54.7		-28 27.3	50	6 26	7 05	7 41	6 39	51	13 34	83								
6	266	49.6	-18	29.1	301	16.0		-28 26.2	45	6 18	6 54	7 26	6 08	55	14 05	79								
7	281	49.5		28.5	315	37.3		24.9	40	11	44	13	5 43	58	29	76								
8	296	49.4		27.8	329	58.5		23.4	35	6 05	36	7 02	23	59	14 49	74								
9	311	49.2		27.2	344	19.7		21.7	30	5 59	28	6 53	5 06	61	15 06	72								
10	326	49.1		26.6	358	40.9		19.7	20	47	14	37	4 38	62	34	69								
11	341	49.0	-18	25.9	13	02.1		-28 17.6	10 N	5 35	6 01	6 23	4 13	64	15 58	67								
12	356	48.9	-18	25.3	27	23.3		-28 15.3	0	5 22	5 47	6 09	3 50	65	16 21	65								
13	11	48.7		24.6	41	44.4		12.7	10 S	5 07	33	5 56	27	66	16 43	63								
14	26	48.6		24.0	56	05.5		09.9	20	4 49	5 17	41	3 03	67	17 08	59								
15	41	48.5		23.3	70	26.6		07.0	30	27	4 58	24	2 34	69	35	57								
16	56	48.4		22.7	84	47.7		03.8	32	4 12	46	14	2 17	70	17 52	54								
17	71	48.2	-18	22.0	99	08.8		-28 00.4	40	3 54	4 32	5 03	1 57	71	18 11	52								
18	86	48.1	-18	21.4	113	29.9		-27 56.8	45	3 32	4 15	4 49	1 33	73	18 34	49								
19	101	48.0		20.7	127	51.0		53.0	50	3 02	3 54	33	1 02	75	19 04	43								
20	116	47.9		20.1	142	12.1		48.9	52	2 46	43	25	0 47	76	18	41								
21	131	47.7		19.4	156	33.2		44.7	54	27	31	16	29	77	35	38								
22	146	47.6		18.8	170	54.3		40.2	56	2 02	17	4 06	0 08	79	19 55	33								
23	161	47.5		18.1	185	15.4		35.6	58	1 25	3 00	3 55	** ** *	**	20 19	27								
24	176	47.4	-18	17.5	199	36.6		-27 30.7	60 S	** ** *	2 40	3 42	** ** *	**	20 53	16								
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO											
	PMG: 15 ^h 32 ^m 9			Mag: -4.6 PMG: 10 ^h 44 ^m			Mag: +0.1 PMG: 18 ^h 42 ^m			Mag: -2.0 PMG: 6 ^h 33 ^m			Mag: -0.2 PMG: 0 ^h 18 ^m											
	hG ♊	Dec		hG ♋	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec										
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'								
0	126	08.0	198	29.0	-15	19.5	79	10.2	+19	25.0	261	26.0	-15	45.5	355	35.4	+18	56.5						
1	141	10.5	213	32.2		19.5	94	11.6		25.3	276	28.2		45.5	10	38.1		56.5						
2	156	12.9	228	35.5		19.5	109	13.0		25.6	291	30.4		45.6	25	40.8		56.6						
3	171	15.4	243	38.7		19.5	124	14.4		25.9	306	32.5		45.7	40	43.5		56.7						
4	186	17.9	258	41.9		19.5	139	15.8		26.2	321	34.7		45.7	55	46.1		56.7						
5	201	20.3	273	45.2	-15	19.5	154	17.2	+19	26.5	336	36.9	-15	45.8	70	48.8	+18	56.8						
6	216	22.8	288	48.4	-15	19.6	169	18.6	+19	26.8	351	39.1	-15	45.9	85	51.5	+18	56.8						
7	231	25.3	303	51.6		19.6	184	20.0		27.1	6	41.3		45.9	100	54.1		56.9						
8	246	27.7	318	54.8		19.6	199	21.4		27.4	21	43.5		46.0	115	56.8		56.9						
9	261	30.2	333	58.0		19.6	214	22.8		27.7	36	45.7		46.1	130	59.5		57.0						
10	276	32.6	349	01.2		19.6	229	24.2		27.9	51	47.9		46.2	146	02.2		57.1						
11	291	35.1	4	04.4	-15	19.6	244	25.6	+19	28.2	66	50.1	-15	46.2	161	04.8	+18	57.1						
12	306	37.6	19	07.6	-15	19.6	259	27.0	+19	28.5	81	52.3	-15	46.3	176	07.5	+18	57.2						
13	321	40.0	34	10.8		19.6	274	28.4		28.8	96	54.5		46.4	191	10.2		57.2						
14	336	42.5	49	14.0		19.6	289	29.8		29.1	111	56.7		46.4	206	12.9		57.3						
15	351	45.0	64	17.2		19.6	304	31.2		29.4	126	58.9		46.5	221	15.5		57.3						
16	6	47.4	79	20.3		19.7	319	32.6		29.7	142	01.1		46.6	236	18.2		57.4						
17	21	49.9	94	23.5	-15	19.7	334	34.0	+19	30.0	157	03.3	-15	46.6	251	20.9	+18	57.5						
18	36	52.4	109	26.7	-15	19.7	349	35.4	+19	30.3	172	05.5	-15	46.7	266	23.5	+18	57.5						
19	51	54.8	124	29.9		19.7	4	36.8		30.6	187	07.7		46.8	281	26.2		57.6						
20	66	57.3	139	33.0		19.7	19	38.2		30.9	202	09.9		46.8	296	28.9		57.6						
21	81	59.8	154	36.2		19.7	34	39.6		31.2	217	12.1		46.9	311	31.6		57.7						
22	97	02.2	169	39.3		19.7	49	41.0		31.5	232	14.3		47.0	326	34.2		57.7						
23	112	04.7	184	42.5		19.8	64	42.4		31.7	247	16.6		47.0	341	36.9		57.8						
24	127	07.1	199	45.6	-15	19.8	79	43.8	+19	32.0	262	18.8	-15	47.1	356	39.6	+18	57.9						
Dif	—			+32			+14			+3			+22			-1			+27			+		

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: 27 ^d 9 PHE { 4 ^h : 60:5 12 ^h : 60:7 20 ^h : 60:9 PMG: 11 ^h 10 ^m R°: 63 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m m	h m m	h m m	h m m			
0	176	47.4	-18	17.5	199	36.6	-27	30.7	60 N	16 03	16 52	17 43	9 09 8	13 21 123				
1	191	47.3		16.8	213	57.8	22	25.6	58	14	16 59	48	8 40 18	13 49 113				
2	206	47.1		16.1	228	19.0	22	20.3	56	24	17 06	52	18 25	14 11 106				
3	221	47.0		15.5	242	40.2	22	14.9	54	33	12	55	8 00 29	29 100				
4	236	46.9		14.8	257	01.4	22	09.2	52	40	17	57	7 44 33	44 96				
5	251	46.8	-18	14.2	271	22.7	23	-27 03.2	50	16 47	17 23	18 02	7 30 37	14 57 93				
6	266	46.6	-18	13.5	285	44.0	23	-26 57.1	45	17 02	17 34	18 09	7 03 42	15 24 87				
7	281	46.5		12.9	300	05.4	24	50.8	40	14	43	16	6 41 46	15 45 82				
8	296	46.4		12.2	314	26.8	24	44.3	35	24	51	22	22 50	16 03 78				
9	311	46.3		11.5	328	48.2	24	37.6	30	34	17 59	28	6 07 52	18 75				
10	326	46.2		10.9	343	09.7	25	30.7	20	17 49	18 13	39	5 40 56	16 43 71				
11	341	46.0	-18	10.2	357	31.2	25	-26 23.5	10 N	18 03	18 25	18 51	5 17 60	17 05 66				
12	356	45.9	-18	09.6	11	52.8	26	-26 16.2	0	18 16	18 38	19 04	4 55 64	17 26 61				
13	11	45.8		08.9	26	14.5	27	08.7	10 S	30	18 52	18	33 67	17 46 58				
14	26	45.7		08.2	40	36.2	27	-26 00.9	20	18 44	19 08	35	4 10 70	18 07 54				
15	41	45.6		07.6	54	57.9	27	-25 53.0	30	19 01	27	19 58	3 43 74	32 48				
16	56	45.5		06.9	69	19.7	28	44.9	35	10	38	20 12	27 77	18 46 46				
17	71	45.3	-18	06.2	83	41.6	29	-25 36.6	40	19 21	19 52	20 29	3 08 80	19 03 42				
18	86	45.2	-18	05.6	98	03.5	29	-25 28.1	45	19 34	20 08	20 51	2 46 84	19 23 37				
19	101	45.1		04.9	112	25.5	30	19.4	50	50	29	21 20	17 89	47 31				
20	116	45.0		04.3	126	47.6	31	10.5	52	19 58	39	35	2 03 92	19 59 28				
21	131	44.9		03.6	141	09.8	32	-25 01.4	54	20 06	20 51	21 54	1 46 96	20 13 23				
22	146	44.8		02.9	155	32.0	32	-24 52.2	56	16	21 04	22 17	27 100	28 19				
23	161	44.7		02.3	169	54.3	33	42.7	58	27	20	22 49	1 02 107	20 46 14				
24	176	44.5	-18	01.6	184	16.7	34	-24 33.1	60 S	20 39	21 40	** **	0 29 119	21 09 5				
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 15 ^h 29 ^m 0		Mag: -4.6 PMG: 10 ^h 39 ^m				Mag: +0.1 PMG: 18 ^h 39 ^m				Mag: -2.0 PMG: 6 ^h 30 ^m				Mag: -0.2 PMG: 0 ^h 13 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	127	07.1	199	45.6	-15	19.8	79	43.8	+19	32.0	262	18.8	-15	47.1	356	39.6	+18	57.9
1	142	09.6	214	48.7		19.8	94	45.2		32.3	277	21.0		47.2	11	42.2		57.9
2	157	12.1	229	51.9		19.8	109	46.6		32.6	292	23.2		47.2	26	44.9		58.0
3	172	14.5	244	55.0		19.8	124	47.9		32.9	307	25.4		47.3	41	47.6		58.0
4	187	17.0	259	58.1		19.9	139	49.3		33.2	322	27.6		47.4	56	50.3		58.1
5	202	19.5	275	01.2	-15	19.9	154	50.7	+19	33.5	337	29.8	-15	47.4	71	52.9	+18	58.1
6	217	21.9	290	04.4	-15	19.9	169	52.1	+19	33.8	352	32.0	-15	47.5	86	55.6	+18	58.2
7	232	24.4	305	07.5		19.9	184	53.5		34.1	7	34.2		47.6	101	58.3		58.3
8	247	26.9	320	10.6		20.0	199	54.9		34.4	22	36.4		47.6	117	01.0		58.3
9	262	29.3	335	13.7		20.0	214	56.3		34.7	37	38.6		47.7	132	03.6		58.4
10	277	31.8	350	16.8		20.0	229	57.7		35.0	52	40.8		47.8	147	06.3		58.4
11	292	34.3	5	19.9	-15	20.0	244	59.0	+19	35.3	67	43.0	-15	47.8	162	09.0	+18	58.5
12	307	36.7	20	23.0	-15	20.1	260	00.4	+19	35.5	82	45.2	-15	47.9	177	11.6	+18	58.5
13	322	39.2	35	26.0		20.1	275	01.8		35.8	97	47.4		48.0	192	14.3		58.6
14	337	41.6	50	29.1		20.1	290	03.2		36.1	112	49.6		48.0	207	17.0		58.7
15	352	44.1	65	32.2		20.1	305	04.6		36.4	127	51.8		48.1	222	19.7		58.7
16	7	46.6	80	35.3		20.2	320	06.0		36.7	142	54.0		48.2	237	22.3		58.8
17	22	49.0	95	38.3	-15	20.2	335	07.4	+19	37.0	157	56.2	-15	48.2	252	25.0	+18	58.8
18	37	51.5	110	41.4	-15	20.2	350	08.7	+19	37.3	172	58.4	-15	48.3	267	27.7	+18	58.9
19	52	54.0	125	44.4		20.3	5	10.1		37.6	188	00.7		48.4	282	30.4		58.9
20	67	56.4	140	47.5		20.3	20	11.5		37.9	203	02.9		48.4	297	33.0		59.0
21	82	58.9	155	50.5		20.3	35	12.9		38.2	218	05.1		48.5	312	35.7		59.1
22	98	01.4	170	53.6		20.4	50	14.3		38.5	233	07.3		48.6	327	38.4		59.1
23	113	03.8	185	56.6		20.4	65	15.6		38.8	248	09.5		48.6	342	41.0		59.2
24	128	06.3	200	59.7	-15	20.4	80	17.0	+19	39.1	263	11.7	-15	48.7	357	43.7	+18	59.2
Dif	—		+31		0		+14		+3		+22		-1		+27		+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 1			Edad: 28 ^d 9 PHE { SD: 16:6 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	176	44.5	-18	01.6	184	16.7	-24	33.1	60 N	6 42	7 33	8 21	9 17	2	15 24	120
1	191	44.4		00.9	198	39.1		23.3	58	37	26	10	8 58	9	42	112
2	206	44.3	-18	00.2	213	01.7		13.3	56	34	19	8 01	43	14	15 57	106
3	221	44.2	-17	59.6	227	24.3	-24	03.1	54	30	13	7 52	29	19	16 09	102
4	236	44.1		58.9	241	47.0	-23	52.7	52	27	08	45	17	23	20	98
5	251	44.0	-17	58.2	256	09.8	-23	42.2	50	6 24	7 03	7 38	8 07	26	16 30	95
6	266	43.9	-17	57.6	270	32.6	-23	31.5	45	6 17	6 52	7 23	7 45	32	16 51	87
7	281	43.8		56.9	284	55.6		20.6	40	10	43	11	27	37	17 07	83
8	296	43.6		56.2	299	18.7	-23	09.6	35	6 04	34	7 01	7 12	41	21	78
9	311	43.5		55.6	313	41.8	-22	58.4	30	5 58	27	6 52	6 59	45	33	74
10	326	43.4		54.9	328	05.0		47.0	20	47	13	36	36	51	17 54	67
11	341	43.3	-17	54.2	342	28.4	-22	35.4	10 N	5 35	6 01	6 23	6 17	55	18 11	63
12	356	43.2	-17	53.5	356	51.8	-22	23.7	0	5 23	5 48	6 10	5 59	59	18 27	58
13	11	43.1		52.9	11	15.3	-22	11.9	10 S	5 08	34	5 56	40	64	18 44	52
14	26	43.0		52.2	25	38.9	-21	59.8	20	4 51	19	42	5 20	70	19 01	47
15	41	42.9		51.5	40	02.7		47.6	30	29	5 00	26	4 57	75	20	42
16	56	42.8		50.8	54	26.5		35.3	35	4 15	4 48	16	44	78	32	37
17	71	42.7	-17	50.2	68	50.4	-21	22.8	40	3 57	4 35	5 05	4 28	83	19 45	33
18	86	42.5	-17	49.5	83	14.4	-21	10.2	45	3 36	4 18	4 52	4 10	87	20 00	28
19	101	42.4		48.8	97	38.5	-20	57.4	50	3 06	3 57	36	3 46	94	18	23
20	116	42.3		48.1	112	02.7		44.5	52	2 51	47	29	35	97	27	19
21	131	42.2		47.4	126	27.0		31.4	54	33	36	20	22	102	36	16
22	146	42.1		46.8	140	51.5		18.2	56	2 10	22	11	3 07	107	20 47	12
23	161	42.0		46.1	155	16.0	-20	04.8	58	1 38	3 06	4 00	2 49	113	21 00	7
24	176	41.9	-17	45.4	169	40.6	-19	51.3	60 S	** **	2 47	3 48	2 28	121	21 14	1

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 15 ^h 25 ^m 0		Mag: -4.6 PMG: 10 ^h 34 ^m		Mag: +0.1 PMG: 18 ^h 37 ^m		Mag: -2.0 PMG: 6 ^h 26 ^m		Mag: -0.2 PMG: 0 ^h 09 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	128	06.3	200	59.7	80	17.0	+19	39.1	263	11.7	-15	48.7	357	43.7	+18	59.2		
1	143	08.8	216	02.7		20.5		39.3	278	13.9		48.8	12	46.4		59.3		
2	158	11.2	231	05.7		20.5		39.6	293	16.1		48.8	27	49.1		59.3		
3	173	13.7	246	08.7		20.5		39.9	308	18.3		48.9	42	51.7		59.4		
4	188	16.1	261	11.8		20.6		40.2	323	20.5		49.0	57	54.4		59.5		
5	203	18.6	276	14.8	-15	20.6	155	23.9	+19	40.5	338	22.7	-15	49.0	72	57.1	+18	59.5
6	218	21.1	291	17.8	-15	20.6	170	25.3	+19	40.8	353	25.0	-15	49.1	87	59.8	+18	59.6
7	233	23.5	306	20.8		20.7	185	26.7		41.1	8 27.2		49.1	103	02.4		59.6	
8	248	26.0	321	23.8		20.7	200	28.0		41.4	23 29.4		49.2	118	05.1		59.7	
9	263	28.5	336	26.8		20.7	215	29.4		41.7	38 31.6		49.3	133	07.8		59.7	
10	278	30.9	351	29.8		20.8	230	30.8		42.0	53 33.8		49.3	148	10.4		59.8	
11	293	33.4	6 32.7	-15	20.8	245	32.1	+19	42.3	68 36.0	-15	49.4	163	13.1	+18	59.9		
12	308	35.9	21 35.7	-15	20.9	260	33.5	+19	42.6	83 38.2	-15	49.5	178	15.8	+18	59.9		
13	323	38.3	36 38.7		20.9	275	34.9		42.9	98 40.4		49.5	193	18.5	+19	00.0		
14	338	40.8	51 41.7		20.9	290	36.3		43.2	113 42.7		49.6	208	21.1	+19	00.0		
15	353	43.3	66 44.6		21.0	305	37.6		43.4	128 44.9		49.7	223	23.8	+19	00.1		
16	8 45.7	81 47.6		21.0	320	39.0		43.7		143 47.1		49.7	238	26.5		00.1		
17	23 48.2	96 50.6	-15	21.1	335	40.4	+19	44.0	158 49.3	-15	49.8		253	29.2	+19	00.2		
18	38 50.6	111 53.5	-15	21.1	350	41.7	+19	44.3	173 51.5	-15	49.9		268	31.8	+19	00.3		
19	53 53.1	126 56.5		21.2	5 43.1			44.6	188 53.7		49.9		283	34.5		00.3		
20	68 55.6	141 59.4		21.2	20 44.5			44.9	203 55.9		50.0		298	37.2		00.4		
21	83 58.0	157 02.3		21.2	35 45.8			45.2	218 58.2		50.0		313	39.8		00.4		
22	99 00.5	172 05.3		21.3	50 47.2			45.5	234 00.4		50.1		328	42.5		00.5		
23	114 03.0	187 08.2		21.3	65 48.6			45.8	249 02.6		50.2		343	45.2		00.5		
24	129 05.4	202 11.1	-15	21.4	80 49.9	+19	46.1		264 04.8	-15	50.2		358	47.9	+19	00.6		
Dif	—		+30		0		+14		+3		+22		-1		+27		+1	

UT	SOL			● LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16 ^h 2			Edad: 29 ^d 9 PHE { 4 ^h : 61 ^h /3 12 ^h : 61 ^h /3 20 ^h : 61 ^h /2 R°: 54 ^m												
	PMG: 12 ^h 13 ^m 3			SD: 16 ^h 7 PMG: 13 ^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	41.9	-17 45.4	169	40.6	-19 51.3		60 N	16 09	16 57	17 48	9 19	0	17 24	112	
1	191	41.8		184	05.3	57	37.7	58	19	17 04	52	9 07	5	34	107	
2	206	41.7		198	30.2	59	23.9	56	28	10	55	8 57	9	43	102	
3	221	41.6		212	55.1	59	-19 10.0	54	37	16	17 59	48	13	51	98	
4	236	41.5		227	20.1	60	-18 56.0	52	44	21	18 02	40	16	17 58	95	
5	251	41.4	-17 42.0	241	45.3	62	-18 41.8	50	16 51	17 26	18 05	8 33	19	18 05	91	
6	266	41.3	-17 41.3	256	10.5	62	-18 27.6	45	17 05	17 36	18 12	8 17	26	18 18	85	
7	281	41.2		270	35.8	63	-18 13.2	40	16	45	18	8 04	31	30	79	
8	296	41.1		285	01.3	65	-17 58.7	35	26	17 53	24	7 53	35	39	75	
9	311	41.0		299	26.8	65	44.0	30	35	18 00	29	44	38	18 47	71	
10	326	40.9		313	52.5	67	29.3	20	17 51	14	40	27	45	19 01	65	
11	341	40.8	-17 37.9	328	18.2	67	-17 14.4	10 N	18 04	18 26	18 51	7 12	50	19 14	58	
12	356	40.7	-17 37.2	342	44.1	69	-16 59.5	0	18 17	18 39	19 04	6 58	56	19 25	54	
13	11	40.6		357	10.1	70	44.4	10 S	30	18 52	18	44	61	36	48	
14	26	40.5		11	36.1	70	29.2	20	44	19 07	35	30	66	19 48	43	
15	41	40.4		26	02.3	72	-16 13.9	30	18 59	25	19 56	12	73	20 02	36	
16	56	40.3		40	28.5	72	-15 58.5	35	19 09	37	20 10	6 02	77	09	33	
17	71	40.2	-17 33.7	54	54.9	74	-15 43.1	40	19 20	19 50	20 27	5 51	81	20 18	29	
18	86	40.1	-17 33.0	69	21.4	75	-15 27.5	45	19 32	20 06	20 48	5 37	86	20 28	24	
19	101	40.0		83	47.9	75	-15 11.8	50	48	26	21 16	20	93	41	17	
20	116	39.9		98	14.6	77	-14 56.1	52	19 55	36	30	12	97	46	15	
21	131	39.8		112	41.3	77	40.2	54	20 03	20 47	21 48	5 04	100	52	12	
22	146	39.7		127	08.2	79	24.3	56	12	21 00	22 09	4 54	104	20 59	8	
23	161	39.6		141	35.1	79	-14 08.3	58	22	15	22 39	42	109	21 07	4	
24	176	39.5	-17 28.9	156	02.2	81	-13 52.2	60 S	20 34	21 33	23 29	4 29	115	21 15	0	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG 15 ^h 21 ^m 1		Mag: -4.7 PMG: 10 ^h 29 ^m		Mag: +0.2 PMG: 18 ^h 35 ^m		Mag: -2.0 PMG: 6 ^h 23 ^m		Mag: -0.2 PMG: 0 ^h 05 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	129	05.4	202	11.1	-15	21.4	80	49.9	+19	46.1	264	04.8	-15	50.2	358	47.9	+19	00.6
1	144	07.9	217	14.1		21.4	95	51.3		46.4	279	07.0		50.3	13	50.5		00.7
2	159	10.4	232	17.0		21.5	110	52.7		46.7	294	09.2		50.4	28	53.2		00.7
3	174	12.8	247	19.9		21.5	125	54.0		47.0	309	11.4		50.4	43	55.9		00.8
4	189	15.3	262	22.8		21.6	140	55.4		47.2	324	13.7		50.5	58	58.5		00.8
5	204	17.7	277	25.7	-15	21.6	155	56.8	+19	47.5	339	15.9	-15	50.6	74	01.2	+19	00.9
6	219	20.2	292	28.6	-15	21.7	170	58.1	+19	47.8	354	18.1	-15	50.6	89	03.9	+19	00.9
7	234	22.7	307	31.5		21.7	185	59.5		48.1	9	20.3		50.7	104	06.6		01.0
8	249	25.1	322	34.4		21.8	201	00.8		48.4	24	22.5		50.7	119	09.2		01.1
9	264	27.6	337	37.3		21.8	216	02.2		48.7	39	24.7		50.8	134	11.9		01.1
10	279	30.1	352	40.2		21.9	231	03.6		49.0	54	27.0		50.9	149	14.6		01.2
11	294	32.5	7	43.0	-15	21.9	246	04.9	+19	49.3	69	29.2	-15	50.9	164	17.3	+19	01.2
12	309	35.0	22	45.9	-15	22.0	261	06.3	+19	49.6	84	31.4	-15	51.0	179	19.9	+19	01.3
13	324	37.5	37	48.8		22.0	276	07.6		49.9	99	33.6		51.1	194	22.6		01.3
14	339	39.9	52	51.6		22.1	291	09.0		50.2	114	35.8		51.1	209	25.3		01.4
15	354	42.4	67	54.5		22.2	306	10.4		50.5	129	38.1		51.2	224	27.9		01.5
16	9	44.9	82	57.3		22.2	321	11.7		50.8	144	40.3		51.2	239	30.6		01.5
17	24	47.3	98	00.2	-15	22.3	336	13.1	+19	51.1	159	42.5	-15	51.3	254	33.3	+19	01.6
18	39	49.8	113	03.0	-15	22.3	351	14.4	+19	51.3	174	44.7	-15	51.4	269	36.0	+19	01.6
19	54	52.2	128	05.9		22.4	6	15.8		51.6	189	46.9		51.4	284	38.6		01.7
20	69	54.7	143	08.7		22.4	21	17.1		51.9	204	49.2		51.5	299	41.3		01.7
21	84	57.2	158	11.5		22.5	36	18.5		52.2	219	51.4		51.5	314	44.0		01.8
22	99	59.6	173	14.4		22.6	51	19.8		52.5	234	53.6		51.6	329	46.7		01.8
23	115	02.1	188	17.2		22.6	66	21.2		52.8	249	55.8		51.7	344	49.3		01.9
24	130	04.6	203	20.0	-15	22.7	81	22.5	+19	53.1	264	58.0	-15	51.7	359	52.0	+19	02.0
Dif	—		+29	-1		+14	+3		+22		-1		+27		+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 4			Edad: 1 ^d 4 PHE { SD: 16/7 PMG: 14 ^h 06 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	176	39.5	-17 28.9	156	02.2	-13 52.2	162	6 38	7 29	8 17	9 19	**	19 16	105	
1	191	39.4	28.2	170	29.3	81 36.0	162	34	22	8 06	12 3		21 101		
2	206	39.3	27.5	184	56.5	82 19.7	163	31	16	7 57	06 7		25 97		
3	221	39.2	26.8	199	23.9	84 -13 03.4	163	27	10	49	9 01 10		29 94		
4	236	39.1	26.1	213	51.3	84 -12 47.0	164	24	05	42	8 56 14		33 90		
5	251	39.0	-17 25.4	228	18.8	85 -12 30.5	165	6 21	7 00	7 35	8 52 16		19 36 88		
6	266	38.9	-17 24.7	242	46.4	86 -12 14.0	165	6 15	6 50	7 21	8 43 21		19 43 82		
7	281	38.8	24.0	257	14.1	87 -11 57.4	166	09	41	10	35 26		49 76		
8	296	38.7	23.3	271	41.8	87 40.7	167	6 03	33	7 00	28 31		54 72		
9	311	38.6	22.6	286	09.7	89 24.0	167	5 57	26	6 51	22 34		19 58 69		
10	326	38.5	21.9	300	37.6	89 -11 07.2	168	46	13	36	12 40		20 06 61		
11	341	38.4	-17 21.2	315	05.7	91 -10 50.3	169	10 N	5 35	6 01	6 23	8 02 47		20 12 56	
12	356	38.4	-17 20.5	329	33.8	91 -10 33.4	169	0	5 23	5 48	6 10	7 54 51		20 19 50	
13	11	38.3	19.8	344	02.0	92 -10 16.4	170	10 S	5 09	35	5 57	45 57		24 46	
14	26	38.2	19.1	358	30.3	93 -9 59.4	170	20	4 52	20	43	36 63		31 39	
15	41	38.1	18.4	12	58.6	93 42.4	170	30	31	5 02	28	25 69		38 33	
16	56	38.0	17.7	27	27.1	95 25.3	171	35	17	4 51	18	19 73		42 29	
17	71	37.9	-17 17.0	41	55.6	95 -9 08.1	172	40	4 00	4 37	5 08	7 12 77		20 47 25	
18	86	37.8	-17 16.3	56	24.2	96 -8 51.0	171	45	3 39	4 22	4 55	7 03 83		20 52 20	
19	101	37.7	15.6	70	52.8	96 33.7	173	50	3 11	4 01	40	6 53 90		20 58 15	
20	116	37.6	14.9	85	21.6	98 -8 16.5	172	52	2 57	3 52	32	49 92		21 01 12	
21	131	37.5	14.2	99	50.4	98 -7 59.2	173	54	40	40	24	44 95		04 10	
22	146	37.4	13.5	114	19.3	99 41.8	174	56	2 18	28	15	38 99		07 7	
23	161	37.4	12.8	128	48.2	99 24.5	173	58	1 49	3 13	4 05	31 104		11 3	
24	176	37.3	-17 12.1	143	17.2	100 -7 07.1	174	60 S	0 58	2 54	3 53	6 24 108		21 15 0	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO		
	PMG 15 ^h 17 ^m 2		Mag: -4.7 PMG: 10 ^h 25 ^m		Mag: +0.2 PMG: 18 ^h 33 ^m		Mag: -2.0 PMG: 6 ^h 19 ^m		Mag: -0.2 PMG: 0 ^h 01 ^m		
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	
0	130	04.6	203	20.0	-15 22.7	81 22.5	+19 53.1	264 58.0	-15 51.7	359 52.0	+19 02.0
1	145	07.0	218	22.8	22.7	96 23.9	53.4	280 00.3	51.8	14 54.7	02.0
2	160	09.5	233	25.6	22.8	111 25.3	53.7	295 02.5	51.9	29 57.3	02.1
3	175	12.0	248	28.4	22.9	126 26.6	54.0	310 04.7	51.9	45 00.0	02.1
4	190	14.4	263	31.2	22.9	141 28.0	54.3	325 06.9	52.0	60 02.7	02.2
5	205	16.9	278	34.0	-15 23.0	156 29.3	+19 54.6	340 09.2	-15 52.0	75 05.4	+19 02.2
6	220	19.4	293	36.8	-15 23.0	171 30.7	+19 54.9	355 11.4	-15 52.1	90 08.0	+19 02.3
7	235	21.8	308	39.6	23.1	186 32.0	55.1	10 13.6	52.2	105 10.7	02.4
8	250	24.3	323	42.4	23.2	201 33.4	55.4	25 15.8	52.2	120 13.4	02.4
9	265	26.7	338	45.2	23.2	216 34.7	55.7	40 18.1	52.3	135 16.0	02.5
10	280	29.2	353	47.9	23.3	231 36.0	56.0	55 20.3	52.3	150 18.7	02.5
11	295	31.7	8 50.7	-15 23.4	246 37.4	+19 56.3	70 22.5	-15 52.4	165 21.4	+19 02.6	
12	310	34.1	23 53.5	-15 23.4	261 38.7	+19 56.6	85 24.7	-15 52.5	180 24.1	+19 02.6	
13	325	36.6	38 56.2	23.5	276 40.1	56.9	100 27.0	52.5	195 26.7	02.7	
14	340	39.1	53 59.0	23.6	291 41.4	57.2	115 29.2	52.6	210 29.4	02.8	
15	355	41.5	69 01.7	23.6	306 42.8	57.5	130 31.4	52.6	225 32.1	02.8	
16	10	44.0	84 04.5	23.7	321 44.1	57.8	145 33.6	52.7	240 34.7	02.9	
17	25	46.5	99 07.2	-15 23.8	336 45.5	+19 58.1	160 35.9	-15 52.8	255 37.4	+19 02.9	
18	40	48.9	114 10.0	-15 23.8	351 46.8	+19 58.4	175 38.1	-15 52.8	270 40.1	+19 03.0	
19	55	51.4	129 12.7	23.9	6 48.1	58.7	190 40.3	52.9	285 42.8	03.0	
20	70	53.8	144 15.4	24.0	21 49.5	58.9	205 42.5	52.9	300 45.4	03.1	
21	85	56.3	159 18.1	24.0	36 50.8	59.2	220 44.8	53.0	315 48.1	03.1	
22	100	58.8	174 20.9	24.1	51 52.2	59.5	235 47.0	53.1	330 50.8	03.2	
23	116	01.2	189 23.6	24.2	66 53.5	+19 59.8	250 49.2	53.1	345 53.5	03.3	
24	131	03.7	204 26.3	-15 24.2	81 54.9	+20 00.1	265 51.5	-15 53.2	0 56.1	+19 03.3	
Dif	—		+28	-1	+13	+3	+22	-1	-8973	+	

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: 2 ^d 4 PHE { SD: 16:6 PMG: 14 ^h 57 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m m	h m m	h m m	h m m	h m m		
0	176	37.3	-17	12.1	143	17.2	-7	07.1	60 N	16 14	17 01	17 52	9 18 **	21 01	102			
1	191	37.2		11.4	157	46.3 ¹⁰¹	-6	49.7 ¹⁷⁴	58	24	08	56	15 3	02	98			
2	206	37.1		10.7	172	15.5 ¹⁰²		32.2 ¹⁷⁵	56	33	14	17 59	13 6	02	95			
3	221	37.0		09.9	186	44.7 ¹⁰²	-6	14.7 ¹⁷⁵	54	41	19	18 02	11 9	03	9			
4	236	36.9		09.2	201	14.0 ¹⁰³	-5	57.3 ¹⁷⁴	52	48	24	05	10 11	03	88			
5	251	36.8	-17	08.5	215	43.4 ¹⁰⁴	-5	39.8 ¹⁷⁵	50	16 54	17 29	18 08	9 08 14	21 04	85			
6	266	36.7	-17	07.8	230	12.8 ¹⁰⁴	-5	22.2 ¹⁷⁶	45	17 08	17 39	18 14	9 04 20	21 05	79			
7	281	36.7		07.1	244	42.2 ¹⁰⁴	-5	04.7 ¹⁷⁵	40	19	47	20	9 01 25	05	74			
8	296	36.6		06.4	259	11.8 ¹⁰⁶	-4	47.1 ¹⁷⁶	35	29	17 55	25	8 59 28	06	70			
9	311	36.5		05.7	273	41.3 ¹⁰⁵		29.6 ¹⁷⁵	30	37	18 02	31	56 33	07	66			
10	326	36.4		05.0	288	11.0 ¹⁰⁷	-4	12.0 ¹⁷⁶	20	17 52	15	41	52 39	07	60			
11	341	36.3	-17	04.3	302	40.7 ¹⁰⁷	-3	54.4 ¹⁷⁶	10 N	18 05	18 27	18 52	8 49 44	21 08	54			
12	356	36.2	-17	03.5	317	10.4 ¹⁰⁷	-3	36.8 ¹⁷⁶	0	18 17	18 39	19 04	8 45 50	21 09	49			
13	11	36.2		02.8	331	40.2 ¹⁰⁸		19.3 ¹⁷⁵	10 S	30	18 52	17	42 55	10	43			
14	26	36.1		02.1	346	10.1 ¹⁰⁹	-3	01.7 ¹⁷⁶	20	43	19 06	34	39 60	10	38			
15	41	36.0		01.4	0	40.0 ¹⁰⁹	-2	44.1 ¹⁷⁶	30	18 58	24	19 55	34 67	11	32			
16	56	35.9	-17	00.7	15	09.9 ¹⁰⁹		26.5 ¹⁷⁶	35	19 07	35	20 08	32 71	11	29			
17	71	35.8	-17	00.0	29	39.9 ¹¹⁰	-2	08.9 ¹⁷⁶	40	19 18	19 48	20 24	8 29 75	21 12	24			
18	86	35.7	-16	59.3	44	10.0 ¹¹¹	-1	51.3 ¹⁷⁶	45	19 30	20 03	20 45	8 26 80	21 12	20			
19	101	35.7		58.5	58	40.0 ¹¹⁰		33.8 ¹⁷⁵	50	45	23	21 12	23 86	13	14			
20	116	35.6		57.8	73	10.2 ¹¹²	-1	16.2 ¹⁷⁶	52	19 52	32	26	21 89	13	12			
21	131	35.5		57.1	87	40.3 ¹¹¹	-0	58.6 ¹⁷⁶	54	20 00	43	21 42	19 92	14	9			
22	146	35.4		56.4	102	10.5 ¹¹²		41.1 ¹⁷⁵	56	08	20 55	22 02	17 95	14	6			
23	161	35.3		55.7	116	40.8 ¹¹³		23.6 ¹⁷⁵	58	18	21 09	22 29	15 99	14	3			
24	176	35.3	-16	54.9	131	11.1 ¹¹³	-0	06.1 ¹⁷⁵	60 S	20 29	21 27	23 10	8 12 103	21 15	**			
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 15 ^h 13 ^m 3		Mag: -4.7 PMG: 10 ^h 20 ^m				Mag: +0.2 PMG: 18 ^h 31 ^m				Mag: -2.0 PMG: 6 ^h 16 ^m				Mag: -0.2 PMG: 23 ^h 52 ^m			
	hG ♈		hG ♀	Dec			hG ♂	Dec			hG ♃	Dec			hG ♄	Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	131	03.7	204	26.3	-15	24.2	81	54.9	+20	00.1	265	51.5	-15	53.2	0	56.1	+19	03.3
1	146	06.2	219	29.0		24.3	96	56.2		00.4	280	53.7		53.2	15	58.8		03.4
2	161	08.6	234	31.7		24.4	111	57.5		00.7	295	55.9		53.3	31	01.5		03.4
3	176	11.1	249	34.4		24.5	126	58.9		01.0	310	58.1		53.4	46	04.1		03.5
4	191	13.6	264	37.1		24.5	142	00.2		01.3	326	00.4		53.4	61	06.8		03.5
5	206	16.0	279	39.8	-15	24.6	157	01.5	+20	01.6	341	02.6	-15	53.5	76	09.5	+19	03.6
6	221	18.5	294	42.4	-15	24.7	172	02.9	+20	01.9	356	04.8	-15	53.5	91	12.2	+19	03.7
7	236	21.0	309	45.1		24.8	187	04.2		02.2	11	07.1		53.6	106	14.8		03.7
8	251	23.4	324	47.8		24.8	202	05.6		02.5	26	09.3		53.6	121	17.5		03.8
9	266	25.9	339	50.5		24.9	217	06.9		02.7	41	11.5		53.7	136	20.2		03.8
10	281	28.3	354	53.1		25.0	232	08.2		03.0	56	13.7		53.8	151	22.8		03.9
11	296	30.8	9	55.8	-15	25.1	247	09.6	+20	03.3	71	16.0	-15	53.8	166	25.5	+19	03.9
12	311	33.3	24	58.4	-15	25.1	262	10.9	+20	03.6	86	18.2	-15	53.9	181	28.2	+19	04.0
13	326	35.7	40	01.1		25.2	277	12.2		03.9	101	20.4		53.9	196	30.9		04.0
14	341	38.2	55	03.7		25.3	292	13.6		04.2	116	22.7		54.0	211	33.5		04.1
15	356	40.7	70	06.4		25.4	307	14.9		04.5	131	24.9		54.1	226	36.2		04.2
16	11	43.1	85	09.0		25.4	322	16.2		04.8	146	27.1		54.1	241	38.9		04.2
17	26	45.6	100	11.7	-15	25.5	337	17.6	+20	05.1	161	29.4	-15	54.2	256	41.5	+19	04.3
18	41	48.1	115	14.3	-15	25.6	352	18.9	+20	05.4	176	31.6	-15	54.2	271	44.2	+19	04.3
19	56	50.5	130	16.9		25.7	7	20.2		05.7	191	33.8		54.3	286	46.9		04.4
20	71	53.0	145	19.5		25.8	22	21.5		06.0	206	36.1		54.3	301	49.6		04.4
21	86	55.4	160	22.2		25.8	37	22.9		06.2	221	38.3		54.4	316	52.2		04.5
22	101	57.9	175	24.8		25.9	52	24.2		06.5	236	40.5		54.5	331	54.9		04.6
23	117	00.4	190	27.4		26.0	67	25.5		06.8	251	42.8		54.5	346	57.6		04.6
24	132	02.8	205	30.0	-15	26.1	82	26.9	+20	07.1	266	45.0	-15	54.6	2	00.2	+19	04.7
Dif	—		+27		-1		+13		+3		+22		-1		+27		+1	

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna				
	SD: 16:2 PMG: 12 ^h 13 ^m 7			Edad: 3 ^d 4 PHE { SD: 16:4 PMG: 15 ^h 46 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	m
0	176	35.3	-16	54.9	131	11.1	-0	06.1	60 N	6 34	7 25	8 12	9 17	**	22 43	102	
1	191	35.2		54.2	145	41.4 ¹¹³	+0	11.4 ¹⁷⁵	58	31	18	8 02	18 3		40 96		
2	206	35.1		53.5	160	11.7 ¹¹³		28.9 ¹⁷⁵	56	27	12	7 53	19 7		37 92		
3	221	35.0		52.8	174	42.1 ¹¹⁴	+0	46.3 ¹⁷⁴	54	24	07	46	20 10		34 89		
4	236	34.9		52.1	189	12.5 ¹¹⁴	+1	03.8 ¹⁷⁵	52	22	7 02	39	21 12		31 86		
5	251	34.9	-16	51.3	203	42.9 ¹¹⁴	+1	21.2 ¹⁷⁴	50	6 19	6 58	7 32	9 22 15		22 29 83		
6	266	34.8	-16	50.6	218	13.4 ¹¹⁵	+1	38.5 ¹⁷³	45	6 13	6 48	7 19	9 24 20		22 24 77		
7	281	34.7		49.9	232	43.9 ¹¹⁵	+1	55.9 ¹⁷⁴	40	07	39	7 08	26 24		19 73		
8	296	34.6		49.2	247	14.4 ¹¹⁵	+2	13.2 ¹⁷³	35	6 01	32	6 58	27 29		16 68		
9	311	34.6		48.5	261	45.0 ¹¹⁶		30.5 ¹⁷³	30	5 56	25	50	29 31		13 65		
10	326	34.5		47.7	276	15.5 ¹¹⁵	+2	47.7 ¹⁷²	20	46	12	35	31 38		07 59		
11	341	34.4	-16	47.0	290	46.1 ¹¹⁶	+3	05.0 ¹⁷³	10 N	5 35	6 00	6 22	9 33 43		22 02 54		
12	356	34.3	-16	46.3	305	16.7 ¹¹⁶	+3	22.1 ¹⁷¹	0	5 23	5 49	6 10	9 35 48		21 58 48		
13	11	34.3		45.6	319	47.3 ¹¹⁶		39.3 ¹⁷²	10 S	5 10	36	5 58	37 53		53 44		
14	26	34.2		44.8	334	18.0 ¹¹⁷	+3	56.4 ¹⁷¹	20	4 54	21	45	39 59		48 39		
15	41	34.1		44.1	348	48.6 ¹¹⁶	+4	13.5 ¹⁷¹	30	33	5 04	29	41 66		43 32		
16	56	34.0		43.4	3	19.3 ¹¹⁷		30.5 ¹⁷⁰	35	20	4 53	20	43 69		40 29		
17	71	34.0	-16	42.6	17	50.0 ¹¹⁷	+4	47.5 ¹⁷⁰	40	4 03	4 40	5 10	9 44 74		21 36 25		
18	86	33.9	-16	41.9	32	20.7 ¹¹⁷	+5	04.4 ¹⁶⁹	45	3 43	4 25	4 58	9 46 78		21 32 21		
19	101	33.8		41.2	46	51.4 ¹¹⁷		21.3 ¹⁶⁹	50	16	4 05	43	49 84		27 15		
20	116	33.7		40.5	61	22.1 ¹¹⁷		38.1 ¹⁶⁸	52	3 02	3 56	36	50 86		25 13		
21	131	33.7		39.7	75	52.9 ¹¹⁸	+5	54.9 ¹⁶⁸	54	2 46	45	28	51 90		23 9		
22	146	33.6		39.0	90	23.6 ¹¹⁷	+6	11.7 ¹⁶⁸	56	2 26	33	20	52 93		20 7		
23	161	33.5		38.3	104	54.3 ¹¹⁷		28.4 ¹⁶⁷	58	1 59	19	4 10	54 97		17 3		
24	176	33.5	-16	37.5	119	25.1 ¹¹⁸	+6	45.0 ¹⁶⁶	60 S	1 18	3 01	3 59	9 55 102		21 14 **		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 15 ^h 09 ^m 3		Mag: -4.8 PMG: 10 ^h 16 ^m		Mag: +0.2 PMG: 18 ^h 29 ^m		Mag: -2.1 PMG: 6 ^h 12 ^m		Mag: -0.2 PMG: 23 ^h 48 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	132	02.8	205	30.0	-15	26.1	82	26.9	+20	07.1	266	45.0	-15	54.6	2	00.2	+19	04.7
1	147	05.3	220	32.6		26.2	97	28.2		07.4	281	47.2		54.6	17	02.9		04.7
2	162	07.8	235	35.2		26.3	112	29.5		07.7	296	49.5		54.7	32	05.6		04.8
3	177	10.2	250	37.8		26.3	127	30.8		08.0	311	51.7		54.7	47	08.3		04.8
4	192	12.7	265	40.3		26.4	142	32.2		08.3	326	54.0		54.8	62	10.9		04.9
5	207	15.2	280	42.9	-15	26.5	157	33.5	+20	08.6	341	56.2	-15	54.9	77	13.6	+19	04.9
6	222	17.6	295	45.5	-15	26.6	172	34.8	+20	08.9	356	58.4	-15	54.9	92	16.3	+19	05.0
7	237	20.1	310	48.1		26.7	187	36.1		09.2	12	00.7		55.0	107	18.9		05.1
8	252	22.6	325	50.6		26.8	202	37.5		09.5	27	02.9		55.0	122	21.6		05.1
9	267	25.0	340	53.2		26.8	217	38.8		09.7	42	05.1		55.1	137	24.3		05.2
10	282	27.5	355	55.7		26.9	232	40.1		10.0	57	07.4		55.1	152	27.0		05.2
11	297	29.9	10	58.3	-15	27.0	247	41.4	+20	10.3	72	09.6	-15	55.2	167	29.6	+19	05.3
12	312	32.4	26	00.9	-15	27.1	262	42.7	+20	10.6	87	11.9	-15	55.3	182	32.3	+19	05.3
13	327	34.9	41	03.4		27.2	277	44.1		10.9	102	14.1		55.3	197	35.0		05.4
14	342	37.3	56	05.9		27.3	292	45.4		11.2	117	16.3		55.4	212	37.6		05.4
15	357	39.8	71	08.5		27.4	307	46.7		11.5	132	18.6		55.4	227	40.3		05.5
16	12	42.3	86	11.0		27.5	322	48.0		11.8	147	20.8		55.5	242	43.0		05.6
17	27	44.7	101	13.5	-15	27.5	337	49.3	+20	12.1	162	23.0	-15	55.5	257	45.7	+19	05.6
18	42	47.2	116	16.1	-15	27.6	352	50.7	+20	12.4	177	25.3	-15	55.6	272	48.3	+19	05.7
19	57	49.7	131	18.6		27.7	7	52.0		12.7	192	27.5		55.6	287	51.0		05.7
20	72	52.1	146	21.1		27.8	22	53.3		12.9	207	29.8		55.7	302	53.7		05.8
21	87	54.6	161	23.6		27.9	37	54.6		13.2	222	32.0		55.8	317	56.3		05.8
22	102	57.1	176	26.1		28.0	52	55.9		13.5	237	34.2		55.8	332	59.0		05.9
23	117	59.5	191	28.6		28.1	67	57.2		13.8	252	36.5		55.9	348	01.7		06.0
24	133	02.0	206	31.1	-15	28.2	82	58.6	+20	14.1	267	38.7	-15	55.9	3	04.3	+19	06.0
Dif	—		+25		-1		+13		+3		+22		-1		+27		+	

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: 4 ^d 4 PHE { 4 ^h : 59:3 12 ^h : 59:0 20 ^h : 58:7 R°: 49 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m m	h m m	h m m
0	176	33.5	-16	37.5	119	25.1	+6	45.0	60 N	16 19	17 06	17 56	9 16 0	*** ** *
1	191	33.4		36.8	133	55.8 ¹¹⁷	+7	01.6 ¹⁶⁶	58	29	12	18 00	21 4	*** ** *
2	206	33.3		36.1	148	26.6 ¹¹⁸		18.1 ¹⁶⁵	56	37	18	03	26 7	*** ** *
3	221	33.2		35.3	162	57.3 ¹¹⁷		34.6 ¹⁶⁵	54	45	23	05	30 10	*** ** *
4	236	33.2		34.6	177	28.1 ¹¹⁸	+7	51.0 ¹⁶⁴	52	51	28	08	33 14	23 57 86
5	251	33.1	-16	33.9	191	58.8 ¹¹⁷	+8	07.4 ¹⁶⁴	50	16 57	17 32	18 11	9 37 16	23 52 83
6	266	33.0	-16	33.1	206	29.6 ¹¹⁸	+8	23.7 ¹⁶³	45	17 10	17 42	18 17	9 44 22	23 41 77
7	281	33.0		32.4	221	00.3 ¹¹⁷		39.9 ¹⁶²	40	21	50	22	50 26	32 72
8	296	32.9		31.7	235	31.0 ¹¹⁷	+8	56.1 ¹⁶²	35	31	17 57	27	9 56 29	24 68
9	311	32.8		30.9	250	01.8 ¹¹⁸	+9	12.2 ¹⁶¹	30	39	18 04	32	10 00 34	18 64
10	326	32.8		30.2	264	32.5 ¹¹⁷		28.2 ¹⁶⁰	20	17 53	16	42	09 39	23 06 59
11	341	32.7	-16	29.5	279	03.2 ¹¹⁷	+9	44.2 ¹⁶⁰	10 N	18 05	18 27	18 53	10 16 44	22 56 54
12	356	32.6	-16	28.7	293	33.9 ¹¹⁷	+10	00.1 ¹⁵⁹	0	18 17	18 39	19 04	10 23 49	22 46 50
13	11	32.6		28.0	308	04.6 ¹¹⁷		15.9 ¹⁵⁸	10 S	29	18 51	17	30 54	37 45
14	26	32.5		27.2	322	35.3 ¹¹⁷		31.7 ¹⁵⁸	20	42	19 05	33	38 59	27 40
15	41	32.4		26.5	337	05.9 ¹¹⁶	+10	47.3 ¹⁵⁶	30	18 57	23	19 53	47 64	15 35
16	56	32.4		25.8	351	36.6 ¹¹⁷	+11	02.9 ¹⁵⁶	35	19 06	33	20 06	52 68	09 31
17	71	32.3	-16	25.0	6	07.2 ¹¹⁶	+11	18.5 ¹⁵⁶	40	19 16	19 45	20 22	10 58 72	22 01 28
18	86	32.2	-16	24.3	20	37.8 ¹¹⁶	+11	33.9 ¹⁵⁴	45	19 27	20 00	20 41	11 04 77	21 53 23
19	101	32.2		23.5	35	08.4 ¹¹⁶	+11	49.3 ¹⁵⁴	50	42	19	21 07	13 83	42 18
20	116	32.1		22.8	49	39.0 ¹¹⁶	+12	04.6 ¹⁵³	52	48	28	21	16 86	38 14
21	131	32.1		22.1	64	09.6 ¹¹⁶		19.8 ¹⁵²	54	19 56	38	36	21 89	32 12
22	146	32.0		21.3	78	40.1 ¹¹⁵		35.0 ¹⁵²	56	20 04	20 50	21 55	25 93	27 8
23	161	31.9		20.6	93	10.6 ¹¹⁵	+12	50.0 ¹⁵⁰	58	14	21 04	22 20	31 96	20 5
24	176	31.9	-16	19.8	107	41.1 ¹¹⁵	+13	05.0 ¹⁵⁰	60 S	20 24	21 20	22 55	11 37 101	21 13 0

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 15 ^h 05 ^m 4		Mag: -4.8 PMG: 10 ^h 12 ^m		Mag: +0.3 PMG: 18 ^h 26 ^m		Mag: -2.1 PMG: 6 ^h 08 ^m		Mag: -0.2 PMG: 23 ^h 43 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	133	02.0	206	31.1	-15	28.2	82	58.6	+20	14.1
1	148	04.4	221	33.6		28.3	97	59.9		14.4
2	163	06.9	236	36.1		28.4	113	01.2		14.7
3	178	09.4	251	38.6		28.4	128	02.5		15.0
4	193	11.8	266	41.0		28.5	143	03.8		15.3
5	208	14.3	281	43.5	-15	28.6	158	05.1	+20	15.6
6	223	16.8	296	46.0	-15	28.7	173	06.4	+20	15.9
7	238	19.2	311	48.4		28.8	188	07.8		16.1
8	253	21.7	326	50.9		28.9	203	09.1		16.4
9	268	24.2	341	53.4		29.0	218	10.4		16.7
10	283	26.6	356	55.8		29.1	233	11.7		17.0
11	298	29.1	11	58.3	-15	29.2	248	13.0	+20	17.3
12	313	31.5	27	00.7	-15	29.3	263	14.3	+20	17.6
13	328	34.0	42	03.1		29.4	278	15.6		17.9
14	343	36.5	57	05.6		29.5	293	16.9		18.2
15	358	38.9	72	08.0		29.6	308	18.2		18.5
16	13	41.4	87	10.4		29.7	323	19.5		18.8
17	28	43.9	102	12.9	-15	29.8	338	20.8	+20	19.1
18	43	46.3	117	15.3	-15	29.9	353	22.2	+20	19.3
19	58	48.8	132	17.7		30.0	8	23.5		19.6
20	73	51.3	147	20.1		30.1	23	24.8		19.9
21	88	53.7	162	22.5		30.2	38	26.1		20.2
22	103	56.2	177	24.9		30.3	53	27.4		20.5
23	118	58.7	192	27.3		30.4	68	28.7		20.8
24	134	01.1	207	29.7	-15	30.5	83	30.0	+20	21.1
Dif	—		+24		-1		+13		+3	
									+22	
									-1	
									+27	
									+1	

UT	SOL				 LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16/2 PMG: 12 ^h 13 ^m 9				Edad: 5 ^d 4 PHE { 4 ^h : 58/4 12 ^h : 58/1 20 ^h : 57/9 SD: 16/0 PMG: 17 ^h 24 ^m R°: 50 ^m													
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m
0	176	31.9	-16	19.8	107	41.1	+13	05.0	60 N	6 30	7 21	8 07	9 16	0	0 25	102		
1	191	31.8		19.1	122	11.6 ¹¹⁵		19.9 ¹⁴⁹	58	27	14	7 58	25	6	16	97		
2	206	31.7		18.3	136	42.1 ¹¹⁵		34.7 ¹⁴⁸	56	24	09	49	33	10	09	93		
3	221	31.7		17.6	151	12.5 ¹¹⁴	+13	49.4 ¹⁴⁷	54	21	7 04	42	40	14	0 03	89		
4	236	31.6		16.8	165	42.9 ¹¹⁴	+14	04.0 ¹⁴⁶	52	19	6 59	35	47	16	***	***	***	
5	251	31.6	-16	16.1	180	13.3 ¹¹⁴	+14	18.6 ¹⁴⁶	50	6 16	6 55	7 29	9 53	19	***	***	***	
6	266	31.5	-16	15.4	194	43.6 ¹¹³	+14	33.0 ¹⁴⁴	45	6 11	6 45	7 17	10 06	24	***	***	***	
7	281	31.4		14.6	209	13.9 ¹¹³	+14	47.4 ¹⁴⁴	40	05	37	7 06	16	30	***	***	***	
8	296	31.4		13.9	223	44.2 ¹¹³	+15	01.6 ¹⁴²	35	6 00	30	6 57	25	33	***	***	***	
9	311	31.3		13.1	238	14.5 ¹¹³		15.8 ¹⁴²	30	5 55	24	49	34	36	***	***	***	
10	326	31.3		12.4	252	44.7 ¹¹²		29.9 ¹⁴¹	20	45	12	35	10 48	41	***	***	***	
11	341	31.2	-16	11.6	267	14.9 ¹¹²	+15	43.9 ¹⁴⁰	10 N	5 35	6 00	6 22	11 00	46	23	50	55	
12	356	31.1	-16	10.9	281	45.0 ¹¹¹	+15	57.8 ¹³⁹	0	5 24	5 49	6 10	11 12	50	23	36	51	
13	11	31.1		10.1	296	15.2 ¹¹²	+16	11.5 ¹³⁷	10 S	5 11	37	5 59	24	54	22	47		
14	26	31.0		09.4	310	45.3 ¹¹¹		25.2 ¹³⁷	20	4 55	23	46	37	59	23	07	43	
15	41	31.0		08.6	325	15.3 ¹¹⁰		38.8 ¹³⁶	30	35	5 05	31	11 51	65	22	50	38	
16	56	30.9		07.9	339	45.3 ¹¹⁰	+16	52.3 ¹³⁵	35	22	4 55	22	12 00	68	40	35		
17	71	30.9	-16	07.1	354	15.3 ¹¹⁰	+17	05.7 ¹³⁴	40	4 06	4 43	5 13	12 10	71	22	29	31	
18	86	30.8	-16	06.4	8	45.3 ¹¹⁰	+17	19.0 ¹³³	45	3 47	4 28	5 01	12 21	76	22	16	27	
19	101	30.8		05.6	23	15.2 ¹⁰⁹		32.1 ¹³¹	50	21	09	4 47	36	82	22	00	22	
20	116	30.7		04.9	37	45.1 ¹⁰⁹		45.2 ¹³¹	52	3 08	4 00	40	42	85	21	52	19	
21	131	30.6		04.1	52	14.9 ¹⁰⁸	+17	58.2 ¹³⁰	54	2 52	3 50	33	50	88	44	16		
22	146	30.6		03.3	66	44.7 ¹⁰⁸	+18	11.0 ¹²⁸	56	33	38	24	12 58	92	35	12		
23	161	30.5		02.6	81	14.5 ¹⁰⁸		23.8 ¹²⁸	58	2 09	25	15	13 07	98	25	7		
24	176	30.5	-16	01.8	95	44.2 ¹⁰⁷	+18	36.4 ¹²⁶	60 S	1 34	3 08	4 04	13 18	104	21	13	1	

UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG 15 ^h 01 ^m 5		Mag: -4.8 PMG: 10 ^h 08 ^m				Mag: +0.3 PMG: 18 ^h 24 ^m				Mag: -2.1 PMG: 6 ^h 05 ^m				Mag: -0.2 PMG: 23 ^h 39 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	134	01.1	207	29.7	-15	30.5	83	30.0	+20	21.1	268	32.6	-15	57.2	4	08.4	+19	07.3
1	149	03.6	222	32.1		30.6	98	31.3		21.4	283	34.9		57.3	19	11.1		07.4
2	164	06.0	237	34.4		30.7	113	32.6		21.7	298	37.1		57.3	34	13.8		07.4
3	179	08.5	252	36.8		30.8	128	33.9		22.0	313	39.4		57.4	49	16.4		07.5
4	194	11.0	267	39.2		30.9	143	35.2		22.2	328	41.6		57.4	64	19.1		07.6
5	209	13.4	282	41.6	-15	31.0	158	36.5	+20	22.5	343	43.9	-15	57.5	79	21.8	+19	07.6
6	224	15.9	297	43.9	-15	31.1	173	37.8	+20	22.8	358	46.1	-15	57.5	94	24.5	+19	07.7
7	239	18.4	312	46.3		31.2	188	39.1		23.1	373	48.4		57.6	109	27.1		07.7
8	254	20.8	327	48.7		31.3	203	40.4		23.4	388	50.6		57.6	124	29.8		07.8
9	269	23.3	342	51.0		31.4	218	41.7		23.7	403	52.9		57.7	139	32.5		07.8
10	284	25.8	357	53.4		31.5	233	43.0		24.0	418	55.1		57.7	154	35.1		07.9
11	299	28.2	372	55.7	-15	31.6	248	44.3	+20	24.3	433	57.4	-15	57.8	169	37.8	+19	07.9
12	314	30.7	387	58.0	-15	31.7	263	45.6	+20	24.6	448	59.6	-15	57.9	184	40.5	+19	08.0
13	329	33.2	402	00.4		31.8	278	46.9		24.9	463	01.9		57.9	199	43.1		08.1
14	344	35.6	417	02.7		31.9	293	48.2		25.1	478	04.1		58.0	214	45.8		08.1
15	359	38.1	432	05.0		32.0	308	49.5		25.4	493	06.4		58.0	229	48.5		08.2
16	14	40.5	88	07.3		32.1	323	50.8		25.7	508	08.6		58.1	244	51.2		08.2
17	29	43.0	103	09.7	-15	32.2	338	52.1	+20	26.0	523	10.9	-15	58.1	259	53.8	+19	08.3
18	44	45.5	118	12.0	-15	32.3	353	53.4	+20	26.3	538	13.1	-15	58.2	274	56.5	+19	08.3
19	59	47.9	133	14.3		32.4	8	54.7		26.6	553	15.4		58.2	289	59.2		08.4
20	74	50.4	148	16.6		32.5	23	56.0		26.9	568	17.6		58.3	305	01.8		08.4
21	89	52.9	163	18.9		32.6	38	57.2		27.2	583	19.9		58.3	320	04.5		08.5
22	104	55.3	178	21.2		32.7	53	58.5		27.5	598	22.1		58.4	335	07.2		08.6
23	119	57.8	193	23.5		32.8	68	59.8		27.7	613	24.4		58.4	350	09.8		08.6
24	135	00.3	208	25.8	-15	32.9	84	01.1	+20	28.0	629	26.6	-15	58.5	5	12.5	+19	08.7
Dif	—		+23		-1		+13		+3		+23		-1		+27		+1	

UT	SOL				 LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna			Puesta de Luna			
	SD: 16:2 PMG: 12 ^h 14 ^m 0				Edad: 6 ^d 4 PHE { 4 ^h : 57:6 12 ^h : 57:3 20 ^h : 57:0 PMG: 18 ^h 14 ^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	h m	h m	h m	m
0	176	30.5	-16	01.8	95	44.2	+18	36.4	60 N	16 24	17 11	18 01	9 16	3	2 07	104				
1	191	30.4		01.1	110	13.9 ¹⁰⁷	+18	49.0 ¹²⁶	58	33		17 04	31	9	1 53	97				
2	206	30.4	-16	00.3	124	43.5 ¹⁰⁶	+19	01.4 ¹²⁴	56	41	22	06	43	15	42	91				
3	221	30.3	-15	59.6	139	13.1 ¹⁰⁶		13.7 ¹²³	54	49	27	09	9 54	19	32	87				
4	236	30.3		58.8	153	42.6 ¹⁰⁵		25.9 ¹²²	52	16 55	31	11	10 03	23	23	84				
5	251	30.2	-15	58.1	168	12.2 ¹⁰⁶	+19	38.0 ¹²¹	50	17 01	17 35	18 14	10 12	25	1 15	81				
6	266	30.2	-15	57.3	182	41.6 ¹⁰⁴	+19	49.9 ¹¹⁹	45	17 13	17 44	18 19	10 30	31	0 58	75				
7	281	30.1		56.5	197	11.1 ¹⁰⁵	+20	01.8 ¹¹⁹	40	24	52	24	46	34	44	71				
8	296	30.1		55.8	211	40.4 ¹⁰³		13.5 ¹¹⁷	35	33	17 59	29	10 58	38	32	67				
9	311	30.0		55.0	226	09.8 ¹⁰⁴		25.1 ¹¹⁶	30	40	18 05	34	11 10	40	22	64				
10	326	30.0		54.3	240	39.1 ¹⁰³		36.6 ¹¹⁵	20	17 54	17 43	43	29 45		0 05	59				
11	341	29.9	-15	53.5	255	08.3 ¹⁰²	+20	48.0 ¹¹⁴	10 N	18 06	18 28	18 53	11 46	49	**	**	**			
12	356	29.9	-15	52.7	269	37.5 ¹⁰²	+20	59.3 ¹¹³	0	18 17	18 39	19 04	12 02	52	**	**	**			
13	11	29.8		52.0	284	06.7 ¹⁰²	+21	10.4 ¹¹¹	10 S	29	18 51	17	18 56		**	**	**			
14	26	29.8		51.2	298	35.8 ¹⁰¹		21.4 ¹¹⁰	20	41	19 05	32	36 59		23 50	46				
15	41	29.7		50.5	313	04.9 ¹⁰¹		32.3 ¹⁰⁹	30	18 56	21	19 52	12 56	63	28	43				
16	56	29.7		49.7	327	33.9 ¹⁰⁰		43.1 ¹⁰⁸	35	19 04	31	20 04	13 08	66	15	41				
17	71	29.6	-15	48.9	342	02.9 ¹⁰⁰	+21	53.8 ¹⁰⁷	40	19 14	19 43	20 19	13 21	70	23 00	38				
18	86	29.6	-15	48.2	356	31.9 ¹⁰⁰	+22	04.3 ¹⁰⁵	45	19 25	19 57	20 38	13 37	74	22 43	34				
19	101	29.5		47.4	11	00.8 ⁹⁹		14.7 ¹⁰⁴	50	39	20 16	21 03	13 58	79	22	28				
20	116	29.5		46.6	25	29.6 ⁹⁸		24.9 ¹⁰²	52	45	24	16	14 07	82	11	27				
21	131	29.4		45.9	39	58.4 ⁹⁸		35.1 ¹⁰²	54	19 52	34	30	18 85		22 00	23				
22	146	29.4		45.1	54	27.2 ⁹⁸		45.1 ¹⁰⁰	56	20 00	45	21 48	30 90		21 47	19				
23	161	29.4		44.3	68	55.9 ⁹⁷	+22	55.0 ⁹⁹	58	09	20 58	22 11	14 45	95	32	13				
24	176	29.3	-15	43.6	83	24.6 ⁹⁷	+23	04.7 ⁹⁷	60 S	20 19	21 14	22 42	15 02	104	21 14	5				
UT	ARIES				VENUS				MARTE				JÚPITER				SATURNO			
	PMG 14 ^h 57 ^m 5				Mag: -4.8 PMG: 10 ^h 05 ^m				Mag: +0.3 PMG: 18 ^h 22 ^m				Mag: -2.1 PMG: 6 ^h 01 ^m				Mag: -0.2 PMG: 23 ^h 35 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	135	00.3	208	25.8	-15	32.9	84	01.1	+20	28.0	269	20.6	-15	58.5	5	12.5	+19	08.7		
1	150	02.7	223	28.1		33.0	99	02.4		28.3	284	28.9		58.5	20	15.2		08.7		
2	165	05.2	238	30.3		33.1	114	03.7		28.6	299	31.2		58.6	35	17.8		08.8		
3	180	07.6	253	32.6		33.3	129	05.0		28.9	314	33.4		58.6	50	20.5		08.8		
4	195	10.1	268	34.9		33.4	144	06.3		29.2	329	35.7		58.7	65	23.2		08.9		
5	210	12.6	283	37.1	-15	33.5	159	07.6	+20	29.5	344	37.9	-15	58.7	80	25.9	+19	08.9		
6	225	15.0	298	39.4	-15	33.6	174	08.9	+20	29.8	359	40.2	-15	58.8	95	28.5	+19	09.0		
7	240	17.5	313	41.7		33.7	189	10.2		30.1	14	42.4		58.8	110	31.2		09.0		
8	255	20.0	328	43.9		33.8	204	11.4		30.4	29	44.7		58.9	125	33.9		09.1		
9	270	22.4	343	46.2		33.9	219	12.7		30.6	44	47.0		58.9	140	36.5		09.2		
10	285	24.9	358	48.4		34.0	234	14.0		30.9	59	49.2		59.0	155	39.2		09.2		
11	300	27.4	13	50.7	-15	34.1	249	15.3	+20	31.2	74	51.5	-15	59.0	170	41.9	+19	09.3		
12	315	29.8	28	52.9	-15	34.2	264	16.6	+20	31.5	89	53.7	-15	59.1	185	44.5	+19	09.3		
13	330	32.3	43	55.1		34.3	279	17.9		31.8	104	56.0		59.1	200	47.2		09.4		
14	345	34.8	58	57.3		34.5	294	19.2		32.1	119	58.2		59.2	215	49.9		09.4		
15	0	37.2	73	59.6		34.6	309	20.4		32.4	135	00.5		59.2	230	52.5		09.5		
16	15	39.7	89	01.8		34.7	324	21.7		32.7	150	02.8		59.3	245	55.2		09.5		
17	30	42.1	104	04.0	-15	34.8	339	23.0	+20	32.9	165	05.0	-15	59.3	260	57.9	+19	09.6		
18	45	44.6	119	06.2	-15	34.9	354	24.3	+20	33.2	180	07.3	-15	59.4	276	00.5	+19	09.6		
19	60	47.1	134	08.4		35.0	9	25.6		33.5	195	09.5		59.4	291	03.2		09.7		
20	75	49.5	149	10.6		35.1	24	26.9		33.8	210	11.8		59.5	306	05.9		09.8		
21	90	52.0	164	12.8		35.2	39	28.1		34.1	225	14.1		59.5	321	08.6		09.8		
22	105	54.5	179	15.0		35.3	54	29.4		34.4	240	16.3		59.6	336	11.2		09.9		
23	120	56.9	194	17.2		35.4	69	30.7		34.7	255	18.6		59.6	351	13.9		09.9		
24	135	59.4	209	19.4	-15	35.6	84	32.0	+20	35.0	270	20.8	-15	59.7	6	16.6	+19	10.0		
Dif	—				+22				-1				+13				+3			

ALMANAQUE NÁUTICO PERSEIS

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16 ^h 2 PMG: 12 ^h 14 ^m 1			Edad: 8 ^d 4 PHE { 4 ^h : 56 ^m 1 12 ^h : 55 ^m 9 20 ^h : 55 ^m 7 R°: 54 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m m	h m m	h m m
0	176	28.3	-15	25.0	70	40.6	+26	18.1	60 N	16 30	17 15	18 05	9 28 26	5 32 88
1	191	28.3		24.3	85	08.3		24.4	58	38	21	08	9 59 34	5 02 79
2	206	28.3		23.5	99	36.0		30.5	56	46	26	10	10 22 39	4 40 73
3	221	28.2		22.7	114	03.6		36.5	54	53	30	13	41 41	21 71
4	236	28.2		21.9	128	31.2		42.4	52	16 59	35	15	10 57 43	4 05 69
5	251	28.2	-15	21.2	142	58.8	+26	48.1	50	17 04	17 38	18 17	11 10 45	3 52 67
6	266	28.1	-15	20.4	157	26.4	+26	53.6	45	17 16	17 47	18 22	11 39 47	3 24 65
7	281	28.1		19.6	171	53.9	+26	59.0	40	26	17 54	26	12 01 49	3 03 62
8	296	28.1		18.8	186	21.5	+27	04.3	35	35	18 01	31	19 50	2 45 60
9	311	28.0		18.0	200	49.0		09.4	30	42	07	35	12 35 51	29 60
10	326	28.0		17.3	215	16.4		14.3	20	17 55	18	44	13 02 53	2 03 58
11	341	28.0	-15	16.5	229	43.9	+27	19.2	10 N	18 07	18 28	18 54	13 26 53	1 41 55
12	356	27.9	-15	15.7	244	11.3	+27	23.8	0	18 18	18 39	19 04	13 48 54	1 20 54
13	11	27.9		14.9	258	38.7		28.3	10 S	29	18 50	16	14 10 55	0 59 52
14	26	27.9		14.1	273	06.1		32.7	20	41	19 04	31	14 33 56	36 51
15	41	27.8		13.3	287	33.5		36.9	30	18 54	20	19 50	15 01 57	0 11 48
16	56	27.8		12.6	302	00.9		41.0	35	19 02	29	20 02	17 58	** ** *
17	71	27.8	-15	11.8	316	28.3	+27	44.9	40	19 11	19 41	20 16	15 36 59	** ** *
18	86	27.7	-15	11.0	330	55.6	+27	48.6	45	19 22	19 55	20 35	15 59 60	23 59 52
19	101	27.7		10.2	345	22.9		52.2	50	35	20 12	20 59	16 29 61	29 51
20	116	27.7		09.4	359	50.2		55.7	52	41	20	21 11	16 44 62	23 14 50
21	131	27.7		08.6	14	17.6	+27	59.0	54	48	30	25	17 01 63	22 57 49
22	146	27.6		07.8	28	44.9	+28	02.1	56	19 56	40	21 41	22 64	36 48
23	161	27.6		07.0	43	12.2		05.1	58	20 04	20 53	22 02	17 48 67	22 10 46
24	176	27.6	-15	06.3	57	39.5	+28	08.0	60 S	20 14	21 07	22 30	18 24 73	21 33 40

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 14 ^h 49 ^m 7		Mag: -4.8 PMG: 9 ^h 58 ^m		Mag: +0.3 PMG: 18 ^h 18 ^m		Mag: -2.1 PMG: 5 ^h 54 ^m		Mag: -0.2 PMG: 23 ^h 26 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	136	58.5	210	10.6	85	02.6	+20	41.9	271	15.2
1	152	01.0	225	12.7	100	03.9		42.2	286	17.5
2	167	03.5	240	14.8	115	05.1		42.4	301	19.7
3	182	05.9	255	16.9	130	06.4		42.7	316	22.0
4	197	08.4	270	18.9	145	07.7		43.0	331	24.3
5	212	10.9	285	21.0	160	08.9	+20	43.3	346	26.6
6	227	13.3	300	23.1	175	10.2	+20	43.6	1	28.8
7	242	15.8	315	25.1	190	11.5		43.9	16	31.1
8	257	18.2	330	27.2	205	12.7		44.2	31	33.4
9	272	20.7	345	29.2	220	14.0		44.4	46	35.6
10	287	23.2	0	31.3	235	15.3		44.7	61	37.9
11	302	25.6	15	33.3	250	16.5	+20	45.0	76	40.2
12	317	28.1	30	35.3	265	17.8	+20	45.3	91	42.5
13	332	30.6	45	37.4	280	19.0		45.6	106	44.7
14	347	33.0	60	39.4	295	20.3		45.9	121	47.0
15	2	35.5	75	41.4	310	21.6		46.2	136	49.3
16	17	38.0	90	43.5	325	22.8		46.5	151	51.5
17	32	40.4	105	45.5	340	24.1	+20	46.7	166	53.8
18	47	42.9	120	47.5	355	25.4	+20	47.0	181	56.1
19	62	45.4	135	49.5	10	26.6		47.3	196	58.4
20	77	47.8	150	51.5	25	27.9		47.6	212	00.6
21	92	50.3	165	53.5	40	29.1		47.9	227	02.9
22	107	52.7	180	55.5	55	30.4		48.2	242	05.2
23	122	55.2	195	57.5	70	31.7		48.5	257	07.5
24	137	57.7	210	59.5	85	32.9	+20	48.7	272	09.7
Dif	—		+20		-1		+13		+23	
									0	
									+27	
									+	

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: 9 ^d 4 PHE { 4 ^h : 55:5 12 ^h : 55:3 20 ^h : 55:1 Rº: 53 ^m											
	hG ☉	Dec			hG ☾	Dif		Dec	Dif		Náutico	Civil	Hora	Rº	Hora
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	176	27.6	-15	06.3	57	39.5	+28 08.0	60 N	6 22	7 12	7 57	9 54	60	7 00	52
1	191	27.5		05.5	72	06.7	10.7	58	19	06	49	10 33	59	6 21	53
2	206	27.5		04.7	86	34.0	13.2	56	17	7 01	41	11 01	57	5 53	54
3	221	27.5		03.9	101	01.3	15.6	54	15	6 57	34	22	57	32	54
4	236	27.5		03.1	115	28.6	17.9	52	13	53	28	40	57	5 14	55
5	251	27.4	-15	02.3	129	55.9	+28 20.0	50	6 11	6 49	7 23	11 55	57	4 59	55
6	266	27.4	-15	01.5	144	23.2	+28 21.9	45	6 06	6 41	7 11	12 26	56	4 29	54
7	281	27.4	-15	00.7	158	50.5	23.7	40	6 01	33	7 02	12 50	55	4 05	55
8	296	27.4	-14	59.9	173	17.8	25.3	35	5 57	27	6 53	13 09	56	3 45	55
9	311	27.3		59.1	187	45.1	26.8	30	53	21	46	26	55	29	54
10	326	27.3		58.4	202	12.4	28.1	20	44	10	33	13 55	54	3 01	54
11	341	27.3	-14	57.6	216	39.8	+28 29.3	10 N	5 35	6 00	6 22	14 19	54	2 36	55
12	356	27.3	-14	56.8	231	07.1	+28 30.3	0	5 24	5 49	6 11	14 42	53	2 14	54
13	11	27.2		56.0	245	34.5	31.2	10 S	5 12	38	6 00	15 05	53	1 51	54
14	26	27.2		55.2	260	01.8	31.9	20	4 58	25	5 48	29	53	1 27	54
15	41	27.2		54.4	274	29.2	32.5	30	39	5 09	34	15 58	51	0 59	53
16	56	27.2		53.6	288	56.6	32.9	35	27	4 59	27	16 15	51	42	53
17	71	27.1	-14	52.8	303	24.0	+28 33.2	40	4 12	4 48	5 17	16 35	50	0 23	52
18	86	27.1	-14	52.0	317	51.5	+28 33.3	45	3 54	4 34	5 07	16 59	49	***	***
19	101	27.1		51.2	332	18.9	33.3	50	30	17	4 54	17 30	48	***	***
20	116	27.1		50.4	346	46.4	33.1	52	18	09	48	17 46	46	***	***
21	131	27.1		49.6	1	14.0	32.8	54	3 04	4 00	41	18 04	45	23 46	65
22	146	27.0		48.8	15	41.5	32.3	56	2 48	3 49	33	26	43	23 24	67
23	161	27.0		48.0	30	09.1	31.7	58	2 27	37	25	18 55	40	22 56	70
24	176	27.0	-14	47.2	44	36.7	+28 30.9	60 S	1 59	3 22	4 15	19 37	32	22 13	79

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 14 ^h 45 ^m 7		Mag: -4.8 PMG: 9 ^h 55 ^m		Mag: +0.4 PMG: 18 ^h 16 ^m		Mag: -2.1 PMG: 5 ^h 50 ^m		Mag: -0.2 PMG: 23 ^h 22 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	137	57.7	210	59.5	-15	41.2	85	32.9	+20	48.7
1	153	00.1	226	01.5		41.3	100	34.2		49.0
2	168	02.6	241	03.5		41.4	115	35.4		49.3
3	183	05.1	256	05.4		41.5	130	36.7		49.6
4	198	07.5	271	07.4		41.6	145	38.0		49.9
5	213	10.0	286	09.4	-15	41.8	160	39.2	+20	50.2
6	228	12.5	301	11.3	-15	41.9	175	40.5	+20	50.5
7	243	14.9	316	13.3		42.0	190	41.7		50.7
8	258	17.4	331	15.3		42.1	205	43.0		51.0
9	273	19.9	346	17.2		42.3	220	44.2		51.3
10	288	22.3	1	19.2		42.4	235	45.5		51.6
11	303	24.8	16	21.1	-15	42.5	250	46.7	+20	51.9
12	318	27.2	31	23.1	-15	42.6	265	48.0	+20	52.2
13	333	29.7	46	25.0		42.7	280	49.2		52.4
14	348	32.2	61	26.9		42.9	295	50.5		52.7
15	3	34.6	76	28.9		43.0	310	51.7		53.0
16	18	37.1	91	30.8		43.1	325	53.0		53.3
17	33	39.6	106	32.7	-15	43.2	340	54.3	+20	53.6
18	48	42.0	121	34.6	-15	43.3	355	55.5	+20	53.9
19	63	44.5	136	36.5		43.5	10	56.8		54.2
20	78	47.0	151	38.4		43.6	25	58.0		54.4
21	93	49.4	166	40.4		43.7	40	59.3		54.7
22	108	51.9	181	42.3		43.8	56	00.5		55.0
23	123	54.4	196	44.2		44.0	71	01.8		55.3
24	138	56.8	211	46.1	-15	44.1	86	03.0	+20	55.6
Dif	—		+19		-1		+13		+3	
								+23		0
									+27	
										+

UT	SOL			LUNA					Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16:2 PMG: 12 ^h 14 ^m 2			Edad: 10 ^d 4 PHE { 4 ^h : 55:0 12 ^h : 54:8 20 ^h : 54:7 R°: 51 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec	Dif					Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m	h m	h m	m	
0	176	27.0	-14	47.2	44	36.7	+28	30.9	60 N	16 35	17 20	18 10	10 54	88	7 52	21	
1	191	27.0		46.4	59	04.3		30.0	58	43	25	12	11 32	78	7 14	30	
2	206	27.0		45.6	73	31.9		28.9	56	50	30	14	11 58	74	6 47	35	
3	221	26.9		44.8	87	59.6		27.7	54	16 57	34	16	12 19	71		26 38	
4	236	26.9		44.0	102	27.4		26.3	52	17 02	38	18		37 68	6 09	39	
5	251	26.9	-14	43.2	116	55.1	+28	24.8	50	17 08	17 42	18 20	12 52	66	5 54	41	
6	266	26.9	-14	42.4	131	22.9	+28	23.1	45	17 19	17 50	18 24	13 22	63	5 23	44	
7	281	26.9		41.6	145	50.8		21.3	40	28	17 57	29	13 45	61	5 00	45	
8	296	26.9		40.8	160	18.6		19.4	35	37	18 03	33	14 05	59	4 40	47	
9	311	26.8		40.0	174	46.5		17.3	30	44	08	37	21 58		4 23	49	
10	326	26.8		39.2	189	14.5		15.1	20	17 56	19	45	14 49	55	3 55	50	
11	341	26.8	-14	38.4	203	42.5	+28	12.7	10 N	18 07	18 29	18 54	15 13	53	3 31	51	
12	356	26.8	-14	37.6	218	10.6	+28	10.2	0	18 18	18 39	19 04	15 35	52	3 08	53	
13	11	26.8		36.8	232	38.6		07.5	10 S	28	18 50	15	15 58	49	2 45	54	
14	26	26.8		36.0	247	06.8		04.7	20	40	19 03	30	16 22	47	2 21	55	
15	41	26.7		35.2	261	35.0	+28	01.8	30	18 53	18	19 48	16 49	45	1 52	57	
16	56	26.7		34.4	276	03.2	+27	58.7	35	19 00	27	20 00	17 06	43		35 58	
17	71	26.7	-14	33.6	290	31.5	+27	55.5	40	19 09	19 38	20 14	17 25	41	1 15	59	
18	86	26.7	-14	32.8	304	59.8	+27	52.1	45	19 19	19 51	20 31	17 48	39	0 51	60	
19	101	26.7		32.0	319	28.2		48.6	50	32	20 08	20 54	18 18	34		20 62	
20	116	26.7		31.2	333	56.7		45.0	52	38	16	21 06		32 33	0 04	64	
21	131	26.7		30.4	348	25.2		41.2	54	44	25	19	18 49	30	** ** *	**	
22	146	26.7		29.5	2	53.7		37.3	56	51	35	35	19 09	27	** ** *	**	
23	161	26.6		28.7	17	22.3		33.2	58	19 59	20 47	21 54	19 35	20	** ** *	**	
24	176	26.6	-14	27.9	31	51.0	+27	29.0	60 S	20 09	21 01	22 19	20 09	11	23 32	94	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 14 ^h 41 ^m 8		Mag: -4.8 PMG: 9 ^h 52 ^m		Mag: +0.4 PMG: 18 ^h 14 ^m		Mag: -2.1 PMG: 5 ^h 47 ^m		Mag: -0.2 PMG: 23 ^h 18 ^m									
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	138	56.8	211	46.1	-15	44.1	86	03.0	+20	55.6	273	04.4	-16	03.0	9	28.5	+19	13.8
1	153	59.3	226	47.9		44.2	101	04.2		55.9	288	06.7		03.0	24	31.2		13.9
2	169	01.7	241	49.8		44.3	116	05.5		56.1	303	09.0		03.1	39	33.9		14.0
3	184	04.2	256	51.7		44.4	131	06.7		56.4	318	11.3		03.1	54	36.5		14.0
4	199	06.7	271	53.6		44.6	146	08.0		56.7	333	13.6		03.2	69	39.2		14.1
5	214	09.1	286	55.5	-15	44.7	161	09.2	+20	57.0	348	15.8	-16	03.2	84	41.9	+19	14.1
6	229	11.6	301	57.3	-15	44.8	176	10.5	+20	57.3	3	18.1	-16	03.3	99	44.5	+19	14.2
7	244	14.1	316	59.2		44.9	191	11.7		57.6	18	20.4		03.3	114	47.2		14.2
8	259	16.5	332	01.1		45.1	206	13.0		57.8	33	22.7		03.3	129	49.8		14.3
9	274	19.0	347	02.9		45.2	221	14.2		58.1	48	25.0		03.4	144	52.5		14.3
10	289	21.5	2	04.8		45.3	236	15.5		58.4	63	27.3		03.4	159	55.2		14.4
11	304	23.9	17	06.6	-15	45.4	251	16.7	+20	58.7	78	29.6	-16	03.5	174	57.8	+19	14.4
12	319	26.4	32	08.5	-15	45.6	266	17.9	+20	59.0	93	31.8	-16	03.5	190	00.5	+19	14.5
13	334	28.9	47	10.3		45.7	281	19.2		59.3	108	34.1		03.5	205	03.2		14.5
14	349	31.3	62	12.2		45.8	296	20.4		59.5	123	36.4		03.6	220	05.8		14.6
15	4	33.8	77	14.0		45.9	311	21.7	+20	59.8	138	38.7		03.6	235	08.5		14.6
16	19	36.2	92	15.8		46.0	326	22.9	+21	00.1	153	41.0		03.7	250	11.2		14.7
17	34	38.7	107	17.7	-15	46.2	341	24.2	+21	00.4	168	43.3	-16	03.7	265	13.8	+19	14.7
18	49	41.2	122	19.5	-15	46.3	356	25.4	+21	00.7	183	45.6	-16	03.8	280	16.5	+19	14.8
19	64	43.6	137	21.3		46.4	11	26.6		01.0	198	47.8		03.8	295	19.1		14.9
20	79	46.1	152	23.1		46.5	26	27.9		01.2	213	50.1		03.8	310	21.8		14.9
21	94	48.6	167	25.0		46.7	41	29.1		01.5	228	52.4		03.9	325	24.5		15.0
22	109	51.0	182	26.8		46.8	56	30.3		01.8	243	54.7		03.9	340	27.1		15.0
23	124	53.5	197	28.6		46.9	71	31.6		02.1	258	57.0		04.0	355	29.8		15.1
24	139	56.0	212	30.4	-15	47.0	86	32.8	+21	02.4	273	59.3	-16	04.0	10	32.5	+19	15.1
Dif	—		+18		-1		+12		+3		+23		0		+27		+	

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: 11 ^d 4 PHE { SD: 14'9 PMG: 22 ^h 39 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	Rº	Hora	Rº
h	°	'	°	°	'	°	°	h	m	h	m	h	m	h	m
0	176	26.6	-14	27.9	31	51.0	+27	29.0	60 N	6 18	7 07	7 52	12 22	95	8 13 7
1	191	26.6		27.1	46	19.7	97	24.7	58	15	7 02	44	12 50	86	7 44 15
2	206	26.6		26.3	60	48.5	98	20.3	56	13	6 57	37	13 12	81	22 21
3	221	26.6		25.5	75	17.4	99	15.7	54	11	53	31	30	76	7 04 28
4	236	26.6		24.7	89	46.3	99	11.0	52	10	49	25	45	73	6 48 28
5	251	26.6	-14	23.9	104	15.3	100	+27	50	6 08	6 46	7 20	13 58	71	6 35 30
6	266	26.6	-14	23.1	118	44.3	100	+27	45	6 03	6 38	7 09	14 25	66	6 07 34
7	281	26.6		22.3	133	13.4	101	+26	40	5 59	31	6 59	14 46	63	5 45 38
8	296	26.6		21.4	147	42.5	101	50.8	35	55	25	51	15 04	60	27 40
9	311	26.5		20.6	162	11.8	103	45.4	30	51	20	44	19 58	57	5 12 41
10	326	26.5		19.8	176	41.1	103	39.9	20	43	6 09	32	15 44	55	4 45 45
11	341	26.5	-14	19.0	191	10.4	103	+26	10 N	5 34	5 59	6 21	16 06	52	4 22 48
12	356	26.5	-14	18.2	205	39.9	105	+26	0	5 25	5 49	6 11	16 27	48	4 01 50
13	11	26.5		17.4	220	09.4	105	22.7	10 S	5 13	39	6 00	16 47	46	3 39 52
14	26	26.5		16.6	234	38.9	105	16.7	20	4 59	26	5 49	17 09	42	3 16 55
15	41	26.5		15.7	249	08.6	107	10.6	30	41	11	36	34	39	2 49 58
16	56	26.5		14.9	263	38.3	107	+26	35	29	5 02	29	17 49	36	33 60
17	71	26.5	-14	14.1	278	08.1	108	+25	40	4 15	4 51	5 20	18 06	34	2 14 62
18	86	26.5	-14	13.3	292	37.9	108	+25	45	3 58	4 38	5 10	18 27	30	1 51 65
19	101	26.5		12.5	307	07.8	109	45.0	50	35	21	4 57	18 52	26	22 70
20	116	26.5		11.7	321	37.8	110	38.3	52	24	13	52	19 05	23	1 08 72
21	131	26.5		10.9	336	07.9	111	31.4	54	3 10	4 04	45	19 20	20	0 51 75
22	146	26.5		10.0	350	38.0	111	24.5	56	2 54	3 54	38	36	16	31 79
23	161	26.5		09.2	5	08.2	112	17.4	58	35	42	30	19 55	11	0 06 84
24	176	26.5	-14	08.4	19	38.5	113	+25	60 S	2 10	3 29	4 21	20 20	3	** ** *

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG 14 ^h 37 ^m 9		Mag: -4.8 PMG: 9 ^h 49 ^m		Mag: +0.4 PMG: 18 ^h 12 ^m		Mag: -2.1 PMG: 5 ^h 43 ^m		Mag: -0.2 PMG: 23 ^h 14 ^m									
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	°	°	'	°	°	°	'								
0	139	56.0	212	30.4	-15	47.0	86	32.8	+21	02.4	273	59.3	-16	04.0	10	32.5	+19	15.1
1	154	58.4	227	32.2		47.2	101	34.1		02.7	289	01.6		04.0	25	35.1		15.2
2	170	00.9	242	34.0		47.3	116	35.3		02.9	304	03.9		04.1	40	37.8		15.2
3	185	03.3	257	35.8		47.4	131	36.5		03.2	319	06.2		04.1	55	40.5		15.3
4	200	05.8	272	37.5		47.5	146	37.8		03.5	334	08.5		04.2	70	43.1		15.4
5	215	08.3	287	39.3	-15	47.7	161	39.0	+21	03.8	349	10.7	-16	04.2	85	45.8	+19	15.4
6	230	10.7	302	41.1	-15	47.8	176	40.2	+21	04.1	4	13.0	-16	04.2	100	48.4	+19	15.4
7	245	13.2	317	42.9		47.9	191	41.5		04.3	19	15.3		04.3	115	51.1		15.5
8	260	15.7	332	44.7		48.0	206	42.7		04.6	34	17.6		04.3	130	53.8		15.5
9	275	18.1	347	46.4		48.2	221	43.9		04.9	49	19.9		04.4	145	56.4		15.6
10	290	20.6	2	48.2		48.3	236	45.2		05.2	64	22.2		04.4	160	59.1		15.6
11	305	23.1	17	50.0	-15	48.4	251	46.4	+21	05.5	79	24.5	-16	04.4	176	01.8	+19	15.7
12	320	25.5	32	51.7	-15	48.5	266	47.6	+21	05.8	94	26.8	-16	04.5	191	04.4	+19	15.7
13	335	28.0	47	53.5		48.6	281	48.9		06.0	109	29.1		04.5	206	07.1		15.8
14	350	30.5	62	55.2		48.8	296	50.1		06.3	124	31.4		04.6	221	09.7		15.8
15	5	32.9	77	57.0		48.9	311	51.3		06.6	139	33.7		04.6	236	12.4		15.9
16	20	35.4	92	58.7		49.0	326	52.6		06.9	154	36.0		04.6	251	15.1		16.0
17	35	37.8	108	00.4	-15	49.1	341	53.8	+21	07.2	169	38.3	-16	04.7	266	17.7	+19	16.0
18	50	40.3	123	02.2	-15	49.3	356	55.0	+21	07.4	184	40.6	-16	04.7	281	20.4	+19	16.1
19	65	42.8	138	03.9		49.4	11	56.3		07.7	199	42.8		04.8	296	23.1		16.1
20	80	45.2	153	05.6		49.5	26	57.5		08.0	214	45.1		04.8	311	25.7		16.2
21	95	47.7	168	07.4		49.6	41	58.7		08.3	229	47.4		04.8	326	28.4		16.2
22	110	50.2	183	09.1		49.8	56	59.9		08.6	244	49.7		04.9	341	31.0		16.3
23	125	52.6	198	10.8		49.9	72	01.2		08.8	259	52.0		04.9	356	33.7		16.3
24	140	55.1	213	12.5	-15	50.0	87	02.4	+21	09.1	274	54.3	-16	05.0	11	36.4	+19	16.4
Dif	—		+18		-1		+12		+3		+23		0		+27		+	

UT	SOL				LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna						
	SD: 16:2 PMG: 12 ^h 14 ^m 2				Edad: 12 ^d 4 PHE { 4 ^h : 54:3 12 ^h : 54:2 20 ^h : 54:2 R°: 45 ^m																
	hG ☉		Dec		hG ☾		Dif				Dec		Dif		Civil		Náutico		Hora R°		Hora R°
h	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	h	m	
0	176	26.5	-14	08.4	19	38.5	+25	10.2	60 N	16 40	17 25	18 14	13 57	92	8 20	2					
1	191	26.5		07.6	34	08.9 ¹¹⁴	+25	03.0	58	48	30	16	14 16	87	7 59	9					
2	206	26.5		06.8	48	39.3 ¹¹⁴	+24	55.6	56	16 55	34	18	33 81		43	12					
3	221	26.5		05.9	63	09.8 ¹¹⁵		48.0	54	17 01	38	20	46 78		28	17					
4	236	26.5		05.1	77	40.4 ¹¹⁶		40.4	52	06	42	21	14 58	75	16	19					
5	251	26.5	-14	04.3	92	11.1 ¹¹⁷	+24	32.7	50	17 11	17 45	18 23	15 09	72	7 05	22					
6	266	26.5	-14	03.5	106	41.8 ¹¹⁷	+24	24.8	45	17 22	17 52	18 27	15 31	67	6 41	27					
7	281	26.4		02.7	121	12.6 ¹¹⁸		16.9	40	31	17 59	31	15 49	63	23	30					
8	296	26.4		01.8	135	43.5 ¹¹⁹		08.8	35	39	18 05	35	16 04	60	6 07	34					
9	311	26.4		01.0	150	14.5 ¹²⁰	+24	00.7	30	45	10	38	17 57		5 53	36					
10	326	26.4	-14	00.2	164	45.5 ¹²⁰	+23	52.4	20	17 57	20	46	39 52		30	40					
11	341	26.4	-13	59.4	179	16.6 ¹²¹	+23	44.0	10 N	18 08	18 29	18 54	16 58	48	5 10	43					
12	356	26.5	-13	58.5	193	47.8 ¹²²	+23	35.5	0	18 18	18 39	19 04	17 15	45	4 51	46					
13	11	26.5		57.7	208	19.1 ¹²³		27.0	10 S	28	18 49	15	33 42		31	51					
14	26	26.5		56.9	222	50.4 ¹²³		18.3	20	39	19 01	28	17 51	38	4 11	53					
15	41	26.5		56.1	237	21.8 ¹²⁴		09.5	30	51	16	46	18 13	33	3 47	58					
16	56	26.5		55.2	251	53.3 ¹²⁵	+23	00.6	35	18 58	25	19 57	25 31		33	60					
17	71	26.5	-13	54.4	266	24.9 ¹²⁶	+22	51.6	40	19 07	19 36	20 11	18 40	28	3 16	64					
18	86	26.5	-13	53.6	280	56.6 ¹²⁷	+22	42.6	45	19 16	19 48	20 28	18 57	24	2 56	68					
19	101	26.5		52.8	295	28.3 ¹²⁷		33.4	50	28	20 04	20 50	19 18	19	32	72					
20	116	26.5		51.9	310	00.1 ¹²⁸		24.1	52	34	12	21 00	28 16		20	74					
21	131	26.5		51.1	324	32.0 ¹²⁹		14.8	93	54	40	20 13	39 13		2 06	78					
22	146	26.5		50.3	339	03.9 ¹²⁹	+22	05.3	95	56	47	30 28	19 52	10	1 50	82					
23	161	26.5		49.5	353	35.9 ¹³⁰	+21	55.8	95	58	19 54	41 21	20 06	6	30	88					
24	176	26.5	-13	48.6	8	08.0 ¹³¹	+21	46.1	97	60 S	20 03	20 54	22 09	20 23	1	1 06	95				

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 14 ^h 33 ^m 9		Mag: -4.9 PMG: 9 ^h 46 ^m		Mag: +0.4 PMG: 18 ^h 10 ^m		Mag: -2.1 PMG: 5 ^h 40 ^m		Mag: -0.2 PMG: 23 ^h 09 ^m									
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♎									
h	°	'	°	'	°	'	°	'	°	'								
0	140	55.1	213	12.5	-15	50.0	87	02.4	+21	09.1	274	54.3	-16	05.0	11	36.4	+19	16.4
1	155	57.6	228	14.2		50.1	102	03.6		09.4	289	56.6		05.0	26	39.0		16.4
2	171	00.0	243	15.9		50.3	117	04.9		09.7	304	58.9		05.0	41	41.7		16.5
3	186	02.5	258	17.6		50.4	132	06.1		10.0	320	01.2		05.1	56	44.3		16.5
4	201	05.0	273	19.3		50.5	147	07.3		10.2	335	03.5		05.1	71	47.0		16.6
5	216	07.4	288	21.0	-15	50.6	162	08.5	+21	10.5	350	05.8	-16	05.2	86	49.7	+19	16.6
6	231	09.9	303	22.7	-15	50.7	177	09.8	+21	10.8	5	08.1	-16	05.2	101	52.3	+19	16.7
7	246	12.3	318	24.4		50.9	192	11.0		11.1	20	10.4		05.2	116	55.0		16.7
8	261	14.8	333	26.1		51.0	207	12.2		11.4	35	12.7		05.3	131	57.7		16.8
9	276	17.3	348	27.8		51.1	222	13.4		11.6	50	15.0		05.3	147	00.3		16.8
10	291	19.7	3	29.4		51.2	237	14.7		11.9	65	17.3		05.3	162	03.0		16.9
11	306	22.2	18	31.1	-15	51.4	252	15.9	+21	12.2	80	19.6	-16	05.4	177	05.6	+19	16.9
12	321	24.7	33	32.8	-15	51.5	267	17.1	+21	12.5	95	21.9	-16	05.4	192	08.3	+19	17.0
13	336	27.1	48	34.5		51.6	282	18.3		12.8	110	24.2		05.5	207	11.0		17.0
14	351	29.6	63	36.1		51.7	297	19.5		13.0	125	26.5		05.5	222	13.6		17.1
15	6	32.1	78	37.8		51.9	312	20.8		13.3	140	28.8		05.5	237	16.3		17.1
16	21	34.5	93	39.4		52.0	327	22.0		13.6	155	31.1		05.6	252	18.9		17.2
17	36	37.0	108	41.1	-15	52.1	342	23.2	+21	13.9	170	33.4	-16	05.6	267	21.6	+19	17.3
18	51	39.5	123	42.7	-15	52.2	357	24.4	+21	14.2	185	35.7	-16	05.7	282	24.3	+19	17.3
19	66	41.9	138	44.4		52.3	12	25.7		14.4	200	38.0		05.7	297	26.9		17.4
20	81	44.4	153	46.0		52.5	27	26.9		14.7	215	40.3		05.7	312	29.6		17.4
21	96	46.8	168	47.7		52.6	42	28.1		15.0	230	42.6		05.8	327	32.2		17.5
22	111	49.3	183	49.3		52.7	57	29.3		15.3	245	44.9		05.8	342	34.9		17.5
23	126	51.8	198	50.9		52.8	72	30.5		15.6	260	47.2		05.8	357	37.6		17.6
24	141	54.2	213	52.5	-15	53.0	87	31.7	+21	15.8	275	49.5	-16	05.9	12	40.2	+19	17.6
Dif	—		+17		-1		+12		+3		+23		0		+27		+1	

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'2 PMG: 12 ^h 14 ^m 2			Edad: 13 ^d 4 PHE { SD: 14'7 PMG: *** **m											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	Rº	Hora	Rº
h	°	'	°	°	'	°	°	h	m	h	m	h	m	h	m
0	176	26.5	-13 48.6	8	08.0	+21 46.1	60 N	6 13	7 02	7 47	15 29	88	8 22	0	
1	191	26.5	47.8	22	40.2 ¹³²	36.4 ⁹⁷	58	11	6 57	39	43	83	8 08	4	
2	206	26.5	47.0	37	12.5 ¹³³	26.6 ⁹⁸	56	10	53	32	15 54	80	7 55	9	
3	221	26.5	46.1	51	44.8 ¹³³	16.7 ⁹⁹	54	08	49	27	16 04	77	45	1	
4	236	26.5	45.3	66	17.2 ¹³⁴	+21 06.7 ¹⁰⁰	52	06	46	21	13	74	35	14	
5	251	26.5	-13 44.5	80	49.7 ¹³⁵	+20 56.6 ¹⁰¹	50	6 05	6 43	7 16	16 21	71	7 27	16	
6	266	26.5	-13 43.7	95	22.2 ¹³⁵	+20 46.5 ¹⁰¹	45	6 01	6 35	7 06	16 38	66	7 08	22	
7	281	26.5	42.8	109	54.8 ¹³⁶	36.2 ¹⁰³	40	5 57	29	6 57	16 52	62	6 53	26	
8	296	26.5	42.0	124	27.5 ¹³⁷	25.9 ¹⁰³	35	54	23	49	17 04	58	41	28	
9	311	26.5	41.2	139	00.3 ¹³⁸	15.5 ¹⁰⁴	30	50	18	43	14	55	29	32	
10	326	26.6	40.3	153	33.1 ¹³⁸	+20 05.0 ¹⁰⁵	20	42	6 08	31	31	51	6 10	36	
11	341	26.6	-13 39.5	168	06.1 ¹⁴⁰	+19 54.4 ¹⁰⁶	10 N	5 34	5 59	6 21	17 46	47	5 53	40	
12	356	26.6	-13 38.7	182	39.0 ¹³⁹	+19 43.7 ¹⁰⁷	0	5 25	5 50	6 11	18 00	43	5 37	44	
13	11	26.6	37.8	197	12.1 ¹⁴¹	33.0 ¹⁰⁷	10 S	14	39	6 01	15	38	22	47	
14	26	26.6	37.0	211	45.2 ¹⁴¹	22.2 ¹⁰⁸	20	5 00	27	5 50	29	35	5 04	52	
15	41	26.6	36.2	226	18.4 ¹⁴²	11.3 ¹⁰⁹	30	4 43	13	38	46	30	4 45	56	
16	56	26.6	35.3	240	51.7 ¹⁴³	+19 00.4 ¹⁰⁹	35	32	5 04	31	18 56	27	33	59	
17	71	26.6	-13 34.5	255	25.0 ¹⁴³	+18 49.3 ¹¹¹	40	4 18	4 53	5 22	19 08	23	4 20	62	
18	86	26.6	-13 33.7	269	58.4 ¹⁴⁴	+18 38.2 ¹¹¹	45	4 01	4 41	5 13	19 21	19	4 04	66	
19	101	26.6	32.8	284	31.9 ¹⁴⁵	27.0 ¹¹²	50	3 40	25	5 01	37	14	3 44	72	
20	116	26.7	32.0	299	05.4 ¹⁴⁵	15.8 ¹¹²	52	29	17	4 55	44	13	34	75	
21	131	26.7	31.2	313	39.0 ¹⁴⁶	+18 04.4 ¹¹⁴	54	16	4 09	49	19 52	10	24	77	
22	146	26.7	30.3	328	12.7 ¹⁴⁷	+17 53.0 ¹¹⁴	56	3 01	3 59	43	20 02	6	3 12	81	
23	161	26.7	29.5	342	46.4 ¹⁴⁷	41.6 ¹¹⁴	58	2 43	48	35	12	3	2 58	85	
24	176	26.7	-13 28.6	357	20.2 ¹⁴⁸	+17 30.0 ¹¹⁶	60 S	2 20	3 35	4 26	20 24	**	2 41	91	
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO		
	PMG 14 ^h 30 ^m 0			Mag: -4.9 PMG: 9 ^h 43 ^m			Mag: +0.4 PMG: 18 ^h 08 ^m			Mag: -2.1 PMG: 5 ^h 36 ^m			Mag: -0.2 PMG: 23 ^h 05 ^m		
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°
0	141	54.2	213 52.5	-15 53.0	87 31.7	+21 15.8	275 49.5	-16 05.9	12 40.2	+19 17.6					
1	156	56.7	228 54.2	53.1	102 33.0	16.1	290 51.8	05.9	27 42.9	17.7					
2	171	59.2	243 55.8	53.2	117 34.2	16.4	305 54.1	05.9	42 45.5	17.7					
3	187	01.6	258 57.4	53.3	132 35.4	16.7	320 56.4	06.0	57 48.2	17.8					
4	202	04.1	273 59.0	53.4	147 36.6	16.9	335 58.7	06.0	72 50.9	17.8					
5	217	06.6	289 00.6	-15 53.6	162 37.8	+21 17.2	351 01.0	-16 06.1	87 53.5	+19 17.9					
6	232	09.0	304 02.2	-15 53.7	177 39.0	+21 17.5	6 03.4	-16 06.1	102 56.2	+19 17.9					
7	247	11.5	319 03.8	53.8	192 40.3	17.8	21 05.7	06.1	117 58.8	18.0					
8	262	13.9	334 05.4	53.9	207 41.5	18.1	36 08.0	06.2	133 01.5	18.0					
9	277	16.4	349 07.0	54.1	222 42.7	18.3	51 10.3	06.2	148 04.2	18.1					
10	292	18.9	4 08.6	54.2	237 43.9	18.6	66 12.6	06.2	163 06.8	18.1					
11	307	21.3	19 10.2	-15 54.3	252 45.1	+21 18.9	81 14.9	-16 06.3	178 09.5	+19 18.2					
12	322	23.8	34 11.8	-15 54.4	267 46.3	+21 19.2	96 17.2	-16 06.3	193 12.1	+19 18.2					
13	337	26.3	49 13.4	54.5	282 47.5	19.4	111 19.5	06.3	208 14.8	18.3					
14	352	28.7	64 14.9	54.7	297 48.8	19.7	126 21.8	06.4	223 17.4	18.3					
15	7	31.2	79 16.5	54.8	312 50.0	20.0	141 24.1	06.4	238 20.1	18.4					
16	22	33.7	94 18.1	54.9	327 51.2	20.3	156 26.4	06.5	253 22.8	18.4					
17	37	36.1	109 19.6	-15 55.0	342 52.4	+21 20.6	171 28.7	-16 06.5	268 25.4	+19 18.5					
18	52	38.6	124 21.2	-15 55.1	357 53.6	+21 20.8	186 31.0	-16 06.5	283 28.1	+19 18.5					
19	67	41.1	139 22.8	55.3	12 54.8	21.1	201 33.3	06.6	298 30.7	18.6					
20	82	43.5	154 24.3	55.4	27 56.0	21.4	216 35.7	06.6	313 33.4	18.6					
21	97	46.0	169 25.9	55.5	42 57.2	21.7	231 38.0	06.6	328 36.1	18.7					
22	112	48.4	184 27.4	55.6	57 58.4	21.9	246 40.3	06.7	343 38.7	18.7					
23	127	50.9	199 29.0	55.7	72 59.6	22.2	261 42.6	06.7	358 41.4	18.8					
24	142	53.4	214 30.5	-15 55.9	88 00.8	+21 22.5	276 44.9	-16 06.7	13 44.0	+19 18.8					
Dif	—		+16	-1	+12	+3	+23	0	+27	+					

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna		
	SD: 16 ^h 2 PMG: 12 ^h 14 ^m 2			Edad: 14 ^d 4 PHE { 4 ^h : 54 ⁰ SD: 14 ^h 7 12 ^h : 54 ⁰ PMG: 0 ^h 11 ^m R°: 42 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m	h m	h m	h m	h m
0	176	26.7	-13	28.6	357	20.2	+17	30.0	60 N	16 45	17 30	18 19	16 57	85	8 22	**
1	191	26.7		27.8	11	54.1 ¹⁴⁹		18.4 ¹¹⁶	58	53	34	20	17 06	81	12	3
2	206	26.7		27.0	26	28.0 ¹⁴⁹	+17	06.8 ¹¹⁶	56	16 59	38	22	14 77		8 04	6
3	221	26.7		26.1	41	02.0 ¹⁵⁰	+16	55.0 ¹¹⁸	54	17 05	42	23	21 74		7 56	9
4	236	26.8		25.3	55	36.1 ¹⁵¹		43.2 ¹¹⁸	52	10	45	25	27 71		49	12
5	251	26.8	-13	24.5	70	10.2 ¹⁵¹	+16	31.4 ¹¹⁸	50	17 15	17 48	18 26	17 32	70	7 43	14
6	266	26.8	-13	23.6	84	44.4 ¹⁵²	+16	19.4 ¹²⁰	45	17 25	17 55	18 30	17 44	65	7 30	18
7	281	26.8		22.8	99	18.6 ¹⁵²	+16	07.5 ¹¹⁹	40	33	18 01	33	17 54	60	19	22
8	296	26.8		21.9	113	52.9 ¹⁵³	+15	55.4 ¹²¹	35	41	07	36	18 02	57	09	25
9	311	26.8		21.1	128	27.3 ¹⁵⁴		43.3 ¹²¹	30	47	12	40	09 54		7 01	28
10	326	26.8		20.3	143	01.7 ¹⁵⁴		31.1 ¹²²	20	17 58	21	47	22 49		6 46	33
11	341	26.9	-13	19.4	157	36.1 ¹⁵⁴	+15	18.9 ¹²²	10 N	18 08	18 30	18 55	18 33	44	6 33	38
12	356	26.9	-13	18.6	172	10.7 ¹⁵⁶	+15	06.6 ¹²³	0	18 18	18 39	19 04	18 43	40	6 21	42
13	11	26.9		17.7	186	45.3 ¹⁵⁶	+14	54.3 ¹²³	10 S	27	18 49	14	18 53	36	6 09	45
14	26	26.9		16.9	201	19.9 ¹⁵⁶		41.9 ¹²⁴	20	37	19 00	27	19 04	32	5 56	50
15	41	26.9		16.0	215	54.6 ¹⁵⁷		29.4 ¹²⁵	30	49	14	44	16 27		41	55
16	56	26.9		15.2	230	29.4 ¹⁵⁸		16.9 ¹²⁵	35	18 56	23	19 55	23 24		32	58
17	71	27.0	-13	14.4	245	04.2 ¹⁵⁸	+14	04.4 ¹²⁵	40	19 04	19 33	20 08	19 31	21	5 22	61
18	86	27.0	-13	13.5	259	39.0 ¹⁵⁸	+13	51.8 ¹²⁶	45	19 13	19 45	20 24	19 40	17	5 10	65
19	101	27.0		12.7	274	13.9 ¹⁵⁹		39.1 ¹²⁷	50	25	20 00	45	51 13		4 56	70
20	116	27.0		11.8	288	48.9 ¹⁶⁰		26.4 ¹²⁷	52	30	07	20 55	19 57	10	49	73
21	131	27.0		11.0	303	23.9 ¹⁶⁰		13.7 ¹²⁷	54	36	16	21 07	20 02	8	41	76
22	146	27.1		10.1	317	59.0 ¹⁶¹	+13	00.9 ¹²⁸	56	42	25	21	08 6		33	78
23	161	27.1		09.3	332	34.1 ¹⁶¹	+12	48.0 ¹²⁹	58	49	35	21 38	15 3		23	82
24	176	27.1	-13	08.4	347	09.2 ¹⁶¹	+12	35.1 ¹²⁹	60 S	19 58	20 48	22 00	20 23	**	4 12	86

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 14 ^h 26 ^m 1		Mag: -4.9 PMG: 9 ^h 41 ^m		Mag: +0.5 PMG: 18 ^h 06 ^m		Mag: -2.1 PMG: 5 ^h 32 ^m		Mag: -0.2 PMG: 23 ^h 01 ^m									
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	142	53.4	214	30.5	-15	55.9	88	00.8	+21	22.5	276	44.9	-16	06.7	13	44.0	+19	18.8
1	157	55.8	229	32.1		56.0	103	02.1		22.8	291	47.2		06.8	28	46.7		18.9
2	172	58.3	244	33.6		56.1	118	03.3		23.0	306	49.5		06.8	43	49.3		18.9
3	188	00.8	259	35.1		56.2	133	04.5		23.3	321	51.8		06.8	58	52.0		19.0
4	203	03.2	274	36.7		56.3	148	05.7		23.6	336	54.1		06.9	73	54.7		19.0
5	218	05.7	289	38.2	-15	56.5	163	06.9	+21	23.9	351	56.5	-16	06.9	88	57.3	+19	19.1
6	233	08.2	304	39.7	-15	56.6	178	08.1	+21	24.2	6	58.8	-16	06.9	104	00.0	+19	19.1
7	248	10.6	319	41.2		56.7	193	09.3		24.4	22	01.1		07.0	119	02.6		19.2
8	263	13.1	334	42.7		56.8	208	10.5		24.7	37	03.4		07.0	134	05.3		19.2
9	278	15.6	349	44.2		56.9	223	11.7		25.0	52	05.7		07.0	149	08.0		19.3
10	293	18.0	4	45.7		57.0	238	12.9		25.3	67	08.0		07.1	164	10.6		19.3
11	308	20.5	19	47.3	-15	57.2	253	14.1	+21	25.5	82	10.3	-16	07.1	179	13.3	+19	19.4
12	323	22.9	34	48.8	-15	57.3	268	15.3	+21	25.8	97	12.6	-16	07.1	194	15.9	+19	19.4
13	338	25.4	49	50.3		57.4	283	16.5		26.1	112	15.0		07.2	209	18.6		19.5
14	353	27.9	64	51.7		57.5	298	17.7		26.4	127	17.3		07.2	224	21.2		19.5
15	8	30.3	79	53.2		57.6	313	18.9		26.6	142	19.6		07.3	239	23.9		19.6
16	23	32.8	94	54.7		57.8	328	20.1		26.9	157	21.9		07.3	254	26.6		19.7
17	38	35.3	109	56.2	-15	57.9	343	21.3	+21	27.2	172	24.2	-16	07.3	269	29.2	+19	19.7
18	53	37.7	124	57.7	-15	58.0	358	22.5	+21	27.5	187	26.5	-16	07.4	284	31.9	+19	19.8
19	68	40.2	139	59.2		58.1	13	23.7		27.7	202	28.9		07.4	299	34.5		19.8
20	83	42.7	155	00.6		58.2	28	24.9		28.0	217	31.2		07.4	314	37.2		19.9
21	98	45.1	170	02.1		58.3	43	26.1		28.3	232	33.5		07.5	329	39.8		19.9
22	113	47.6	185	03.6		58.5	58	27.3		28.6	247	35.8		07.5	344	42.5		20.0
23	128	50.0	200	05.0		58.6	73	28.5		28.8	262	38.1		07.5	359	45.1		20.0
24	143	52.5	215	06.5	-15	58.7	88	29.7	+21	29.1	277	40.4	-16	07.5	14	47.8	+19	20.1
Dif	—		+15		-1		+12		+3		+23		0		+27		+	

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: 15 ^d 4 PHE { 4 ^h : 54'0 12 ^h : 54'0 20 ^h : 54'0 SD: 14'7 PMG: 0 ^h 53 ^m R°: 40 ^m															
	hG ☉		Dec		hG ☾		Dif		Dec			Dif			Náutico	Civil	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	'	°	'	°	'	h m	h m	h m	m	m	m	m	
0	176	27.1	-13	08.4	347	09.2	+12	35.1	129	58	60 N	6 08	6 57	7 41	18 22	82	8 21	**		
1	191	27.1		07.6	1	44.4	162	22.2	129	58		07	53	34	27	79	15	2		
2	206	27.1		06.7	16	19.7	163	+12	09.2	130	56	05	49	28	31	76	10	5		
3	221	27.2		05.9	30	55.0	163	+11	56.1	131	54	04	46	22	35	73	05			
4	236	27.2		05.0	45	30.3	163		43.1	130	52	03	42	17	38	71	8 01	9		
5	251	27.2	-13	04.2	60	05.7	164	+11	29.9	132	50	6 01	6 39	7 13	18 42	68	7 57	11		
6	266	27.2	-13	03.4	74	41.1	164	+11	16.8	131	45	5 58	6 33	7 03	18 49	63	7 48	16		
7	281	27.3		02.5	89	16.6	165	+11	03.6	132	40	55	27	6 54	54	60	41	20		
8	296	27.3		01.7	103	52.1	165	+10	50.3	133	35	52	21	47	18 59	56	34	24		
9	311	27.3	-13	00.8	118	27.6	165		37.0	133	30	48	16	41	19 03	53	29	26		
10	326	27.3	-13	00.0	133	03.2	166		23.7	133	20	41	6 07	30	11	48	19	31		
11	341	27.3	-12	59.1	147	38.8	166	+10	10.4	133	10 N	5 34	5 59	6 20	19 17	44	7 11	35		
12	356	27.4	-12	58.3	162	14.5	167	+9	57.0	134	0	5 25	5 50	6 11	19 23	39	7 03	39		
13	11	27.4		57.4	176	50.2	167		43.5	135	10 S	14	40	6 01	29	35	6 54	44		
14	26	27.4		56.5	191	25.9	167		30.1	134	20	5 02	28	5 51	36	30	46	48		
15	41	27.4		55.7	206	01.7	168		16.6	135	30	4 45	14	39	43	26	36	53		
16	56	27.5		54.8	220	37.5	168	+9	03.0	136	35	34	5 06	33	47	23	30	56		
17	71	27.5	-12	54.0	235	13.3	168	+8	49.5	135	40	4 21	4 56	5 25	19 52	19	6 23	60		
18	86	27.5	-12	53.1	249	49.2	169	+8	35.9	136	45	4 05	4 44	5 16	19 57	16	6 15	64		
19	101	27.6		52.3	264	25.1	169		22.2	137	50	3 44	29	5 04	20 04	11	06	69		
20	116	27.6		51.4	279	01.0	169	+8	08.6	136	52	34	22	4 59	07	9	6 02	71		
21	131	27.6		50.6	293	37.0	170	+7	54.9	137	54	22	14	53	10	7	5 57	73		
22	146	27.6		49.7	308	12.9	169		41.2	137	56	3 08	4 04	47	14	4	51	77		
23	161	27.7		48.9	322	48.9	170		27.4	138	58	2 51	3 54	40	18	1	45	80		
24	176	27.7	-12	48.0	337	25.0	171	+7	13.6	138	60 S	2 30	3 42	4 32	20 22	**	5 38	84		

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO					
	PMG 14 ^h 22 ^m 1		Mag: -4.9 PMG: 9 ^h 39 ^m			Mag: +0.5 PMG: 18 ^h 05 ^m			Mag: -2.1 PMG: 5 ^h 28 ^m			Mag: -0.2 PMG: 22 ^h 57 ^m					
	hG ♈		hG ♀			hG ♂			hG ♃			hG ♄					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'			
0	143	52.5	215	06.5	-15	58.7	88	29.7	+21	29.1	277	40.4	-16	07.5			
1	158	55.0	230	08.0		58.8	103	30.9		29.4	292	42.8		07.6			
2	173	57.4	245	09.4		58.9	118	32.1		29.7	307	45.1		07.6			
3	188	59.9	260	10.9		59.0	133	33.3		29.9	322	47.4		07.6			
4	204	02.4	275	12.3		59.2	148	34.5		30.2	337	49.7		07.7			
5	219	04.8	290	13.8	-15	59.3	163	35.7	+21	30.5	352	52.0	-16	07.7			
6	234	07.3	305	15.2	-15	59.4	178	36.9	+21	30.7	7	54.4	-16	07.7			
7	249	09.8	320	16.6		59.5	193	38.1		31.0	22	56.7		07.8			
8	264	12.2	335	18.1		59.6	208	39.3		31.3	37	59.0		07.8			
9	279	14.7	350	19.5		59.7	223	40.5		31.6	53	01.3		07.8			
10	294	17.2	5	20.9	-15	59.8	238	41.7		31.8	68	03.6		07.9			
11	309	19.6	20	22.4	-16	00.0	253	42.9	+21	32.1	83	06.0	-16	07.9			
12	324	22.1	35	23.8	-16	00.1	268	44.1	+21	32.4	98	08.3	-16	07.9			
13	339	24.5	50	25.2		00.2	283	45.3		32.7	113	10.6		08.0			
14	354	27.0	65	26.6		00.3	298	46.5		32.9	128	12.9		08.0			
15	9	29.5	80	28.0		00.4	313	47.6		33.2	143	15.2		08.0			
16	24	31.9	95	29.4		00.5	328	48.8		33.5	158	17.6		08.1			
17	39	34.4	110	30.8	-16	00.6	343	50.0	+21	33.8	173	19.9	-16	08.1			
18	54	36.9	125	32.2	-16	00.8	358	51.2	+21	34.0	188	22.2	-16	08.1			
19	69	39.3	140	33.6		00.9	13	52.4		34.3	203	24.5		08.2			
20	84	41.8	155	35.0		01.0	28	53.6		34.6	218	26.9		08.2			
21	99	44.3	170	36.4		01.1	43	54.8		34.8	233	29.2		08.2			
22	114	46.7	185	37.8		01.2	58	56.0		35.1	248	31.5		08.2			
23	129	49.2	200	39.2		01.3	73	57.2		35.4	263	33.8		08.3			
24	144	51.6	215	40.6	-16	01.4	88	58.4	+21	35.7	278	36.2	-16	08.3			
Dif	—		+14			-1			+12			+23			0		
															+27		

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna					
	SD: 16 ^d 2 PMG: 12 ^h 14 ^m 1			Edad: 16 ^d 4 PHE { 4 ^h : 54 ^o 0 12 ^h : 54 ^o 1 20 ^h : 54 ^o 1 R ^o : 39 ^m															
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°				
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m					
0	176	27.7	-12 48.0	337	25.0	+7 13.6	170	60 N	16 51	17 35	18 23	19 44 82	8 20 **						
1	191	27.7		47.2	352	01.0	170	58	16 57	39	25	46 78	17 1						
2	206	27.7		46.3	6	37.1	171	56	17 03	42	26	47 75	15 4						
3	221	27.8		45.4	21	13.2	171	54	09	46	27	48 73	12						
4	236	27.8		44.6	35	49.4	172	52	14	49	28	49 70	10 9						
5	251	27.8	-12 43.7	50	25.5	171		50	17 18	17 51	18 29	19 50 68	8 08 11						
6	266	27.9	-12 42.9	65	01.7	172		45	17 28	17 58	18 32	19 52 63	8 04 15						
7	281	27.9		42.0	79	37.9	172	40	36	18 03	35	54 59	8 01 19						
8	296	27.9		41.2	94	14.1	172	35	42	08	38	55 56	7 58 22						
9	311	28.0		40.3	108	50.3	172	30	49	13	41	56 53	55 25						
10	326	28.0		39.4	123	26.5	172	20	17 59	22	48	19 59 47	50 31						
11	341	28.0	-12 38.6	138	02.8	173		10 N	18 09	18 30	18 55	20 01 43	7 46 35						
12	356	28.0	-12 37.7	152	39.1	173		0	18 18	18 39	19 03	20 02 39	7 42 39						
13	11	28.1		36.9	167	15.3	172	10 S	27	48	13	04 35	38 43						
14	26	28.1		36.0	181	51.6	173	20	36	18 59	26	06 31	34 48						
15	41	28.1		35.1	196	27.9	173	30	48	19 12	42	09 25	29 53						
16	56	28.2		34.3	211	04.3	174	35	18 54	21	19 52	10 22	26 56						
17	71	28.2	-12 33.4	225	40.6	173		40	19 02	19 30	20 05	20 11 19	7 23 59						
18	86	28.2	-12 32.6	240	16.9	173		45	19 10	19 42	20 20	20 13 15	7 19 64						
19	101	28.3		31.7	254	53.2	173	50	21	19 56	40	15 11	15 68						
20	116	28.3		30.8	269	29.6	174	52	26	20 03	20 50	16 9	13 70						
21	131	28.3		30.0	284	05.9	173	54	31	11	21 02	17 6	10 73						
22	146	28.4		29.1	298	42.3	174	56	37	20	15	18 4	08 75						
23	161	28.4		28.2	313	18.7	174	58	44	30	31	19 2	05 78						
24	176	28.5	-12 27.4	327	55.0	173		60 S	19 52	20 41	21 50	20 20 **	7 02 81						
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO							
	PMG 14 ^h 18 ^m 2		Mag: -4.9 PMG: 9 ^h 36 ^m			Mag: +0.5 PMG: 18 ^h 03 ^m			Mag: -2.1 PMG: 5 ^h 25 ^m			Mag: -0.1 PMG: 22 ^h 53 ^m							
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec						
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'					
0	144	51.6	215	40.6	-16	01.4	88	58.4	+21	35.7	278	36.2	-16	08.3	15	51.5	+19	21.3	
1	159	54.1	230	42.0		01.5	103	59.6		35.9	293	38.5		08.3	30	54.2		21.3	
2	174	56.6	245	43.3		01.7	119	00.7		36.2	308	40.8		08.4	45	56.8		21.4	
3	189	59.0	260	44.7		01.8	134	01.9		36.5	323	43.1		08.4	60	59.5		21.4	
4	205	01.5	275	46.1		01.9	149	03.1		36.7	338	45.5		08.4	76	02.1		21.5	
5	220	04.0	290	47.4	-16	02.0	164	04.3	+21	37.0	353	47.8	-16	08.5	91	04.8	+19	21.5	
6	235	06.4	305	48.8	-16	02.1	179	05.5	+21	37.3	8	50.1	-16	08.5	106	07.5	+19	21.5	
7	250	08.9	320	50.2		02.2	194	06.7		37.6	23	52.4		08.5	121	10.1		21.6	
8	265	11.4	335	51.5		02.3	209	07.9		37.8	38	54.8		08.6	136	12.8		21.6	
9	280	13.8	350	52.9		02.4	224	09.0		38.1	53	57.1		08.6	151	15.4		21.7	
10	295	16.3	5	54.2		02.5	239	10.2		38.4	68	59.4		08.6	166	18.1		21.7	
11	310	18.8	20	55.6	-16	02.6	254	11.4	+21	38.6	84	01.8	-16	08.6	181	20.7	+19	21.8	
12	325	21.2	35	56.9	-16	02.8	269	12.6	+21	38.9	99	04.1	-16	08.7	196	23.4	+19	21.8	
13	340	23.7	50	58.2		02.9	284	13.8		39.2	114	06.4		08.7	211	26.0		21.9	
14	355	26.1	65	59.6		03.0	299	15.0		39.5	129	08.7		08.7	226	28.7		21.9	
15	10	28.6	81	00.9		03.1	314	16.2		39.7	144	11.1		08.8	241	31.3		22.0	
16	25	31.1	96	02.3		03.2	329	17.3		40.0	159	13.4		08.8	256	34.0		22.0	
17	40	33.5	111	03.6	-16	03.3	344	18.5	+21	40.3	174	15.7	-16	08.8	271	36.6	+19	22.1	
18	55	36.0	126	04.9	-16	03.4	359	19.7	+21	40.5	189	18.1	-16	08.9	286	39.3	+19	22.1	
19	70	38.5	141	06.2		03.5	14	20.9		40.8	204	20.4		08.9	301	41.9		22.2	
20	85	40.9	156	07.5		03.6	29	22.1		41.1	219	22.7		08.9	316	44.6		22.2	
21	100	43.4	171	08.9		03.7	44	23.2		41.4	234	25.1		08.9	331	47.3		22.3	
22	115	45.9	186	10.2		03.8	59	24.4		41.6	249	27.4		09.0	346	49.9		22.3	
23	130	48.3	201	11.5		03.9	74	25.6		41.9	264	29.7		09.0	1	52.6		22.4	
24	145	50.8	216	12.8	-16	04.0	89	26.8	+21	42.2	279	32.1	-16	09.0	16	55.2	+19	22.4	
Dif	—		+13		-1		+12		+3		+23		0		+27				

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: 17 ^d 4 PHE { 4 ^h : 54:2 12 ^h : 54:2 20 ^h : 54:3 PMG: 2 ^h 12 ^m R°: 39 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico		Civil	Hora		R°	Hora	R°			
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	
0	176	28.5	-12	27.4	327	55.0	+1	36.7	60 N	6 04	6 52	7 36	21 06	84	8 18	**		
1	191	28.5		26.5	342	31.4 ¹⁷⁴		22.5 ¹⁴²	58	02	48	29	04 80		18 2			
2	206	28.5		25.7	357	07.7 ¹⁷³	+1	08.3 ¹⁴²	56	01	45	23	02 77		19 4			
3	221	28.6		24.8	11	44.1 ¹⁷⁴	+0	54.1 ¹⁴²	54	6 00	42	18	21 01 74		19 6			
4	236	28.6		23.9	26	20.4 ¹⁷³		39.8 ¹⁴³	52	5 59	39	13	20 59 72		19 9			
5	251	28.6	-12	23.1	40	56.8 ¹⁷⁴	+0	25.6 ¹⁴²	50	5 58	6 36	7 09	20 58 70		8 19 11			
6	266	28.7	-12	22.2	55	33.1 ¹⁷³	+0	11.3 ¹⁴³	45	5 55	6 30	7 00	20 55 65		8 19 16			
7	281	28.7		21.3	70	09.5 ¹⁷⁴	-0	02.9 ¹⁴²	40	53	24	6 52	53 61		20 19			
8	296	28.7		20.5	84	45.8 ¹⁷³		17.2 ¹⁴³	35	50	19	45	51 57		20 23			
9	311	28.8		19.6	99	22.2 ¹⁷⁴		31.5 ¹⁴³	30	47	15	39	49 54		20 26			
10	326	28.8		18.7	113	58.5 ¹⁷³	-0	45.7 ¹⁴²	20	40	6 06	29	46 49		21 30			
11	341	28.9	-12	17.9	128	34.8 ¹⁷³	-1	00.0 ¹⁴³	10 N	5 33	5 58	6 19	20 44 44		8 21 35			
12	356	28.9	-12	17.0	143	11.1 ¹⁷³	-1	14.2 ¹⁴²	0	5 25	5 50	6 11	20 41 40		8 21 39			
13	11	28.9		16.1	157	47.4 ¹⁷³		28.5 ¹⁴³	10 S	15	40	6 02	39 36		21 44			
14	26	29.0		15.3	172	23.6 ¹⁷²		42.8 ¹⁴³	20	5 03	29	5 52	37 31		22 48			
15	41	29.0		14.4	186	59.9 ¹⁷³	-1	57.0 ¹⁴²	30	4 47	16	41	34 26		22 53			
16	56	29.1		13.5	201	36.1 ¹⁷²	-2	11.3 ¹⁴³	35	36	5 08	35	32 23		22 56			
17	71	29.1	-12	12.7	216	12.4 ¹⁷³	-2	25.6 ¹⁴³	40	4 24	4 58	5 27	20 30 20		8 22 60			
18	86	29.1	-12	11.8	230	48.6 ¹⁷²	-2	39.8 ¹⁴²	45	4 09	4 47	5 18	20 28 16		8 23 63			
19	101	29.2		10.9	245	24.8 ¹⁷²	-2	54.1 ¹⁴³	50	3 49	33	08	26 11		23 68			
20	116	29.2		10.0	260	00.9 ¹⁷¹	-3	08.3 ¹⁴²	52	39	26	5 03	25 9		23 71			
21	131	29.3		09.2	274	37.1 ¹⁷²		22.5 ¹⁴²	54	27	18	4 58	23 7		23 73			
22	146	29.3		08.3	289	13.2 ¹⁷¹		36.8 ¹⁴³	56	3 14	09	52	22 5		23 76			
23	161	29.4		07.4	303	49.3 ¹⁷¹	-3	51.0 ¹⁴²	58	2 58	4 00	45	21 1		23 79			
24	176	29.4	-12	06.6	318	25.4 ¹⁷¹	-4	05.2 ¹⁴²	60 S	2 39	3 48	4 37	20 19 **		8 23 83			
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG 14 ^h 14 ^m 3		Mag: -4.9 PMG: 9 ^h 34 ^m				Mag: +0.5 PMG: 18 ^h 01 ^m				Mag: -2.1 PMG: 5 ^h 21 ^m				Mag: -0.1 PMG: 22 ^h 48 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	145	50.8	216	12.8	-16	04.0	89	26.8	+21	42.2	279	32.1	-16	09.0	16	55.2	+19	22.4
1	160	53.3	231	14.1		04.1	104	28.0		42.4	294	34.4		09.1	31	57.9		22.5
2	175	55.7	246	15.4		04.3	119	29.1		42.7	309	36.7		09.1	47	00.5		22.5
3	190	58.2	261	16.7		04.4	134	30.3		43.0	324	39.1		09.1	62	03.2		22.6
4	206	00.6	276	18.0		04.5	149	31.5		43.2	339	41.4		09.1	77	05.8		22.6
5	221	03.1	291	19.3	-16	04.6	164	32.7	+21	43.5	354	43.7	-16	09.2	92	08.5	+19	22.7
6	236	05.6	306	20.6	-16	04.7	179	33.9	+21	43.8	9	46.1	-16	09.2	107	11.1	+19	22.7
7	251	08.0	321	21.8		04.8	194	35.0		44.0	24	48.4		09.2	122	13.8		22.8
8	266	10.5	336	23.1		04.9	209	36.2		44.3	39	50.7		09.2	137	16.4		22.8
9	281	13.0	351	24.4		05.0	224	37.4		44.6	54	53.1		09.3	152	19.1		22.9
10	296	15.4	6	25.7		05.1	239	38.6		44.9	69	55.4		09.3	167	21.7		22.9
11	311	17.9	21	26.9	-16	05.2	254	39.7	+21	45.1	84	57.7	-16	09.3	182	24.4	+19	23.0
12	326	20.4	36	28.2	-16	05.3	269	40.9	+21	45.4	100	00.1	-16	09.4	197	27.0	+19	23.0
13	341	22.8	51	29.5		05.4	284	42.1		45.7	115	02.4		09.4	212	29.7		23.1
14	356	25.3	66	30.7		05.5	299	43.3		45.9	130	04.7		09.4	227	32.3		23.1
15	11	27.7	81	32.0		05.6	314	44.4		46.2	145	07.1		09.4	242	35.0		23.2
16	26	30.2	96	33.3		05.7	329	45.6		46.5	160	09.4		09.5	257	37.6		23.2
17	41	32.7	111	34.5	-16	05.8	344	46.8	+21	46.7	175	11.8	-16	09.5	272	40.3	+19	23.3
18	56	35.1	126	35.8	-16	05.9	359	48.0	+21	47.0	190	14.1	-16	09.5	287	42.9	+19	23.3
19	71	37.6	141	37.0		06.0	14	49.1		47.3	205	16.4		09.6	302	45.6		23.4
20	86	40.1	156	38.3		06.1	29	50.3		47.5	220	18.8		09.6	317	48.2		23.4
21	101	42.5	171	39.5		06.2	44	51.5		47.8	235	21.1		09.6	332	50.9		23.5
22	116	45.0	186	40.7		06.3	59	52.6		48.1	250	23.5		09.6	347	53.5		23.5
23	131	47.5	201	42.0		06.4	74	53.8		48.3	265	25.8		09.7	2	56.2		23.6
24	146	49.9	216	43.2	-16	06.5	89	55.0	+21	48.6	280	28.1	-16	09.7	17	58.8	+19	23.6
Dif	—		+13		-1		+12		+3		+23		0		+27			

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16:2 PMG: 12 ^h 14 ^m 0			Edad: 18 ^d 4 PHE { 4 ^h : 54'4 12 ^h : 54'5 20 ^h : 54'7 SD: 14'8 PMG: 2 ^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	
0	176	29.4	-12 06.6	318	25.4	-4 05.2		60 N	16 56	17 40	18 28	22 30 88	8 17 **		
1	191	29.4	05.7	333	01.5 ¹⁷¹	19.4 ¹⁴²		58	17 02	43	29	24 84	20 2		
2	206	29.5	04.8	347	37.5 ¹⁷⁰	33.6 ¹⁴²		56	08	46	30	19 81	23 5		
3	221	29.5	03.9	2	13.5 ¹⁷⁰	-4 47.8 ¹⁴²		54	13	49	31	15 77	25 8		
4	236	29.6	03.1	16	49.5 ¹⁷⁰	-5 02.0 ¹⁴²		52	17	52	32	11 75	28 10		
5	251	29.6	-12 02.2	31	25.4 ¹⁶⁹	-5 16.1 ¹⁴¹		50	17 21	17 55	18 32	22 08 72	8 30 12		
6	266	29.7	-12 01.3	46	01.3 ¹⁶⁹	-5 30.3 ¹⁴²		45	17 30	18 01	18 35	22 00 67	8 35 17		
7	281	29.7	-12 00.4	60	37.2 ¹⁶⁹	44.4 ¹⁴¹		40	38	06	37	21 54 62	39 21		
8	296	29.7	-11 59.6	75	13.1 ¹⁶⁹	-5 58.6 ¹⁴²		35	44	10	40	48 59	43 23		
9	311	29.8	58.7	89	48.9 ¹⁶⁸	-6 12.7 ¹⁴¹		30	17 50	14	43	43 56	46 27		
10	326	29.8	57.8	104	24.7 ¹⁶⁸	26.8 ¹⁴¹		20	18 00	23	48	35 51	51 32		
11	341	29.9	-11 56.9	119	00.4 ¹⁶⁷	-6 40.8 ¹⁴⁰		10 N	18 09	18 30	18 55	21 28 46	8 56 36		
12	356	29.9	-11 56.1	133	36.1 ¹⁶⁷	-6 54.9 ¹⁴¹		0	18 17	18 39	19 03	21 21 42	9 00 41		
13	11	30.0	55.2	148	11.8 ¹⁶⁷	-7 08.9 ¹⁴⁰		10 S	26	47	13	15 37	05 45		
14	26	30.0	54.3	162	47.4 ¹⁶⁶	22.9 ¹⁴⁰		20	35	18 58	24	08 33	10 49		
15	41	30.1	53.4	177	23.0 ¹⁶⁶	36.9 ¹⁴⁰		30	46	19 11	40	21 00 28	15 55		
16	56	30.1	52.6	191	58.5 ¹⁶⁵	-7 50.9 ¹⁴⁰		35	52	18	19 50	20 55 25	18 58		
17	71	30.2	-11 51.7	206	34.0 ¹⁶⁵	-8 04.9 ¹⁴⁰		40	18 59	19 27	20 02	20 50 22	9 22 61		
18	86	30.2	-11 50.8	221	09.5 ¹⁶⁵	-8 18.8 ¹³⁹		45	19 07	19 38	20 17	20 44 18	9 26 66		
19	101	30.3	49.9	235	44.9 ¹⁶⁴	32.7 ¹³⁹		50	17	52	36	37 13	31 71		
20	116	30.3	49.0	250	20.3 ¹⁶⁴	-8 46.6 ¹³⁹		52	22	19 59	45	34 11	34 73		
21	131	30.4	48.2	264	55.6 ¹⁶³	-9 00.5 ¹³⁹		54	27	20 06	20 56	30 9	36 76		
22	146	30.4	47.3	279	30.9 ¹⁶³	14.3 ¹³⁸		56	33	14	21 08	27 5	39 79		
23	161	30.5	46.4	294	06.1 ¹⁶²	28.1 ¹³⁸		58	39	24	23	22 3	42 82		
24	176	30.5	-11 45.5	308	41.2 ¹⁶¹	-9 41.9 ¹³⁸		60 S	19 46	20 35	21 41	20 17 **	9 46 85		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG 14 ^h 10 ^m 3		Mag: -4.9 PMG: 9 ^h 32 ^m			Mag: +0.5 PMG: 17 ^h 59 ^m			Mag: -2.2 PMG: 5 ^h 17 ^m			Mag: -0.1 PMG: 22 ^h 44 ^m			
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	°	'	°	'	°	'	°	'	°	'	°	
0	146	49.9	216 43.2	-16 06.5		89 55.0	+21 48.6		280 28.1	-16 09.7		17 58.8	+19 23.6		
1	161	52.4	231 44.4	06.6		104 56.2	48.9		295 30.5	09.7		33 01.5	23.7		
2	176	54.9	246 45.7	06.7		119 57.3	49.1		310 32.8	09.7		48 04.1	23.7		
3	191	57.3	261 46.9	06.8		134 58.5	49.4		325 35.2	09.8		63 06.8	23.7		
4	206	59.8	276 48.1	06.9		149 59.7	49.7		340 37.5	09.8		78 09.4	23.8		
5	222	02.2	291 49.3	-16 07.0		165 00.8	+21 49.9		355 39.8	-16 09.8		93 12.1	+19 23.8		
6	237	04.7	306 50.5	-16 07.1		180 02.0	+21 50.2		10 42.2	-16 09.8		108 14.7	+19 23.9		
7	252	07.2	321 51.8	07.2		195 03.2	50.5		25 44.5	09.9		123 17.4	23.9		
8	267	09.6	336 53.0	07.3		210 04.3	50.7		40 46.9	09.9		138 20.0	24.0		
9	282	12.1	351 54.2	07.4		225 05.5	51.0		55 49.2	09.9		153 22.7	24.0		
10	297	14.6	6 55.4	07.5		240 06.7	51.3		70 51.5	09.9		168 25.3	24.1		
11	312	17.0	21 56.6	-16 07.6		255 07.8	+21 51.5		85 53.9	-16 10.0		183 28.0	+19 24.1		
12	327	19.5	36 57.8	-16 07.7		270 09.0	+21 51.8		100 56.2	-16 10.0		198 30.6	+19 24.2		
13	342	22.0	51 59.0	07.8		285 10.2	52.1		115 58.6	10.0		213 33.3	24.2		
14	357	24.4	67 00.2	07.9		300 11.3	52.3		131 00.9	10.0		228 35.9	24.3		
15	12	26.9	82 01.3	08.0		315 12.5	52.6		146 03.3	10.1		243 38.6	24.3		
16	27	29.3	97 02.5	08.1		330 13.7	52.9		161 05.6	10.1		258 41.2	24.4		
17	42	31.8	112 03.7	-16 08.2		345 14.8	+21 53.1		176 08.0	-16 10.1		273 43.9	+19 24.4		
18	57	34.3	127 04.9	-16 08.2		0 16.0	+21 53.4		191 10.3	-16 10.1		288 46.5	+19 24.5		
19	72	36.7	142 06.1	08.3		15 17.2	53.7		206 12.6	10.2		303 49.2	24.5		
20	87	39.2	157 07.2	08.4		30 18.3	53.9		221 15.0	10.2		318 51.8	24.6		
21	102	41.7	172 08.4	08.5		45 19.5	54.2		236 17.3	10.2		333 54.5	24.6		
22	117	44.1	187 09.6	08.6		60 20.6	54.4		251 19.7	10.2		348 57.1	24.7		
23	132	46.6	202 10.8	08.7		75 21.8	54.7		266 22.0	10.3		3 59.8	24.7		
24	147	49.1	217 11.9	-16 08.8		90 23.0	+21 55.0		281 24.4	-16 10.3		19 02.4	+19 24.8		
Dif	—		+12	-1		+12	+3		+23	0		+26			

UT	SOL				LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna						
	SD: 16'2 PMG: 12 ^h 13 ^m 9				Edad: 19 ^d 4 PHE { 4 ^h : 54'8 12 ^h : 55'0 20 ^h : 55'1 SD: 14'9 PMG: 3 ^h 31 ^m R°: 43 ^m																
	hG ☉		Dec		hG ☾		Dif			Dif			Náutico	Civil	Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m			
0	176	30.5	-11	45.5	308	41.2	-9	41.9	60 N	5	59	6	47	7	30	23	58	94	8	15	**
1	191	30.6		44.6	323	16.4 ¹⁶²	-9	55.7 ¹³⁸	58	58	44	24			48	89		22	3		
2	206	30.6		43.8	337	51.4 ¹⁶⁰	-10	09.4 ¹³⁷	56	57	40	19			40	85		28	6		
3	221	30.7		42.9	352	26.4 ¹⁶⁰		23.1 ¹³⁷	54	56	37	14			32	81		33	9		
4	236	30.7		42.0	7	01.4 ¹⁶⁰		36.8 ¹³⁷	52	55	35	09			26	78		38	12		
5	251	30.8	-11	41.1	21	36.3 ¹⁵⁹	-10	50.4 ¹³⁶	50	5	55	6	32	7	05	23	20	75	8	42	14
6	266	30.8	-11	40.2	36	11.1 ¹⁵⁸	-11	04.0 ¹³⁶	45	5	52	6	27	6	57	23	07	70	8	52	19
7	281	30.9		39.4	50	45.9 ¹⁵⁸		17.6 ¹³⁶	40	50	22	49			22	56	66		9	00	23
8	296	30.9		38.5	65	20.6 ¹⁵⁷		31.1 ¹³⁵	35	48	17	43			47	62		06	27		
9	311	31.0		37.6	79	55.2 ¹⁵⁶		44.6 ¹³⁵	30	45	13	37			39	59		13	29		
10	326	31.0		36.7	94	29.8 ¹⁵⁶	-11	58.0 ¹³⁴	20	39	6	05	28			26	53		23	35	
11	341	31.1	-11	35.8	109	04.4 ¹⁵⁶	-12	11.5 ¹³⁵	10 N	5	33	5	57	6	19	22	14	49	9	32	40
12	356	31.1	-11	34.9	123	38.8 ¹⁵⁴	-12	24.9 ¹³⁴	0	5	25	5	49	6	11	22	03	45	9	41	43
13	11	31.2		34.1	138	13.2 ¹⁵⁴		38.2 ¹³³	10 S	16	41	6	02	21	52	42		50	47		
14	26	31.2		33.2	152	47.5 ¹⁵³	-12	51.5 ¹³³	20	5	04	30	5	53	41	37		9	59	52	
15	41	31.3		32.3	167	21.8 ¹⁵³	-13	04.8 ¹³³	30	4	48	18	43			28	32	10	10	57	
16	56	31.4		31.4	181	56.0 ¹⁵²		18.0 ¹³²	35	39	10	36			20	29		16	61		
17	71	31.4	-11	30.5	196	30.1 ¹⁵¹	-13	31.2 ¹³²	40	4	27	5	01	5	29	21	12	25	10	23	64
18	86	31.5	-11	29.6	211	04.2 ¹⁵¹	-13	44.3 ¹³¹	45	4	12	4	50	5	21	21	02	22	10	32	68
19	101	31.5		28.8	225	38.1 ¹⁴⁹	-13	57.4 ¹³¹	50	3	53	36	11			20	50	17	42	73	
20	116	31.6		27.9	240	12.0 ¹⁴⁹	-14	10.4 ¹³⁰	52	44	30	07			45	14		47	76		
21	131	31.6		27.0	254	45.8 ¹⁴⁸		23.4 ¹³⁰	54	33	23	5	02			39	11		52	79	
22	146	31.7		26.1	269	19.6 ¹⁴⁸		36.4 ¹³⁰	56	20	15	4	56			32	8	10	58	82	
23	161	31.7		25.2	283	53.3 ¹⁴⁷	-14	49.3 ¹²⁹	58	3	06	4	05	50		25	4	11	04	86	
24	176	31.8	-11	24.3	298	26.8 ¹⁴⁵	-15	02.2 ¹²⁹	60 S	2	47	3	54	4	43	20	16	0	11	11	91

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO											
	PMG: 14 ^h 06 ^m 4		Mag: -4.8 PMG: 9 ^h 30 ^m		Mag: +0.6 PMG: 17 ^h 57 ^m		Mag: -2.2 PMG: 5 ^h 14 ^m		Mag: -0.1 PMG: 22 ^h 40 ^m											
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄											
h	°	'	°	'	°	'	°	'	°	'										
0	147	49.1	217	11.9	-16	08.8	90	23.0	+21	55.0	281	24.4	-16	10.3	19	02.4	+19	02.4		
1	162	51.5	232	13.1		08.9	105	24.1		55.2	296	26.7		10.3	34	05.1		24.8		
2	177	54.0	247	14.2		09.0	120	25.3		55.5	311	29.1		10.3	49	07.7		24.8		
3	192	56.5	262	15.4		09.1	135	26.4		55.8	326	31.4		10.4	64	10.4		24.9		
4	207	58.9	277	16.5		09.2	150	27.6		56.0	341	33.8		10.4	79	13.0		24.9		
5	223	01.4	292	17.7	-16	09.3	165	28.8	+21	56.3	356	36.1	-16	10.4	94	15.7	+19	25.0		
6	238	03.8	307	18.8	-16	09.3	180	29.9	+21	56.6	11	38.5	-16	10.4	109	18.3	+19	25.0		
7	253	06.3	322	20.0		09.4	195	31.1		56.8	26	40.8		10.5	124	20.9		25.1		
8	268	08.8	337	21.1		09.5	210	32.2		57.1	41	43.2		10.5	139	23.6		25.1		
9	283	11.2	352	22.2		09.6	225	33.4		57.4	56	45.5		10.5	154	26.2		25.2		
10	298	13.7	7	23.4		09.7	240	34.6		57.6	71	47.9		10.5	169	28.9		25.2		
11	313	16.2	22	24.5	-16	09.8	255	35.7	+21	57.9	86	50.2	-16	10.6	184	31.5	+19	25.3		
12	328	18.6	37	25.6	-16	09.9	270	36.9	+21	58.1	101	52.6	-16	10.6	199	34.2	+19	25.3		
13	343	21.1	52	26.8		10.0	285	38.0		58.4	116	54.9		10.6	214	36.8		25.4		
14	358	23.6	67	27.9		10.1	300	39.2		58.7	131	57.3		10.6	229	39.5		25.4		
15	13	26.0	82	29.0		10.1	315	40.3		58.9	146	59.6		10.7	244	42.1		25.5		
16	28	28.5	97	30.1		10.2	330	41.5		59.2	162	02.0		10.7	259	44.8		25.5		
17	43	30.9	112	31.2	-16	10.3	345	42.7	+21	59.5	177	04.3	-16	10.7	274	47.4	+19	25.6		
18	58	33.4	127	32.3	-16	10.4	0	43.8	+21	59.7	192	06.7	-16	10.7	289	50.1	+19	25.6		
19	73	35.9	142	33.5		10.5	15	45.0	+22	00.0	207	09.0		10.7	304	52.7		25.6		
20	88	38.3	157	34.6		10.6	30	46.1	+22	00.2	222	11.4		10.8	319	55.3		25.7		
21	103	40.8	172	35.7		10.7	45	47.3		00.5	237	13.7		10.8	334	58.0		25.7		
22	118	43.3	187	36.8		10.7	60	48.4		00.8	252	16.1		10.8	350	00.6		25.8		
23	133	45.7	202	37.9		10.8	75	49.6		01.0	267	18.5		10.8	5	03.3		25.8		
24	148	48.2	217	39.0	-16	10.9	90	50.7	+22	01.3	282	20.8	-16	10.9	20	05.9	+19	25.9		
Dif	—		+11		-1		+12		+3		+24		0		+26					

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna				
	SD: 16 ^h 2			Edad: 20 ^d 4 PHE { 4 ^h : 55 ^m 3 12 ^h : 55 ^m 5 20 ^h : 55 ^m 7														
	PMG: 12 ^h 13 ^m 8			SD: 15 ^h 0 PMG: 4 ^h 14 ^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		
0	176	31.8	-11	24.3	298	26.8	-15	02.2	60 N	17 01	17 44	18 33	** ** *	** ** *	8 14	0		
1	191	31.9		23.4	313	00.4 ¹⁴⁶		15.0 ¹²⁸	58	07		48	33	** ** *	** ** *	25	5	
2	206	31.9		22.5	327	33.8 ¹⁴⁴		27.7 ¹²⁷	56	12		51	34	** ** *	** ** *	34	9	
3	221	32.0		21.7	342	07.1 ¹⁴³		40.4 ¹²⁷	54	17		53	34	** ** *	** ** *	42	13	
4	236	32.0		20.8	356	40.4 ¹⁴³	-15	53.0 ¹²⁶	52	21		56	35	** ** *	** ** *	50	16	
5	251	32.1	-11	19.9	11	13.6 ¹⁴²	-16	05.6 ¹²⁶	50	17 25	17 58	18 36	** ** *	** ** *	8 56	19		
6	266	32.1	-11	19.0	25	46.7 ¹⁴¹	-16	18.2 ¹²⁶	45	17 33	18 03	18 37	** ** *	** ** *	9 11	24		
7	281	32.2		18.1	40	19.7 ¹⁴⁰		30.6 ¹²⁴	40	40		08	39	** ** *	** ** *	23	28	
8	296	32.3		17.2	54	52.6 ¹³⁹		43.0 ¹²⁴	35	46		12	42	23 49	65	33	31	
9	311	32.3		16.3	69	25.4 ¹³⁸	-16	55.4 ¹²⁴	30	17 52	16	44		38 62		42	34	
10	326	32.4		15.4	83	58.2 ¹³⁸	-17	07.7 ¹²³	20	18 01	23	49		19 58		9 58	39	
11	341	32.4	-11	14.5	98	30.8 ¹³⁶	-17	19.9 ¹²²	10 N	18 09	18 31	18 55	23 03	54	10 12	43		
12	356	32.5	-11	13.6	113	03.4 ¹³⁶	-17	32.1 ¹²²	0	18 17	18 38	19 03	22 48	50	10 24	48		
13	11	32.6		12.8	127	35.8 ¹³⁴		44.2 ¹²¹	10 S	25	47	12	34	45	37	51		
14	26	32.6		11.9	142	08.2 ¹³⁴	-17	56.2 ¹²⁰	20	34	18 56	23	18	42	10 51	56		
15	41	32.7		11.0	156	40.5 ¹³³	-18	08.2 ¹²⁰	30	44	19 09	38	22 00	37	11 07	60		
16	56	32.7		10.1	171	12.7 ¹³²		20.1 ¹¹⁹	35	50	16	47	21 49	35	17	63		
17	71	32.8	-11	09.2	185	44.7 ¹³⁰	-18	31.9 ¹¹⁸	40	18 56	19 25	19 59	21 37	32	11 27	67		
18	86	32.9	-11	08.3	200	16.7 ¹³⁰	-18	43.7 ¹¹⁸	45	19 04	19 35	20 13	21 24	27	11 40	71		
19	101	32.9		07.4	214	48.6 ¹²⁹	-18	55.4 ¹¹⁷	50	13	48	31	21 07	22	11 55	77		
20	116	33.0		06.5	229	20.4 ¹²⁸	-19	07.0 ¹¹⁶	52	18	19 54	40	20 59	19	12 03	79		
21	131	33.1		05.6	243	52.1 ¹²⁷		18.6 ¹¹⁶	54	23	20 01	20 50	50	16	11	82		
22	146	33.1		04.7	258	23.7 ¹²⁶		30.0 ¹¹⁴	56	28	09	21 02	40	13	20	86		
23	161	33.2		03.8	272	55.2 ¹²⁵		41.4 ¹¹⁴	58	34	18	16	29	8	30	91		
24	176	33.2	-11	02.9	287	26.5 ¹²³	-19	52.7 ¹¹³	60 S	19 41	20 28	21 33	20 16	2	12 42	97		
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO					
	PMG: 14 ^h 02 ^m 5			Mag: -4.8 PMG: 9 ^h 29 ^m			Mag: +0.6 PMG: 17 ^h 55 ^m			Mag: -2.2 PMG: 5 ^h 10 ^m			Mag: -0.1 PMG: 22 ^h 36 ^m					
	hG ♈		Dec	hG ♀		Dec	hG ♂		Dec	hG ♃		Dec	hG ♄		Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	148	48.2	217	39.0	-16	10.9	90	50.7	+22	01.3	282	20.8	-16	10.9	20	05.9	+19	25.9
1	163	50.7	232	40.1		11.0	105	51.9		01.6	297	23.2		10.9	35	08.6		25.9
2	178	53.1	247	41.1		11.1	120	53.0		01.8	312	25.5		10.9	50	11.2		26.0
3	193	55.6	262	42.2		11.2	135	54.2		02.1	327	27.9		10.9	65	13.9		26.0
4	208	58.1	277	43.3		11.2	150	55.3		02.3	342	30.2		10.9	80	16.5		26.1
5	224	00.5	292	44.4	-16	11.3	165	56.5	+22	02.6	357	32.6	-16	11.0	95	19.2	+19	26.1
6	239	03.0	307	45.5	-16	11.4	180	57.6	+22	02.9	12	34.9	-16	11.0	110	21.8	+19	26.2
7	254	05.4	322	46.5		11.5	195	58.8		03.1	27	37.3		11.0	125	24.4		26.2
8	269	07.9	337	47.6		11.6	210	59.9		03.4	42	39.7		11.0	140	27.1		26.3
9	284	10.4	352	48.7		11.6	226	01.1		03.6	57	42.0		11.1	155	29.7		26.3
10	299	12.8	7	49.8		11.7	241	02.2		03.9	72	44.4		11.1	170	32.4		26.4
11	314	15.3	22	50.8	-16	11.8	256	03.4	+22	04.2	87	46.7	-16	11.1	185	35.0	+19	26.4
12	329	17.8	37	51.9	-16	11.9	271	04.5	+22	04.4	102	49.1	-16	11.1	200	37.7	+19	26.4
13	344	20.2	52	52.9		12.0	286	05.7		04.7	117	51.5		11.1	215	40.3		26.5
14	359	22.7	67	54.0		12.0	301	06.8		04.9	132	53.8		11.2	230	43.0		26.5
15	14	25.2	82	55.0		12.1	316	08.0		05.2	147	56.2		11.2	245	45.6		26.6
16	29	27.6	97	56.1		12.2	331	09.1		05.5	162	58.5		11.2	260	48.2		26.6
17	44	30.1	112	57.1	-16	12.3	346	10.3	+22	05.7	178	00.9	-16	11.2	275	50.9	+19	26.7
18	59	32.6	127	58.2	-16	12.3	1	11.4	+22	06.0	193	03.3	-16	11.2	290	53.5	+19	26.7
19	74	35.0	142	59.2		12.4	16	12.6		06.2	208	05.6		11.3	305	56.2		26.8
20	89	37.5	158	00.3		12.5	31	13.7		06.5	223	08.0		11.3	320	58.8		26.8
21	104	39.9	173	01.3		12.6	46	14.9		06.8	238	10.3		11.3	336	01.5		26.9
22	119	42.4	188	02.3		12.6	61	16.0		07.0	253	12.7		11.3	351	04.1		26.9
23	134	44.9	203	03.4		12.7	76	17.2		07.3	268	15.1		11.3	6	06.7		27.0
24	149	47.3	218	04.4	-16	12.8	91	18.3	+22	07.5	283	17.4	-16	11.4	21	09.4	+19	27.0
Dif	—		+11		-1		+11		+3		+24		0		+26		0	

ALMANAQUE NÁUTICO PERSEIS

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna			Puesta de Luna												
	SD: 16/2 PMG: 12 ^h 13 ^m 6			Edad: 22 ^d 4 PHE { 4 ^h : 56/7 12 ^h : 57/0 20 ^h : 57/3 SD: 15/4 PMG: 5 ^h 51 ^m R°: 55 ^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	h m m	h m m	h m m								
0	176	34.9	-10	41.4	275	26.6	-23	57.5	60 N	17 06	17 49	18 38	3 14 106	8 17	9												
1	191	34.9		40.5	289	55.2	96	-24 06.4	58	12	52	38	2 52 94	40	20												
2	206	35.0		39.6	304	23.6	94	15.2	56	17	55	38	33 88	8 59	27												
3	221	35.1		38.7	318	52.0	94	23.9	54	21	57	38	18 84	9 15	31												
4	236	35.1		37.7	333	20.2	92	32.5	52	25	17 59	38	2 05 80	28	35												
5	251	35.2	-10	36.8	347	48.3	91	-24 41.0	50	17 28	18 01	18 39	1 53 78	9 41	36												
6	266	35.3	-10	35.9	2	16.2	89	-24 49.3	45	17 36	18 06	18 40	1 29 73	10 06	41												
7	281	35.4		35.0	16	44.1	89	-24 57.5	40	43	10	42	1 10 69	26	44												
8	296	35.4		34.1	31	11.8	87	-25 05.6	35	48	14	43	0 54 66	43	47												
9	311	35.5		33.2	45	39.4	86	13.6	30	17 53	17	45	40 64	10 57	49												
10	326	35.6		32.3	60	06.9	85	21.4	20	18 02	24	50	0 17 60	11 22	52												
11	341	35.7	-10	31.4	74	34.3	84	-25 29.1	10 N	18 10	18 31	18 56	** ** *	11 43	55												
12	356	35.7	-10	30.5	89	01.6	83	-25 36.7	0	18 17	18 38	19 02	** ** *	12 03	57												
13	11	35.8		29.6	103	28.7	81	44.1	10 S	24	46	11	** ** *	24	59												
14	26	35.9		28.7	117	55.7	80	51.5	20	33	18 55	21	23 48 56	12 45	62												
15	41	35.9		27.8	132	22.6	79	-25 58.6	30	42	19 06	36	22 54	13 11	64												
16	56	36.0		26.9	146	49.4	78	-26 05.7	35	47	13	45	23 06 53	25	66												
17	71	36.1	-10	26.0	161	16.1	77	-26 12.6	40	18 54	19 22	19 55	22 48 51	13 43	68												
18	86	36.2	-10	25.1	175	42.6	75	-26 19.4	45	19 01	19 32	20 09	22 27 48	14 04	70												
19	101	36.2		24.2	190	09.1	75	26.0	50	10	44	26	22 00 45	30	75												
20	116	36.3		23.3	204	35.4	73	32.5	52	14	50	35	21 46 43	43	77												
21	131	36.4		22.3	219	01.6	72	38.8	54	18	19 56	44	31 41	14 58	79												
22	146	36.5		21.4	233	27.7	71	45.0	56	23	20 04	20 56	21 13 38	15 15	83												
23	161	36.6		20.5	247	53.7	70	51.1	58	29	12	21 09	20 52 32	15 36	89												
24	176	36.6	-10	19.6	262	19.5	68	-26 57.0	60 S	19 35	20 22	21 24	20 24 21	16 03	100												
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO														
	PMG: 13 ^h 54 ^m 6			Mag: -4.8 PMG: 9 ^h 26 ^m			Mag: +0.6 PMG: 17 ^h 52 ^m			Mag: -2.2 PMG: 5 ^h 02 ^m			Mag: -0.1 PMG: 22 ^h 27 ^m														
	hG ♈	hG ♀		Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec														
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'													
0	150	46.5	218	28.3	-16	14.4	91	45.6	+22	13.7	284	14.2	-16	11.8	22	12.8	+19	28.1									
1	165	48.9	233	29.3		14.5	106	46.8		14.0	299	16.6		11.8	37	15.4		28.1									
2	180	51.4	248	30.3		14.6	121	47.9		14.2	314	19.0		11.9	52	18.1		28.2									
3	195	53.9	263	31.2		14.6	136	49.1		14.5	329	21.3		11.9	67	20.7		28.2									
4	210	56.3	278	32.2		14.7	151	50.2		14.7	344	23.7		11.9	82	23.4		28.3									
5	225	58.8	293	33.1	-16	14.8	166	51.3	+22	15.0	359	26.1	-16	11.9	97	26.0	+19	28.3									
6	241	01.3	308	34.1	-16	14.8	181	52.5	+22	15.2	14	28.4	-16	11.9	112	28.6	+19	28.4									
7	256	03.7	323	35.0		14.9	196	53.6		15.5	29	30.8		12.0	127	31.3		28.4									
8	271	06.2	338	36.0		14.9	211	54.7		15.8	44	33.2		12.0	142	33.9		28.5									
9	286	08.7	353	36.9		15.0	226	55.9		16.0	59	35.6		12.0	157	36.6		28.5									
10	301	11.1	8	37.9		15.1	241	57.0		16.3	74	37.9		12.0	172	39.2		28.5									
11	316	13.6	23	38.8	-16	15.1	256	58.1	+22	16.5	89	40.3	-16	12.0	187	41.8	+19	28.6									
12	331	16.0	38	39.7	-16	15.2	271	59.2	+22	16.8	104	42.7	-16	12.0	202	44.5	+19	28.6									
13	346	18.5	53	40.7		15.2	287	00.4		17.0	119	45.1		12.1	217	47.1		28.7									
14	1	21.0	68	41.6		15.3	302	01.5		17.3	134	47.4		12.1	232	49.7		28.7									
15	16	23.4	83	42.5		15.3	317	02.6		17.5	149	49.8		12.1	247	52.4		28.8									
16	31	25.9	98	43.5		15.4	332	03.8		17.8	164	52.2		12.1	262	55.0		28.8									
17	46	28.4	113	44.4	-16	15.5	347	04.9	+22	18.0	179	54.6	-16	12.1	277	57.7	+19	28.9									
18	61	30.8	128	45.3	-16	15.5	2	06.0	+22	18.3	194	56.9	-16	12.1	293	00.3	+19	28.9									
19	76	33.3	143	46.2		15.6	17	07.2		18.5	209	59.3		12.2	308	02.9		28.9									
20	91	35.8	158	47.1		15.6	32	08.3		18.8	225	01.7		12.2	323	05.6		29.0									
21	106	38.2	173	48.1		15.7	47	09.4		19.1	240	04.1		12.2	338	08.2		29.0									
22	121	40.7	188	49.0		15.7	62	10.5		19.3	255	06.4		12.2	353	10.9		29.1									
23	136	43.2	203	49.9		15.8	77	11.7		19.6	270	08.8		12.2	8	13.5		29.1									
24	151	45.6	218	50.8	-16	15.8	92	12.8	+22	19.8	285	11.2	-16	12.2	23	16.1	+19	29.2									
Dif	—			+9			-1			+11			+3			+24			0			+26			0		

UT	SOL			 LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna								
	SD: 16:2 PMG: 12 ^h 13 ^m 5			Edad: 23 ^d 4 PHE { 4 ^h : 57/6 12 ^h : 57/9 20 ^h : 58/2 PMG: 6 ^h 46 ^m R°: 60 ^m																	
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°						
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m					
0	176	36.6	-10	19.6	262	19.5	-26	57.0	60 N	5	48	6	36	7	19	5	00				
1	191	36.7		18.7	276	45.3	68	-27	02.7	57	48	34	14	4	26	82	9	00			
2	206	36.8		17.8	291	10.9	66		08.3	56	48	31	09	4	01	77		26			
3	221	36.9		16.9	305	36.5	66		13.7	54	48	29	05	3	42	74	9	46			
4	236	36.9		16.0	320	01.9	64		19.0	53	48	27	7	01	25	72	10	03			
5	251	37.0	-10	15.1	334	27.2	63	-27	24.2	52	50	5	47	6	25	6	58	3	11		
6	266	37.1	-10	14.2	348	52.4	62	-27	29.1	49	45	5	46	6	20	6	50	2	42		
7	281	37.2		13.3	3	17.5	61		34.0	49	40	45	16	44	19	67	11	10			
8	296	37.3		12.3	17	42.5	60		38.6	46	35	43	13	38	2	00	65		30		
9	311	37.3		11.4	32	07.4	59		43.1	45	30	41	09	34	1	44	64	11	46		
10	326	37.4		10.5	46	32.2	58		47.4	43	20	37	6	03	25	1	17	62	12	14	
11	341	37.5	-10	09.6	60	56.9	57	-27	51.6	42	10 N	5	31	5	56	6	17	0	54		
12	356	37.6	-10	08.7	75	21.5	56	-27	55.6	40	0	5	25	5	49	6	10	0	33		
13	11	37.7		07.8	89	46.0	55	-27	59.4	38	10 S	16	41	6	03	0	11	58		23	
14	26	37.7		06.9	104	10.4	54	-28	03.1	37	20	5	06	32	5	55	**	**	**	13	47
15	41	37.8		06.0	118	34.7	53		06.6	35	30	4	52	21	46	**	**	**	14	15	
16	56	37.9		05.0	132	58.9	52		09.9	33	35	43	14	40	23	59	63		31	64	
17	71	38.0	-10	04.1	147	23.0	51	-28	13.1	32	40	4	32	5	06	5	34	23	39	63	
18	86	38.1	-10	03.2	161	47.0	50	-28	16.0	29	45	4	19	4	56	5	27	23	15	64	
19	101	38.1		02.3	176	11.0	50		18.8	28	50	4	02	44	18	22	45	63	15	45	
20	116	38.2		01.4	190	34.8	48		21.4	26	52	3	53	38	14	29	64	16	00	65	
21	131	38.3	-10	00.5	204	58.6	48		23.9	25	54	44	32	10	22	12	63		17	66	
22	146	38.4	-9	59.6	219	22.3	47		26.1	22	56	32	24	05	21	51	63	16	38	66	
23	161	38.5		58.6	233	45.9	46		28.2	21	58	19	16	5	00	21	24	62	17	05	
24	176	38.5	-9	57.7	248	09.4	45	-28	30.1	19	60 S	3	04	4	07	20	45	62	17	43	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 13 ^h 50 ^m 7		Mag: -4.8 PMG: 9 ^h 24 ^m		Mag: +0.6 PMG: 17 ^h 50 ^m		Mag: -2.2 PMG: 4 ^h 58 ^m		Mag: -0.1 PMG: 22 ^h 23 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	151	45.6	218	50.8	-16	15.8	92	12.8	+22	19.8	285	11.2	-16	12.2	23	16.1	+19	29.2
1	166	48.1	233	51.7		15.9	107	13.9		20.1	300	13.6		12.3	38	18.8		29.2
2	181	50.5	248	52.6		15.9	122	15.1		20.3	315	15.9		12.3	53	21.4		29.3
3	196	53.0	263	53.5		16.0	137	16.2		20.6	330	18.3		12.3	68	24.0		29.3
4	211	55.5	278	54.4		16.0	152	17.3		20.8	345	20.7		12.3	83	26.7		29.3
5	226	57.9	293	55.3	-16	16.1	167	18.4	+22	21.1	0	23.1	-16	12.3	98	29.3	+19	29.4
6	242	00.4	308	56.2	-16	16.1	182	19.6	+22	21.3	15	25.5	-16	12.3	113	32.0	+19	29.4
7	257	02.9	323	57.1		16.2	197	20.7		21.6	30	27.8		12.4	128	34.6		29.5
8	272	05.3	338	57.9		16.2	212	21.8		21.8	45	30.2		12.4	143	37.2		29.5
9	287	07.8	353	58.8		16.3	227	22.9		22.1	60	32.6		12.4	158	39.9		29.6
10	302	10.3	8	59.7		16.3	242	24.1		22.3	75	35.0		12.4	173	42.5		29.6
11	317	12.7	24	00.6	-16	16.4	257	25.2	+22	22.6	90	37.4	-16	12.4	188	45.1	+19	29.7
12	332	15.2	39	01.5	-16	16.4	272	26.3	+22	22.8	105	39.7	-16	12.4	203	47.8	+19	29.7
13	347	17.6	54	02.4		16.5	287	27.4		23.1	120	42.1		12.4	218	50.4		29.7
14	2	20.1	69	03.2		16.5	302	28.5		23.3	135	44.5		12.5	233	53.0		29.8
15	17	22.6	84	04.1		16.6	317	29.7		23.6	150	46.9		12.5	248	55.7		29.8
16	32	25.0	99	05.0		16.6	332	30.8		23.8	165	49.3		12.5	263	58.3		29.9
17	47	27.5	114	05.8	-16	16.7	347	31.9	+22	24.1	180	51.7	-16	12.5	279	01.0	+19	29.9
18	62	30.0	129	06.7	-16	16.7	2	33.0	+22	24.3	195	54.0	-16	12.5	294	03.6	+19	30.0
19	77	32.4	144	07.6		16.8	17	34.2		24.6	210	56.4		12.5	309	06.2		30.0
20	92	34.9	159	08.4		16.8	32	35.3		24.8	225	58.8		12.5	324	08.9		30.1
21	107	37.4	174	09.3		16.8	47	36.4		25.1	241	01.2		12.6	339	11.5		30.1
22	122	39.8	189	10.1		16.9	62	37.5		25.3	256	03.6		12.6	354	14.1		30.1
23	137	42.3	204	11.0		16.9	77	38.6		25.6	271	06.0		12.6	9	16.8		30.2
24	152	44.8	219	11.8	-16	17.0	92	39.7	+22	25.8	286	08.3	-16	12.6	24	19.4	+19	30.2
Dif	—		+9	0			+11	+3			+24	0			+26	0		

UT	SOL		☾ LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 16 ^h 2		Edad: 24 ^d 4 PHE { 4 ^h : 58 ^m 5 12 ^h : 58 ^m 8 20 ^h : 59 ^m 2												
	PMG: 12 ^h 13 ^m 4		SD: 15 ^h 9 PMG: 7 ^h 46 ^m R°: 63 ^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	176	38.5	-9 57.7	248	09.4	-28 30.1	17	60 N	17 11	17 54	18 42	6 32	42	9 01	89
1	191	38.6	56.8	262	32.9	31.8	45	58	16	57	42	5 48	50	9 45	80
2	206	38.7	55.9	276	56.2	33.4	16	56	21	59	42	5 18	54	10 14	77
3	221	38.8	55.0	291	19.5	34.7	13	54	25	18 01	42	4 56	55	37	75
4	236	38.9	54.1	305	42.8	35.9	12	52	28	03	42	37	57	10 55	74
5	251	39.0	-9 53.1	320	05.9	-28 36.9	10	50	17 32	18 05	18 42	4 21	58	11 11	73
6	266	39.1	-9 52.2	334	29.0	-28 37.6	7	45	17 39	18 09	18 43	3 50	59	11 43	70
7	281	39.1	51.3	348	52.1	38.2	6	40	45	12	44	26	59	12 07	69
8	296	39.2	50.4	3	15.0	38.6	4	35	50	16	45	3 05	61	27	68
9	311	39.3	49.5	17	37.9	38.9	3	30	17 55	19	47	2 48	61	12 44	67
10	326	39.4	48.6	32	00.8	38.9	0	20	18 03	25	51	2 19	62	13 13	66
11	341	39.5	-9 47.6	46	23.6	-28 38.7	2	10 N	18 10	18 31	18 56	1 55	62	13 38	64
12	356	39.6	-9 46.7	60	46.3	-28 38.4	3	0	18 17	18 38	19 02	1 32	62	14 01	63
13	11	39.7	45.8	75	09.0	37.8	6	10 S	24	45	10	1 09	62	24	62
14	26	39.7	44.9	89	31.7	37.1	7	20	31	18 54	20	0 44	63	14 49	60
15	41	39.8	44.0	103	54.3	36.1	10	30	40	19 04	33	0 16	63	15 18	58
16	56	39.9	43.0	118	16.9	35.0	11	35	45	11	42	** ** *	**	35	56
17	71	40.0	-9 42.1	132	39.4	-28 33.6	14	40	18 51	19 19	19 52	** ** *	**	15 54	56
18	86	40.1	-9 41.2	147	01.9	-28 32.1	15	45	18 57	19 28	20 05	** ** *	**	16 19	53
19	101	40.2	40.3	161	24.3	30.4	17	50	19 06	40	22	23 48	81	16 49	50
20	116	40.3	39.4	175	46.8	28.4	20	52	09	45	30	33	83	17 05	48
21	131	40.4	38.4	190	09.1	26.3	21	54	13	51	39	23 15	86	23	45
22	146	40.4	37.5	204	31.5	24.0	23	56	18	19 58	20 49	22 54	89	17 44	42
23	161	40.5	36.6	218	53.9	21.4	26	58	23	20 06	21 02	22 26	95	18 12	36
24	176	40.6	-9 35.7	233	16.2	-28 18.7	27	60 S	19 29	20 15	21 16	21 47	107	18 51	25

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 13 ^h 46 ^m 8		Mag: -4.8 PMG: 9 ^h 23 ^m		Mag: +0.7 PMG: 17 ^h 48 ^m		Mag: -2.2 PMG: 4 ^h 55 ^m		Mag: -0.1 PMG: 22 ^h 19 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	152	44.8	219	11.8	92	39.7	286	08.3	24	19.4
1	167	47.2	234	12.7	107	40.9	301	10.7	39	22.0
2	182	49.7	249	13.5	122	42.0	316	13.1	54	24.7
3	197	52.1	264	14.4	137	43.1	331	15.5	69	27.3
4	212	54.6	279	15.2	152	44.2	346	17.9	84	29.9
5	227	57.1	294	16.0	167	45.3	1	20.3	99	32.6
6	242	59.5	309	16.9	182	46.5	16	22.7	114	35.2
7	258	02.0	324	17.7	197	47.6	31	25.1	129	37.8
8	273	04.5	339	18.5	212	48.7	46	27.4	144	40.5
9	288	06.9	354	19.4	227	49.8	61	29.8	159	43.1
10	303	09.4	9	20.2	242	50.9	76	32.2	174	45.7
11	318	11.9	24	21.0	257	52.0	91	34.6	189	48.4
12	333	14.3	39	21.8	272	53.1	106	37.0	204	51.0
13	348	16.8	54	22.7	287	54.3	121	39.4	219	53.6
14	3	19.3	69	23.5	302	55.4	136	41.8	234	56.3
15	18	21.7	84	24.3	317	56.5	151	44.2	249	58.9
16	33	24.2	99	25.1	332	57.6	166	46.6	265	01.5
17	48	26.6	114	25.9	347	58.7	181	48.9	280	04.2
18	63	29.1	129	26.7	2	59.8	196	51.3	295	06.8
19	78	31.6	144	27.5	18	00.9	211	53.7	310	09.4
20	93	34.0	159	28.3	33	02.1	226	56.1	325	12.1
21	108	36.5	174	29.1	48	03.2	241	58.5	340	14.7
22	123	39.0	189	29.9	63	04.3	257	00.9	355	17.3
23	138	41.4	204	30.7	78	05.4	272	03.3	10	20.0
24	153	43.9	219	31.5	93	06.5	287	05.7	25	22.6
Dif	—		+8	0	+11	+2	+24	0	+26	0

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna				
	SD: 16/2 PMG: 12 ^h 13 ^m 2			Edad: 25 ^d 4 PHE	4 ^h : 59/5 12 ^h : 59/8 20 ^h : 60/0			Náutico	Civil		Hora	R°	Hora	R°			
	hG ☉	Dec			hG ☾	Dif									Dec	Dif	
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m		
0	176	40.6	-9	35.7	233	16.2	-28	18.7	29	60 N	5	43	6	31	7	13	
1	191	40.7		34.8	247	38.5	33	15.8	29	58	43		29	09	6	38	
2	206	40.8		33.8	262	00.8	33	12.7	31	56	44		27	04	6	12	
3	221	40.9		32.9	276	23.0	32	09.3	34	54	44		25	7	01	5	51
4	236	41.0		32.0	290	45.3	33	05.8	35	52	44		23	6	57	3	40
5	251	41.1	-9	31.1	305	07.5	32	-28	02.1	37	50	5	44	6	54	5	19
6	266	41.2	-9	30.1	319	29.8	33	-27	58.2	39	45	5	43	6	17	6	47
7	281	41.3		29.2	333	52.0	32	54.0	42	40	42		14	41	25	51	
8	296	41.3		28.3	348	14.3	33	49.7	43	35	41		10	36	4	06	
9	311	41.4		27.4	2	36.5	32	45.2	45	30	40		07	31	3	49	
10	326	41.5		26.4	16	58.8	33	40.4	48	20	36	6	01	24	3	21	
11	341	41.6	-9	25.5	31	21.0	32	-27	35.5	49	10 N	5	31	5	55	6	17
12	356	41.7	-9	24.6	45	43.3	33	-27	30.4	51	0	5	25	5	49	6	10
13	11	41.8		23.7	60	05.6	33	25.1	53	10 S	17		42	6	03	2	11
14	26	41.9		22.7	74	27.8	32	19.5	56	20	5	07	33	5	56	1	47
15	41	42.0		21.8	88	50.2	34	13.8	57	30	4	54	23	47	19	70	
16	56	42.1		20.9	103	12.5	33	07.9	59	35	45		16	42	1	02	
17	71	42.2	-9	20.0	117	34.8	33	-27	01.8	61	40	4	35	5	08	5	36
18	86	42.3	-9	19.0	131	57.2	34	-26	55.4	64	45	4	22	4	59	5	30
19	101	42.4		18.1	146	19.6	34	48.9	65	50	4	06	48	22	**	**	
20	116	42.5		17.2	160	42.0	34	42.2	67	52	3	58	42	18	**	**	
21	131	42.6		16.3	175	04.5	35	35.3	69	54	49		36	14	**	**	
22	146	42.6		15.3	189	27.0	35	28.2	71	56	38		29	09	**	**	
23	161	42.7		14.4	203	49.5	35	20.9	73	58	26		21	5	04	**	**
24	176	42.8	-9	13.5	218	12.1	36	-26	13.4	75	60 S	3	11	4	13	4	59

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 13 ^h 42 ^m 8		Mag: -4.8 PMG: 9 ^h 21 ^m		Mag: +0.7 PMG: 17 ^h 46 ^m		Mag: -2.2 PMG: 4 ^h 51 ^m		Mag: -0.1 PMG: 22 ^h 15 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	153	43.9	219	31.5	-16	17.8	93	06.5	+22	31.8	287	05.7	-16	12.9	25	22.6	+19	31.3
1	168	46.4	234	32.3		17.8	108	07.6		32.0	302	08.1		12.9	40	25.2		31.3
2	183	48.8	249	33.1		17.9	123	08.7		32.3	317	10.5		12.9	55	27.9		31.4
3	198	51.3	264	33.9		17.9	138	09.8		32.5	332	12.9		12.9	70	30.5		31.4
4	213	53.8	279	34.7		17.9	153	10.9		32.8	347	15.3		13.0	85	33.1		31.4
5	228	56.2	294	35.5	-16	17.9	168	12.0	+22	33.0	2	17.7	-16	13.0	100	35.8	+19	31.5
6	243	58.7	309	36.2	-16	18.0	183	13.2	+22	33.3	17	20.1	-16	13.0	115	38.4	+19	31.5
7	259	01.1	324	37.0		18.0	198	14.3		33.5	32	22.5		13.0	130	41.0		31.6
8	274	03.6	339	37.8		18.0	213	15.4		33.8	47	24.9		13.0	145	43.7		31.6
9	289	06.1	354	38.6		18.0	228	16.5		34.0	62	27.2		13.0	160	46.3		31.7
10	304	08.5	9	39.3		18.1	243	17.6		34.3	77	29.6		13.0	175	48.9		31.7
11	319	11.0	24	40.1	-16	18.1	258	18.7	+22	34.5	92	32.0	-16	13.0	190	51.5	+19	31.7
12	334	13.5	39	40.9	-16	18.1	273	19.8	+22	34.7	107	34.4	-16	13.0	205	54.2	+19	31.8
13	349	15.9	54	41.6		18.1	288	20.9		35.0	122	36.8		13.1	220	56.8		31.8
14	4	18.4	69	42.4		18.2	303	22.0		35.2	137	39.2		13.1	235	59.4		31.9
15	19	20.9	84	43.2		18.2	318	23.1		35.5	152	41.6		13.1	251	02.1		31.9
16	34	23.3	99	43.9		18.2	333	24.2		35.7	167	44.0		13.1	266	04.7		32.0
17	49	25.8	114	44.7	-16	18.2	348	25.3	+22	36.0	182	46.4	-16	13.1	281	07.3	+19	32.0
18	64	28.3	129	45.4	-16	18.2	3	26.4	+22	36.2	197	48.8	-16	13.1	296	10.0	+19	32.0
19	79	30.7	144	46.2		18.3	18	27.5		36.5	212	51.2		13.1	311	12.6		32.1
20	94	33.2	159	46.9		18.3	33	28.6		36.7	227	53.6		13.1	326	15.2		32.1
21	109	35.6	174	47.7		18.3	48	29.7		36.9	242	56.0		13.1	341	17.8		32.2
22	124	38.1	189	48.4		18.3	63	30.8		37.2	257	58.4		13.2	356	20.5		32.2
23	139	40.6	204	49.2		18.3	78	32.0		37.4	273	00.8		13.2	11	23.1		32.2
24	154	43.0	219	49.9	-16	18.3	93	33.1	+22	37.7	288	03.2	-16	13.2	26	25.7	+19	32.3

Dif	—	+8	0	+11	+2	+24	0	+26	0

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16:2 PMG: 12 ^h 13 ^m 1			Edad: 26 ^d 4 PHE { 4 ^h : 60':3 12 ^h : 60':6 20 ^h : 60':8 SD: 16:4 PMG: 9 ^h 52 ^m R°: 60 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	
0	176	42.8	-9	13.5	218	12.1	-26 13.4	60 N	17 17	17 59	18 47	7 27 3	12 29 121	
1	191	42.9		12.6	232	34.7	-26 05.7	58	21	18 01	47	7 03 12	12 52 112	
2	206	43.0		11.6	246	57.3	-25 57.9	56	25	03	46	6 44 18	13 10 106	
3	221	43.1		10.7	261	20.0	37 49.8	54	29	05	46	28 23	26 101	
4	236	43.2		09.8	275	42.8	38 41.5	52	32	06	45	14 27	39 97	
5	251	43.3	-9	08.8	290	05.5	37 -25 33.1	50	17 35	18 08	18 45	6 01 31	13 51 93	
6	266	43.4	-9	07.9	304	28.4	39 -25 24.5	45	17 42	18 11	18 45	5 36 36	14 15 87	
7	281	43.5		07.0	318	51.3	39 15.6	40	47	14	46	5 16 41	34 82	
8	296	43.6		06.0	333	14.2	39 -25 06.6	35	52	17	47	4 59 44	14 50 78	
9	311	43.7		05.1	347	37.2	40 -24 57.5	30	17 56	20	48	44 48	15 04 74	
10	326	43.8		04.2	2	00.2	40 48.1	20	18 03	26	51	4 19 53	27 69	
11	341	43.9	-9	03.3	16	23.3	41 -24 38.5	10 N	18 10	18 31	18 56	3 57 57	15 48 63	
12	356	44.0	-9	02.3	30	46.5	42 -24 28.8	0	18 16	18 37	19 02	3 37 61	16 06 59	
13	11	44.1		01.4	45	09.7	42 18.9	10 S	23	44	09	3 17 64	25 55	
14	26	44.2	-9	00.5	59	33.0	43 -24 08.8	20	30	18 52	18	2 55 69	16 44 50	
15	41	44.3	-8	59.5	73	56.4	44 -23 58.5	30	38	19 02	31	29 74	17 07 44	
16	56	44.4		58.6	88	19.8	44 48.1	35	42	08	39	2 14 77	20 41	
17	71	44.5	-8	57.7	102	43.3	45 -23 37.5	40	18 48	19 16	19 49	1 57 80	17 35 37	
18	86	44.6	-8	56.7	117	06.9	46 -23 26.7	45	18 54	19 24	20 01	1 35 86	17 53 32	
19	101	44.7		55.8	131	30.5	46 15.7	50	19 02	35	17	1 09 91	18 15 26	
20	116	44.8		54.9	145	54.2	47 -23 04.6	52	05	41	24	0 56 94	25 23	
21	131	44.9		53.9	160	18.0	48 -22 53.3	54	09	46	33	41 98	37 19	
22	146	45.0		53.0	174	41.8	48 41.8	56	13	19 53	43	23 104	18 51 14	
23	161	45.1		52.1	189	05.7	49 30.2	58	18	20 00	20 54	0 01 111	19 06 9	
24	176	45.2	-8	51.1	203	29.7	50 -22 18.4	60 S	19 23	20 09	21 08	** ** *	19 24 3	
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 13 ^h 38 ^m 9		Mag: -4.8 PMG: 9 ^h 20 ^m		Mag: +0.7 PMG: 17 ^h 44 ^m		Mag: -2.2 PMG: 4 ^h 47 ^m		Mag: -0.1 PMG: 22 ^h 10 ^m					
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	154	43.0	219	49.9	-16 18.3	93 33.1	+22 37.7	288 03.2	-16 13.2	26 25.7	+19 32.3			
1	169	45.5	234	50.7	18.4	108 34.2	37.9	303 05.6	13.2	41 28.4	32.3			
2	184	48.0	249	51.4	18.4	123 35.3	38.2	318 08.0	13.2	56 31.0	32.4			
3	199	50.4	264	52.1	18.4	138 36.4	38.4	333 10.4	13.2	71 33.6	32.4			
4	214	52.9	279	52.9	18.4	153 37.5	38.6	348 12.8	13.2	86 36.3	32.5			
5	229	55.4	294	53.6	-16 18.4	168 38.6	+22 38.9	3 15.2	-16 13.2	101 38.9	+19 32.5			
6	244	57.8	309	54.3	-16 18.4	183 39.7	+22 39.1	18 17.6	-16 13.2	116 41.5	+19 32.5			
7	260	00.3	324	55.1	18.4	198 40.8	39.4	33 20.0	13.2	131 44.1	32.6			
8	275	02.8	339	55.8	18.4	213 41.9	39.6	48 22.4	13.2	146 46.8	32.6			
9	290	05.2	354	56.5	18.5	228 43.0	39.9	63 24.8	13.3	161 49.4	32.7			
10	305	07.7	9	57.2	18.5	243 44.1	40.1	78 27.3	13.3	176 52.0	32.7			
11	320	10.1	24	57.9	-16 18.5	258 45.2	+22 40.3	93 29.7	-16 13.3	191 54.6	+19 32.7			
12	335	12.6	39	58.7	-16 18.5	273 46.3	+22 40.6	108 32.1	-16 13.3	206 57.3	+19 32.8			
13	350	15.1	54	59.4	18.5	288 47.4	40.8	123 34.5	13.3	221 59.9	32.8			
14	5	17.5	70	00.1	18.5	303 48.5	41.1	138 36.9	13.3	237 02.5	32.9			
15	20	20.0	85	00.8	18.5	318 49.6	41.3	153 39.3	13.3	252 05.2	32.9			
16	35	22.5	100	01.5	18.5	333 50.7	41.5	168 41.7	13.3	267 07.8	33.0			
17	50	24.9	115	02.2	-16 18.5	348 51.7	+22 41.8	183 44.1	-16 13.3	282 10.4	+19 33.0			
18	65	27.4	130	02.9	-16 18.5	3	52.8	198 46.5	-16 13.3	297 13.0	+19 33.0			
19	80	29.9	145	03.6	18.5	18 53.9	42.3	213 48.9	13.3	312 15.7	33.1			
20	95	32.3	160	04.3	18.5	33 55.0	42.5	228 51.3	13.3	327 18.3	33.1			
21	110	34.8	175	05.0	18.5	48 56.1	42.7	243 53.7	13.4	342 20.9	33.2			
22	125	37.2	190	05.7	18.5	63 57.2	43.0	258 56.1	13.4	357 23.5	33.2			
23	140	39.7	205	06.4	18.5	78 58.3	43.2	273 58.5	13.4	12 26.2	33.2			
24	155	42.2	220	07.1	-16 18.5	93 59.4	+22 43.5	289 00.9	-16 13.4	27 28.8	+19 33.3			
Dif	—		+7		0	+11 +2		+24 0		+26		0		

UT	SOL			● LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16/2 PMG: 12 ^h 12 ^m 9			Edad: 27 ^d 4 PHE { 4 ^h : 61'0 12 ^h : 61'1 20 ^h : 61'3 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	176	45.2	-8 51.1	203	29.7	-22 18.4	120	60 N	5 38	6 26	7 08	7 30	0	14 30	117	
1	191	45.3		217	53.8	-22 06.4	121	58	38	24	7 03	15	6	44	111	
2	206	45.4	49.3	232	17.9	-21 54.3	121	56	39	22	6 59	7 02	11	14 56	106	
3	221	45.5	48.3	246	42.2	42.1	122	54	39	20	56	6 51	15	15 07	101	
4	236	45.6	47.4	261	06.5	29.6	125	52	40	19	53	41	18	16	97	
5	251	45.7	-8 46.5	275	30.8	-21 17.0	126	50	5 40	6 17	6 50	6 32	22	15 24	94	
6	266	45.8	-8 45.5	289	55.3	-21 04.3	127	45	5 40	6 14	6 44	6 12	29	15 42	87	
7	281	45.9	44.6	304	19.8	-20 51.4	129	40	40	11	38	5 57	33	15 56	82	
8	296	46.0	43.7	318	44.5	38.4	130	35	39	08	34	43	38	16 08	77	
9	311	46.1	42.7	333	09.2	25.2	132	30	38	05	29	32	41	18	74	
10	326	46.2	41.8	347	33.9	-20 11.9	133	20	34	6 00	22	5 12	47	36	67	
11	341	46.3	-8 40.9	1	58.8	-19 58.4	135	10 N	5 30	5 55	6 16	4 54	53	16 51	61	
12	356	46.4	-8 39.9	16	23.8	-19 44.8	136	0	5 24	5 49	6 10	4 38	57	17 05	56	
13	11	46.5	39.0	30	48.8	31.1	137	10 S	17	42	6 03	21	63	20	50	
14	26	46.6	38.0	45	13.9	17.2	139	20	5 08	34	5 56	4 04	67	34	46	
15	41	46.7	37.1	59	39.1	-19 03.2	140	30	4 55	24	49	3 43	74	17 51	39	
16	56	46.9	36.2	74	04.4	-18 49.0	142	35	47	18	44	31	78	18 01	35	
17	71	47.0	-8 35.2	88	29.7	-18 34.7	143	40	4 38	5 11	5 39	3 17	82	18 12	31	
18	86	47.1	-8 34.3	102	55.2	-18 20.3	144	45	4 25	5 02	5 33	3 01	87	18 25	26	
19	101	47.2	33.4	117	20.7	-18 05.8	145	50	10	4 51	25	2 40	94	41	19	
20	116	47.3	32.4	131	46.3	-17 51.1	147	52	4 02	46	22	30	98	48	17	
21	131	47.4	31.5	146	12.0	36.3	148	54	3 54	41	18	19	102	18 56	13	
22	146	47.5	30.5	160	37.8	21.4	149	56	44	34	14	2 07	106	19 05	10	
23	161	47.6	29.6	175	03.7	-17 06.4	150	58	32	27	09	1 52	112	15	5	
24	176	47.7	-8 28.7	189	29.6	-16 51.2	152	60 S	3 19	4 18	5 04	1 34	119	19 27	0	
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO			
	PMG 13 ^h 35 ^m 0			Mag: -4.8 PMG: 9 ^h 19 ^m			Mag: +0.7 PMG: 17 ^h 43 ^m			Mag: -2.2 PMG: 4 ^h 43 ^m			Mag: -0.1 PMG: 22 ^h 06 ^m			
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec					
h	°	'	°	°	'	°	'	°	°	'	°	°	'	°	°	
0	155	42.2	220 07.1	-16 18.5	93 59.4	+22 43.5	289 00.9	-16 13.4	27 28.8	+19 33.3						
1	170	44.6	235 07.8	18.5	109 00.5	43.7	304 03.4	13.4	42 31.4	33.3						
2	185	47.1	250 08.5	18.5	124 01.6	43.9	319 05.8	13.4	57 34.0	33.4						
3	200	49.6	265 09.2	18.5	139 02.7	44.2	334 08.2	13.4	72 36.7	33.4						
4	215	52.0	280 09.9	18.5	154 03.8	44.4	349 10.6	13.4	87 39.3	33.5						
5	230	54.5	295 10.5	-16 18.5	169 04.9	+22 44.7	4 13.0	-16 13.4	102 41.9	+19 33.5						
6	245	57.0	310 11.2	-16 18.5	184 06.0	+22 44.9	19 15.4	-16 13.4	117 44.6	+19 33.5						
7	260	59.4	325 11.9	18.5	199 07.1	45.1	34 17.8	13.4	132 47.2	33.6						
8	276	01.9	340 12.6	18.5	214 08.2	45.4	49 20.2	13.4	147 49.8	33.6						
9	291	04.4	355 13.2	18.5	229 09.3	45.6	64 22.6	13.4	162 52.4	33.7						
10	306	06.8	10 13.9	18.5	244 10.3	45.9	79 25.1	13.5	177 55.1	33.7						
11	321	09.3	25 14.6	-16 18.5	259 11.4	+22 46.1	94 27.5	-16 13.5	192 57.7	+19 33.7						
12	336	11.7	40 15.2	-16 18.5	274 12.5	+22 46.3	109 29.9	-16 13.5	208 00.3	+19 33.8						
13	351	14.2	55 15.9	18.5	289 13.6	46.6	124 32.3	13.5	223 02.9	33.8						
14	6	16.7	70 16.6	18.5	304 14.7	46.8	139 34.7	13.5	238 05.5	33.9						
15	21	19.1	85 17.2	18.5	319 15.8	47.0	154 37.1	13.5	253 08.2	33.9						
16	36	21.6	100 17.9	18.5	334 16.9	47.3	169 39.5	13.5	268 10.8	33.9						
17	51	24.1	115 18.6	-16 18.5	349 18.0	+22 47.5	184 41.9	-16 13.5	283 13.4	+19 34.0						
18	66	26.5	130 19.2	-16 18.5	4 19.1	+22 47.8	199 44.4	-16 13.5	298 16.0	+19 34.0						
19	81	29.0	145 19.9	18.5	19 20.2	48.0	214 46.8	13.5	313 18.7	34.1						
20	96	31.5	160 20.5	18.5	34 21.2	48.2	229 49.2	13.5	328 21.3	34.1						
21	111	33.9	175 21.2	18.5	49 22.3	48.5	244 51.6	13.5	343 23.9	34.1						
22	126	36.4	190 21.8	18.4	64 23.4	48.7	259 54.0	13.5	358 26.5	34.2						
23	141	38.9	205 22.5	18.4	79 24.5	48.9	274 56.4	13.5	13 29.2	34.2						
24	156	41.3	220 23.1	-16 18.4	94 25.6	+22 49.2	289 58.9	-16 13.5	28 31.8	+19 34.3						
Dif	—			+7 0	+11 +2			+24 0			+26 0					

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16:2 PMG: 12 ^h 12 ^m 7			Edad: 28 ^d 4 PHE { 4 ^h : 61 ^h 4 12 ^h : 61 ^h 4 20 ^h : 61 ^h 4 PMG: 11 ^h 48 ^m R°: 54 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec			Dif		Civil	Náutico	Hora	R°	Hora
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m
0	176	47.7	-8 28.7	189	29.6	-16 51.2	70	60 N	17 22	18 04	18 52	7 30 0	16 27 111		
1	191	47.8	27.7	203	55.6	36.0	152	58	26	06	51	21 4	35 106		
2	206	47.9	26.8	218	21.7	20.6	154	56	29	07	50	13 8	42 101		
3	221	48.0	25.9	232	47.9	-16 05.1	155	54	33	08	49	7 06 11	48 98		
4	236	48.1	24.9	247	14.2	-15 49.5	156	52	36	10	49	6 59 15	53 95		
5	251	48.2	-8 24.0	261	40.5	-15 33.9	156	50	17 38	18 11	18 48	6 54 17	16 58 92		
6	266	48.3	-8 23.0	276	07.0	-15 18.1	158	45	17 44	18 14	18 48	6 41 23	17 09 85		
7	281	48.5	22.1	290	33.5	-15 02.2	159	40	49	17	48	30 29	18 79		
8	296	48.6	21.2	305	00.1	-14 46.2	160	35	54	19	49	21 33	25 75		
9	311	48.7	20.2	319	26.7	30.1	161	30	17 58	22	49	6 13 37	32 71		
10	326	48.8	19.3	333	53.5	-14 13.9	162	20	18 04	26	52	5 59 43	43 64		
11	341	48.9	-8 18.3	348	20.3	-13 57.6	163	10 N	18 10	18 31	18 56	5 47 49	17 52 59		
12	356	49.0	-8 17.4	2	47.2	-13 41.2	164	0	18 16	18 37	19 01	5 35 55	18 01 53		
13	11	49.1	16.4	17	14.2	24.8	164	10 S	22	43	08	24 59	10 48		
14	26	49.2	15.5	31	41.2	-13 08.2	166	20	28	18 51	17	5 11 66	20 41		
15	41	49.3	14.6	46	08.4	-12 51.6	166	30	36	19 00	29	4 57 72	30 35		
16	56	49.4	13.6	60	35.6	34.9	167	35	40	06	36	49 76	36 31		
17	71	49.6	-8 12.7	75	02.8	-12 18.1	168	40	18 45	19 13	19 46	4 39 81	18 43 27		
18	86	49.7	-8 11.7	89	30.2	-12 01.3	168	45	18 51	19 21	19 57	4 28 86	18 51 22		
19	101	49.8	10.8	103	57.6	-11 44.3	170	50	18 57	31	20 12	14 93	19 00 17		
20	116	49.9	09.8	118	25.1	27.3	170	52	19 01	36	19	08 95	05 13		
21	131	50.0	08.9	132	52.6	-11 10.3	170	54	04	41	27	4 01 99	09 11		
22	146	50.1	08.0	147	20.3	-10 53.1	172	56	08	47	37	3 53 103	15 7		
23	161	50.2	07.0	161	48.0	35.9	172	58	12	19 54	20 48	44 107	20 4		
24	176	50.3	-8 06.1	176	15.7	-10 18.6	173	60 S	19 17	20 02	21 00	3 33 113	19 27 **		
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 13 ^h 31 ^m 0			Mag: -4.8 PMG: 9 ^h 18 ^m			Mag: +0.7 PMG: 17 ^h 41 ^m			Mag: -2.2 PMG: 4 ^h 39 ^m			Mag: -0.1 PMG: 22 ^h 02 ^m		
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♎	Dec	hG ♊	Dec	hG ♋	Dec	hG ♏	Dec	hG ♐	Dec
h	°	'	°	°	'	°	'	°	'	°	'	°	'	°	'
0	156	41.3	220 23.1	-16 18.4	94 25.6	+22 49.2	289 58.9	-16 13.5	28 31.8	+19 34.3					
1	171	43.8	235 23.7	18.4	109 26.7	49.4	305 01.3	13.5	43 34.4	34.3					
2	186	46.2	250 24.4	18.4	124 27.8	49.6	320 03.7	13.5	58 37.0	34.3					
3	201	48.7	265 25.0	18.4	139 28.9	49.9	335 06.1	13.6	73 39.7	34.4					
4	216	51.2	280 25.7	18.4	154 29.9	50.1	350 08.5	13.6	88 42.3	34.4					
5	231	53.6	295 26.3	-16 18.4	169 31.0	+22 50.4	5 10.9	-16 13.6	103 44.9	+19 34.5					
6	246	56.1	310 26.9	-16 18.3	184 32.1	+22 50.6	20 13.4	-16 13.6	118 47.5	+19 34.5					
7	261	58.6	325 27.6	18.3	199 33.2	50.8	35 15.8	13.6	133 50.1	34.5					
8	277	01.0	340 28.2	18.3	214 34.3	51.1	50 18.2	13.6	148 52.8	34.6					
9	292	03.5	355 28.8	18.3	229 35.4	51.3	65 20.6	13.6	163 55.4	34.6					
10	307	06.0	10 29.4	18.3	244 36.4	51.5	80 23.0	13.6	178 58.0	34.7					
11	322	08.4	25 30.1	-16 18.2	259 37.5	+22 51.8	95 25.5	-16 13.6	194 00.6	+19 34.7					
12	337	10.9	40 30.7	-16 18.2	274 38.6	+22 52.0	110 27.9	-16 13.6	209 03.2	+19 34.7					
13	352	13.3	55 31.3	18.2	289 39.7	52.2	125 30.3	13.6	224 05.9	34.8					
14	7	15.8	70 31.9	18.2	304 40.8	52.5	140 32.7	13.6	239 08.5	34.8					
15	22	18.3	85 32.5	18.2	319 41.9	52.7	155 35.1	13.6	254 11.1	34.9					
16	37	20.7	100 33.1	18.1	334 42.9	52.9	170 37.6	13.6	269 13.7	34.9					
17	52	23.2	115 33.8	-16 18.1	349 44.0	+22 53.2	185 40.0	-16 13.6	284 16.4	+19 34.9					
18	67	25.7	130 34.4	-16 18.1	4 45.1	+22 53.4	200 42.4	-16 13.6	299 19.0	+19 35.0					
19	82	28.1	145 35.0	18.1	19 46.2	53.6	215 44.8	13.6	314 21.6	35.0					
20	97	30.6	160 35.6	18.1	34 47.3	53.9	230 47.3	13.6	329 24.2	35.1					
21	112	33.1	175 36.2	18.0	49 48.3	54.1	245 49.7	13.6	344 26.8	35.1					
22	127	35.5	190 36.8	18.0	64 49.4	54.3	260 52.1	13.6	359 29.5	35.1					
23	142	38.0	205 37.4	18.0	79 50.5	54.6	275 54.5	13.6	14 32.1	35.2					
24	157	40.5	220 38.0	-16 17.9	94 51.6	+22 54.8	290 56.9	-16 13.6	29 34.7	+19 35.2					
Dif	—	+6	0	+11	+2	+24	0	+26	0						

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'1 PMG: 12 ^h 12 ^m 6			Edad: 29 ^d 4 SD: 16'7 PMG: 12 ^h 42 ^m	PHE { 4 ^h : 61'4 12 ^h : 61'4 20 ^h : 61'3 Rº: 51 ^m										
	hG ☉	Dec				hG ☾		Dif	Dec		Dif	Náutico	Civil	Hora	Rº
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	m
0	176	50.3	-8 06.1	176	15.7	-10 18.6	173	60 N	5 32	6 20	7 02	7 30	**	18 18	107
1	191	50.4	05.1	190	43.6	-10 01.3	173	58	33	19	6 58	25	3	21	102
2	206	50.6	04.2	205	11.5	-9 43.9	174	56	34	17	55	21	6	23	99
3	221	50.7	03.2	219	39.4	-9 26.5	174	54	35	16	51	17	10	26	95
4	236	50.8	02.3	234	07.4	-9 09.0	175	52	36	15	48	14	13	28	92
5	251	50.9	-8 01.4	248	35.5	-8 51.4	176	50	5 36	6 13	6 46	7 11	15	18 30	89
6	266	51.0	-8 00.4	263	03.7	-8 33.8	176	45	5 37	6 11	6 40	7 04	21	18 34	82
7	281	51.1	-7 59.5	277	31.9	-8 16.2	176	40	37	08	35	6 59	26	37	78
8	296	51.2	58.5	292	00.1	-7 58.5	177	35	36	06	31	54	30	40	73
9	311	51.4	57.6	306	28.4	-7 40.8	177	30	36	6 03	27	50	34	43	69
10	326	51.5	56.6	320	56.8	-7 23.0	178	20	33	5 59	21	42	41	47	62
11	341	51.6	-7 55.7	335	25.2	-7 05.2	178	10 N	5 29	5 54	6 15	6 36	46	18 51	56
12	356	51.7	-7 54.7	349	53.7	-6 47.3	179	0	5 24	5 48	6 09	6 30	51	18 54	51
13	11	51.8	53.8	4	22.3	-6 29.4	179	10 S	18	42	6 03	23	57	18 58	45
14	26	51.9	52.8	18	50.9	-6 11.5	179	20	5 09	35	5 57	17	63	19 01	40
15	41	52.1	51.9	33	19.5	-5 53.6	179	30	4 57	26	50	09	70	05	33
16	56	52.2	50.9	47	48.2	-5 35.6	180	35	49	20	46	05	74	07	30
17	71	52.3	-7 50.0	62	16.9	-5 17.6	180	40	4 40	5 13	5 41	6 00	78	19 10	25
18	86	52.4	-7 49.1	76	45.7	-4 59.6	180	45	4 29	5 05	5 35	5 54	83	19 13	21
19	101	52.5	48.1	91	14.5	-4 41.5	181	50	14	4 55	29	47	90	17	14
20	116	52.6	47.2	105	43.4	-4 23.5	180	52	4 07	50	25	43	93	18	12
21	131	52.8	46.2	120	12.3	-4 05.4	181	54	3 59	45	22	40	96	20	9
22	146	52.9	45.3	134	41.3	-3 47.3	181	56	49	39	18	36	100	22	6
23	161	53.0	44.3	149	10.3	-3 29.2	181	58	39	32	14	31	104	24	3
24	176	53.1	-7 43.4	163	39.3	-3 11.1	181	60 S	3 26	4 24	5 09	5 26	109	19 26	**
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG 13 ^h 27 ^m 1		Mag: -4.8 PMG: 9 ^h 17 ^m			Mag: +0.7 PMG: 17 ^h 39 ^m			Mag: -2.2 PMG: 4 ^h 35 ^m			Mag: -0.1 PMG: 21 ^h 58 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	
0	157	40.5	220	38.0	-16 17.9	94	51.6	+22 54.8	290	56.9	-16 13.6	29	34.7	+19 35.2	
1	172	42.9	235	38.6	17.9	109	52.7	55.0	305	59.4	13.6	44	37.3	35.3	
2	187	45.4	250	39.2	17.9	124	53.7	55.3	321	01.8	13.6	59	39.9	35.3	
3	202	47.8	265	39.8	17.9	139	54.8	55.5	336	04.2	13.7	74	42.6	35.3	
4	217	50.3	280	40.4	17.8	154	55.9	55.7	351	06.7	13.7	89	45.2	35.4	
5	232	52.8	295	40.9	-16 17.8	169	57.0	+22 56.0	6	09.1	-16 13.7	104	47.8	+19 35.4	
6	247	55.2	310	41.5	-16 17.8	184	58.0	+22 56.2	21	11.5	-16 13.7	119	50.4	+19 35.5	
7	262	57.7	325	42.1	17.7	199	59.1	56.4	36	13.9	13.7	134	53.0	35.5	
8	278	00.2	340	42.7	17.7	215	00.2	56.7	51	16.4	13.7	149	55.6	35.5	
9	293	02.6	355	43.3	17.7	230	01.3	56.9	66	18.8	13.7	164	58.3	35.6	
10	308	05.1	10	43.9	17.6	245	02.4	57.1	81	21.2	13.7	180	00.9	35.6	
11	323	07.6	25	44.4	-16 17.6	260	03.4	+22 57.3	96	23.6	-16 13.7	195	03.5	+19 35.7	
12	338	10.0	40	45.0	-16 17.6	275	04.5	+22 57.6	111	26.1	-16 13.7	210	06.1	+19 35.7	
13	353	12.5	55	45.6	17.5	290	05.6	57.8	126	28.5	13.7	225	08.7	35.7	
14	8	15.0	70	46.2	17.5	305	06.7	58.0	141	30.9	13.7	240	11.4	35.8	
15	23	17.4	85	46.7	17.5	320	07.7	58.3	156	33.4	13.7	255	14.0	35.8	
16	38	19.9	100	47.3	17.4	335	08.8	58.5	171	35.8	13.7	270	16.6	35.9	
17	53	22.3	115	47.9	-16 17.4	350	09.9	+22 58.7	186	38.2	-16 13.7	285	19.2	+19 35.9	
18	68	24.8	130	48.4	-16 17.4	5	10.9	+22 59.0	201	40.6	-16 13.7	300	21.8	+19 35.9	
19	83	27.3	145	49.0	17.3	20	12.0	59.2	216	43.1	13.7	315	24.4	36.0	
20	98	29.7	160	49.6	17.3	35	13.1	59.4	231	45.5	13.7	330	27.1	36.0	
21	113	32.2	175	50.1	17.2	50	14.2	59.6	246	47.9	13.7	345	29.7	36.0	
22	128	34.7	190	50.7	17.2	65	15.2	+22 59.9	261	50.4	13.7	0	32.3	36.1	
23	143	37.1	205	51.2	17.2	80	16.3	+23 00.1	276	52.8	13.7	15	34.9	36.1	
24	158	39.6	220	51.8	-16 17.1	95	17.4	+23 00.3	291	55.2	-16 13.7	30	37.5	+19 36.2	
Dif	—		+6 0			+11 +2			+24 0			+26 0			

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16 ^h 1 PMG: 12 ^h 12 ^m 4			Edad: 30 ^d 4 PHE { 4 ^h : 61'1 12 ^h : 61'0 20 ^h : 60'8 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	176	53.1	-7 43.4	163	39.3	-3 11.1		60 N	17 27	18 09	18 57	7 29 **	20 05 105		
1	191	53.2	42.4	178	08.4 ¹⁰¹	-2 53.0 ¹⁸¹		58	30	10	55	28 3	03 101		
2	206	53.3	41.5	192	37.5 ¹⁰¹	34.9 ¹⁸¹		56	34	11	54	27 7	02 97		
3	221	53.5	40.5	207	06.7 ¹⁰²	-2 16.7 ¹⁸²		54	37	12	53	27 9	01 93		
4	236	53.6	39.6	221	35.9 ¹⁰²	-1 58.6 ¹⁸¹		52	39	13	52	27 12	20 00 90		
5	251	53.7	-7 38.6	236	05.1 ¹⁰²	-1 40.5 ¹⁸¹		50	17 42	18 14	18 52	7 26 15	19 59 87		
6	266	53.8	-7 37.7	250	34.3 ¹⁰²	-1 22.3 ¹⁸²		45	17 47	18 17	18 51	7 25 21	19 56 82		
7	281	53.9	36.7	265	03.6 ¹⁰³	-1 04.2 ¹⁸¹		40	52	19	50	25 25	55 76		
8	296	54.1	35.8	279	32.9 ¹⁰³	-0 46.1 ¹⁸¹		35	55	21	50	24 29	53 72		
9	311	54.2	34.8	294	02.3 ¹⁰⁴	28.0 ¹⁸¹		30	17 59	23	51	24 32	52 68		
10	326	54.3	33.9	308	31.7 ¹⁰⁴	-0 09.9 ¹⁸¹		20	18 05	27	53	23 39	49 62		
11	341	54.4	-7 32.9	323	01.0 ¹⁰³	+0 08.2 ¹⁸¹		10 N	18 10	18 32	18 56	7 22 45	19 47 56		
12	356	54.5	-7 32.0	337	30.5 ¹⁰⁵	+0 26.3 ¹⁸¹		0	18 16	18 37	19 01	7 21 51	19 45 50		
13	11	54.7	31.0	351	59.9 ¹⁰⁴	+0 44.3 ¹⁸⁰		10 S	21	42	07	20 56	43 45		
14	26	54.8	30.1	6	29.4 ¹⁰⁵	+1 02.4 ¹⁸¹		20	27	49	15	20 61	41 39		
15	41	54.9	29.1	20	58.9 ¹⁰⁵	20.4 ¹⁸⁰		30	33	18 58	26	19 68	38 34		
16	56	55.0	28.2	35	28.4 ¹⁰⁵	38.4 ¹⁸⁰		35	37	19 03	34	19 72	37 29		
17	71	55.1	-7 27.2	49	57.9 ¹⁰⁵	+1 56.4 ¹⁸⁰		40	18 42	19 09	19 42	7 18 77	19 35 26		
18	86	55.3	-7 26.3	64	27.4 ¹⁰⁵	+2 14.3 ¹⁷⁹		45	18 47	19 17	19 53	7 17 82	19 34 20		
19	101	55.4	25.3	78	57.0 ¹⁰⁶	32.2 ¹⁷⁹		50	53	27	20 07	17 88	31 15		
20	116	55.5	24.3	93	26.5 ¹⁰⁵	+2 50.1 ¹⁷⁹		52	56	31	14	16 91	30 13		
21	131	55.6	23.4	107	56.1 ¹⁰⁶	+3 08.0 ¹⁷⁹		54	18 59	36	22	16 94	29 10		
22	146	55.8	22.4	122	25.7 ¹⁰⁶	25.8 ¹⁷⁸		56	19 03	42	31	16 97	28 6		
23	161	55.9	21.5	136	55.3 ¹⁰⁶	+3 43.6 ¹⁷⁸		58	07	48	41	15 102	27 3		
24	176	56.0	-7 20.5	151	24.9 ¹⁰⁶	+4 01.3 ¹⁷⁷		60 S	19 11	19 56	20 53	7 15 106	19 25 **		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 13 ^h 23 ^m 2		Mag: -4.8 PMG: 9 ^h 16 ^m			Mag: +0.8 PMG: 17 ^h 38 ^m			Mag: -2.2 PMG: 4 ^h 32 ^m			Mag: -0.1 PMG: 21 ^h 54 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	°	'	°	'	°	°	'	°	°	'	°	
0	158	39.6	220 51.8	-16 17.1		95 17.4	+23 00.3		291 55.2	-16 13.7		30 37.5	+19 36.2		
1	173	42.1	235 52.3	17.1		110 18.5	00.6		306 57.7	13.7		45 40.1	36.2		
2	188	44.5	250 52.9	17.0		125 19.5	00.8		322 00.1	13.7		60 42.8	36.2		
3	203	47.0	265 53.4	17.0		140 20.6	01.0		337 02.5	13.7		75 45.4	36.3		
4	218	49.4	280 54.0	16.9		155 21.7	01.2		352 05.0	13.7		90 48.0	36.3		
5	233	51.9	295 54.5	-16 16.9		170 22.7	+23 01.5		7 07.4	-16 13.7		105 50.6	+19 36.4		
6	248	54.4	310 55.1	-16 16.9		185 23.8	+23 01.7		22 09.8	-16 13.7		120 53.2	+19 36.4		
7	263	56.8	325 55.6	16.8		200 24.9	01.9		37 12.3	13.7		135 55.8	36.4		
8	278	59.3	340 56.2	16.8		215 25.9	02.2		52 14.7	13.7		150 58.5	36.5		
9	294	01.8	355 56.7	16.7		230 27.0	02.4		67 17.1	13.7		166 01.1	36.5		
10	309	04.2	10 57.2	16.7		245 28.1	02.6		82 19.6	13.7		181 03.7	36.5		
11	324	06.7	25 57.8	-16 16.6		260 29.1	+23 02.8		97 22.0	-16 13.7		196 06.3	+19 36.6		
12	339	09.2	40 58.3	-16 16.6		275 30.2	+23 03.1		112 24.4	-16 13.7		211 08.9	+19 36.6		
13	354	11.6	55 58.8	16.5		290 31.3	03.3		127 26.9	13.7		226 11.5	36.7		
14	9	14.1	70 59.4	16.5		305 32.4	03.5		142 29.3	13.7		241 14.1	36.7		
15	24	16.6	85 59.9	16.4		320 33.4	03.7		157 31.8	13.7		256 16.8	36.7		
16	39	19.0	101 00.4	16.4		335 34.5	04.0		172 34.2	13.7		271 19.4	36.8		
17	54	21.5	116 01.0	-16 16.3		350 35.6	+23 04.2		187 36.6	-16 13.7		286 22.0	+19 36.8		
18	69	23.9	131 01.5	-16 16.2		5 36.6	+23 04.4		202 39.1	-16 13.7		301 24.6	+19 36.8		
19	84	26.4	146 02.0	16.2		20 37.7	04.6		217 41.5	13.7		316 27.2	36.9		
20	99	28.9	161 02.5	16.1		35 38.7	04.9		232 44.0	13.7		331 29.8	36.9		
21	114	31.3	176 03.0	16.1		50 39.8	05.1		247 46.4	13.7		346 32.4	37.0		
22	129	33.8	191 03.6	16.0		65 40.9	05.3		262 48.8	13.7		1 35.0	37.0		
23	144	36.3	206 04.1	16.0		80 41.9	05.5		277 51.3	13.7		16 37.7	37.0		
24	159	38.7	221 04.6	-16 15.9		95 43.0	+23 05.8		292 53.7	-16 13.7		31 40.3	+19 37.1		
Dif	—		+5	+1		+11	+2		+24	0		+26	0		

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16'1 PMG: 12 ^h 12 ^m 2			Edad: 2 ^d 0	PHE { 4 ^h : 60'6 12 ^h : 60'3 20 ^h : 60'1 Rº: 51 ^m											
	hG ☉	Dec		hG ☾		Dif		Dec	Dif		Náutico	Civil	Hora	Rº	Hora	Rº
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m
0	176	56.0	-7	20.5	151	24.9	+4	01.3	60 N	5 26	6 14	6 56	7 27	0	21 50	107
1	191	56.1		19.6	165	54.6 ¹⁰⁷		19.0 ¹⁷⁷	58	28	13	53	31	3	44	101
2	206	56.3		18.6	180	24.2 ¹⁰⁶		36.7 ¹⁷⁷	56	29	12	49	34	6	39	97
3	221	56.4		17.7	194	53.8 ¹⁰⁶	+4	54.3 ¹⁷⁶	54	30	11	47	36	10	34	93
4	236	56.5		16.7	209	23.5 ¹⁰⁷	+5	11.9 ¹⁷⁶	52	31	10	44	39	13	30	89
5	251	56.6	-7	15.8	223	53.1 ¹⁰⁶	+5	29.4 ¹⁷⁵	50	5 32	6 09	6 42	7 41	15	21 26	87
6	266	56.7	-7	14.8	238	22.8 ¹⁰⁷	+5	46.9 ¹⁷⁵	45	5 33	6 07	6 37	7 46	21	21 18	80
7	281	56.9		13.9	252	52.4 ¹⁰⁶	+6	04.4 ¹⁷⁵	40	34	05	32	50	26	11	75
8	296	57.0		12.9	267	22.1 ¹⁰⁷		21.8 ¹⁷⁴	35	34	03	29	53	30	05	71
9	311	57.1		11.9	281	51.7 ¹⁰⁶		39.1 ¹⁷³	30	33	6 01	25	7 56	34	21 00	67
10	326	57.2		11.0	296	21.4 ¹⁰⁷	+6	56.4 ¹⁷³	20	32	5 57	19	8 02	40	20 51	61
11	341	57.4	-7	10.0	310	51.0 ¹⁰⁶	+7	13.6 ¹⁷²	10 N	5 28	5 53	6 14	8 07	45	20 43	56
12	356	57.5	-7	09.1	325	20.6 ¹⁰⁶	+7	30.7 ¹⁷¹	0	5 24	5 48	6 09	8 12	50	20 35	51
13	11	57.6		08.1	339	50.3 ¹⁰⁷	+7	47.9 ¹⁷²	10 S	18	42	6 04	16	56	28	46
14	26	57.8		07.2	354	19.9 ¹⁰⁶	+8	04.9 ¹⁷⁰	20	5 10	36	5 58	21	62	20	41
15	41	57.9		06.2	8	49.5 ¹⁰⁶		21.9 ¹⁷⁰	30	4 59	27	51	27	68	12	34
16	56	58.0		05.3	23	19.1 ¹⁰⁶		38.8 ¹⁶⁹	35	51	22	48	31	71	06	32
17	71	58.1	-7	04.3	37	48.7 ¹⁰⁶	+8	55.6 ¹⁶⁸	40	4 43	5 16	5 43	8 35	75	20 01	27
18	86	58.3	-7	03.3	52	18.3 ¹⁰⁶	+9	12.4 ¹⁶⁸	45	4 32	5 08	5 38	8 39	81	19 54	23
19	101	58.4		02.4	66	47.9 ¹⁰⁶		29.1 ¹⁶⁷	50	18	4 59	32	45	87	46	17
20	116	58.5		01.4	81	17.5 ¹⁰⁶	+9	45.7 ¹⁶⁶	52	11	54	29	47	90	43	14
21	131	58.6	-7	00.5	95	47.0 ¹⁰⁵	+10	02.3 ¹⁶⁶	54	4 04	49	26	50	93	39	11
22	146	58.8	-6	59.5	110	16.5 ¹⁰⁵		18.8 ¹⁶⁵	56	3 55	44	23	53	97	34	8
23	161	58.9		58.6	124	46.1 ¹⁰⁶		35.2 ¹⁶⁴	58	45	37	19	8 57	101	30	3
24	176	59.0	-6	57.6	139	15.6 ¹⁰⁵	+10	51.5 ¹⁶³	60 S	3 33	4 30	5 14	9 01	105	19 24	**

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 13 ^h 19 ^m 2		Mag: -4.8 PMG: 9 ^h 15 ^m			Mag: +0.8 PMG: 17 ^h 36 ^m			Mag: -2.2 PMG: 4 ^h 28 ^m			Mag: -0.1 PMG: 21 ^h 50 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	159	38.7	221	04.6	-16	15.9	95	43.0	+23	05.8	292	53.7	-16	13.7	31	40.3	+19	37.1
1	174	41.2	236	05.1		15.9	110	44.1		06.0	307	56.2		13.7	46	42.9		37.1
2	189	43.7	251	05.6		15.8	125	45.1		06.2	322	58.6		13.7	61	45.5		37.1
3	204	46.1	266	06.1		15.7	140	46.2		06.4	338	01.0		13.7	76	48.1		37.2
4	219	48.6	281	06.6		15.7	155	47.3		06.7	353	03.5		13.7	91	50.7		37.2
5	234	51.0	296	07.1	-16	15.6	170	48.3	+23	06.9	8	05.9	-16	13.7	106	53.3	+19	37.3
6	249	53.5	311	07.6	-16	15.6	185	49.4	+23	07.1	23	08.4	-16	13.7	121	56.0	+19	37.3
7	264	56.0	326	08.1		15.5	200	50.4		07.3	38	10.8		13.7	136	58.6		37.3
8	279	58.4	341	08.6		15.4	215	51.5		07.6	53	13.2		13.7	152	01.2		37.4
9	295	00.9	356	09.1		15.4	230	52.6		07.8	68	15.7		13.7	167	03.8		37.4
10	310	03.4	11	09.6		15.3	245	53.6		08.0	83	18.1		13.7	182	06.4		37.4
11	325	05.8	26	10.1	-16	15.2	260	54.7	+23	08.2	98	20.6	-16	13.7	197	09.0	+19	37.5
12	340	08.3	41	10.6	-16	15.2	275	55.8	+23	08.5	113	23.0	-16	13.7	212	11.6	+19	37.5
13	355	10.8	56	11.1		15.1	290	56.8		08.7	128	25.5		13.7	227	14.2		37.6
14	10	13.2	71	11.6		15.0	305	57.9		08.9	143	27.9		13.7	242	16.8		37.6
15	25	15.7	86	12.1		15.0	320	58.9		09.1	158	30.4		13.7	257	19.5		37.6
16	40	18.2	101	12.6		14.9	336	00.0		09.3	173	32.8		13.7	272	22.1		37.7
17	55	20.6	116	13.0	-16	14.8	351	01.0	+23	09.6	188	35.2	-16	13.7	287	24.7	+19	37.7
18	70	23.1	131	13.5	-16	14.8	6	02.1	+23	09.8	203	37.7	-16	13.7	302	27.3	+19	37.7
19	85	25.5	146	14.0		14.7	21	03.2		10.0	218	40.1		13.7	317	29.9		37.8
20	100	28.0	161	14.5		14.6	36	04.2		10.2	233	42.6		13.7	332	32.5		37.8
21	115	30.5	176	15.0		14.5	51	05.3		10.5	248	45.0		13.7	347	35.1		37.9
22	130	32.9	191	15.4		14.5	66	06.3		10.7	263	47.5		13.7	2	37.7		37.9
23	145	35.4	206	15.9		14.4	81	07.4		10.9	278	49.9		13.6	17	40.3		37.9
24	160	37.9	221	16.4	-16	14.3	96	08.5	+23	11.1	293	52.4	-16	13.6	32	42.9	+19	38.0
Dif	—		+5		+1		+11		+2		+24		0		+26		0	

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: 3 ^d 0 PHE { SD: 16:3 PMG: 15 ^h 14 ^m					4 ^h : 59/8 12 ^h : 59/5 20 ^h : 59/2 R°: 52 ^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	176	59.0	-6	57.6	139	15.6	+10 51.5	60 N	17 32	18 14	19 02	7 27	**		23 37	107	
1	191	59.2		56.6	153	45.0 ¹⁰⁴	+11 07.8 ¹⁶³	58	35	15	19 00	34	5		25	101	
2	206	59.3		55.7	168	14.5 ¹⁰⁵	24.0 ¹⁶²	56	38	15	18 58	40	9		16	96	
3	221	59.4		54.7	182	44.0 ¹⁰⁵	40.1 ¹⁶¹	54	41	16	57	46	13		23 07	92	
4	236	59.5		53.8	197	13.4 ¹⁰⁴	+11 56.1 ¹⁶⁰	52	43	17	56	52	15		22 59	89	
5	251	59.7	-6	52.8	211	42.8 ¹⁰⁴	+12 12.0 ¹⁵⁹	50	17 45	18 17	18 55	7 56	19		22 53	85	
6	266	59.8	-6	51.9	226	12.2 ¹⁰⁴	+12 27.8 ¹⁵⁸	45	17 50	18 19	18 53	8 07	24		22 38	79	
7	281	59.9		50.9	240	41.5 ¹⁰³	43.6 ¹⁵⁸	40	54	21	52	16	29		26	74	
8	297	00.1		49.9	255	10.9 ¹⁰⁴	+12 59.3 ¹⁵⁷	35	17 57	23	52	23	33		16	70	
9	312	00.2		49.0	269	40.2 ¹⁰³	+13 14.8 ¹⁵⁵	30	18 00	24	52	30	36		22 07	67	
10	327	00.3		48.0	284	09.4 ¹⁰²	30.3 ¹⁵⁵	20	06	28	53	42	42		21 52	61	
11	342	00.5	-6	47.1	298	38.7 ¹⁰³	+13 45.7 ¹⁵⁴	10 N	18 11	18 32	18 56	8 52	47		21 39	56	
12	357	00.6	-6	46.1	313	07.9 ¹⁰²	+14 01.0 ¹⁵³	0	18 15	18 36	19 00	9 02	52		21 26	53	
13	12	00.7		45.1	327	37.1 ¹⁰²	16.2 ¹⁵²	10 S	20	41	06	12	56		14	48	
14	27	00.9		44.2	342	06.3 ¹⁰²	31.3 ¹⁵¹	20	25	47	13	23	61		21 01	43	
15	42	01.0		43.2	356	35.4 ¹⁰¹	+14 46.3 ¹⁵⁰	30	31	18 55	24	35	67		20 46	38	
16	57	01.1		42.3	11	04.5 ¹⁰¹	+15 01.2 ¹⁴⁹	35	35	19 00	31	42	71		38	34	
17	72	01.2	-6	41.3	25	33.6 ¹⁰¹	+15 16.0 ¹⁴⁸	40	18 39	19 06	19 39	9 50	75		20 28	31	
18	87	01.4	-6	40.3	40	02.7 ¹⁰¹	+15 30.6 ¹⁴⁶	45	18 44	19 13	19 49	10 00	80		20 17	26	
19	102	01.5		39.4	54	31.7 ¹⁰⁰	45.2 ¹⁴⁶	50	49	22	20 03	12	86		20 03	20	
20	117	01.6		38.4	69	00.7 ¹⁰⁰	+15 59.7 ¹⁴⁵	52	52	27	09	17	89		19 57	17	
21	132	01.8		37.5	83	29.6 ⁹⁹	+16 14.1 ¹⁴⁴	54	55	31	16	23	93		50	14	
22	147	01.9		36.5	97	58.5 ⁹⁹	28.4 ¹⁴³	56	18 58	37	24	30	97		42	10	
23	162	02.0		35.5	112	27.4 ⁹⁹	42.5 ¹⁴¹	58	19 01	42	34	38	101		33	6	
24	177	02.2	-6	34.6	126	56.3 ⁹⁹	+16 56.6 ¹⁴¹	60 S	19 05	19 49	20 45	10 46	108		19 23	1	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO							
	PMG: 13 ^h 15 ^m 3		Mag: -4.8 PMG: 9 ^h 15 ^m		Mag: +0.8 PMG: 17 ^h 34 ^m		Mag: -2.2 PMG: 4 ^h 24 ^m		Mag: -0.1 PMG: 21 ^h 45 ^m							
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec						
h	°	'	°	'	°	'	°	'	°	'						
0	160	37.9	221	16.4	96	08.5	+23 11.1	293	52.4	-16 13.6	32 42.9	+19 38.0				
1	175	40.3	236	16.9	111	09.5	11.3	308	54.8	13.6	47 45.6	38.0				
2	190	42.8	251	17.3	126	10.6	11.6	323	57.3	13.6	62 48.2	38.0				
3	205	45.3	266	17.8	141	11.6	11.8	338	59.7	13.6	77 50.8	38.1				
4	220	47.7	281	18.3	156	12.7	12.0	354	02.2	13.6	92 53.4	38.1				
5	235	50.2	296	18.7	171	13.7	+23 12.2	9 04.6	-16 13.6	107 56.0	+19 38.1					
6	250	52.6	311	19.2	186	14.8	+23 12.4	24 07.1	-16 13.6	122 58.6	+19 38.2					
7	265	55.1	326	19.7	201	15.8	12.7	39 09.5	13.6	138 01.2	38.2					
8	280	57.6	341	20.1	216	16.9	12.9	54 12.0	13.6	153 03.8	38.3					
9	296	00.0	356	20.6	231	18.0	13.1	69 14.4	13.6	168 06.4	38.3					
10	311	02.5	11 21.0	13.5	246	19.0	13.3	84 16.9	13.6	183 09.0	38.3					
11	326	05.0	26 21.5	-16 13.5	261	20.1	+23 13.5	99 19.3	-16 13.6	198 11.6	+19 38.4					
12	341	07.4	41 22.0	-16 13.4	276	21.1	+23 13.8	114 21.8	-16 13.6	213 14.2	+19 38.4					
13	356	09.9	56 22.4	13.3	291	22.2	14.0	129 24.2	13.6	228 16.9	38.4					
14	11	12.4	71 22.9	13.2	306	23.2	14.2	144 26.7	13.6	243 19.5	38.5					
15	26	14.8	86 23.3	13.1	321	24.3	14.4	159 29.1	13.6	258 22.1	38.5					
16	41	17.3	101 23.8	13.1	336	25.3	14.6	174 31.6	13.6	273 24.7	38.5					
17	56	19.8	116 24.2	-16 13.0	351	26.4	+23 14.8	189 34.0	-16 13.6	288 27.3	+19 38.6					
18	71	22.2	131 24.6	-16 12.9	6 27.4	+23 15.1	204 36.5	-16 13.6	303 29.9	+19 38.6						
19	86	24.7	146 25.1	12.8	21 28.5	15.3	219 39.0	13.6	318 32.5	38.7						
20	101	27.1	161 25.5	12.7	36 29.5	15.5	234 41.4	13.6	333 35.1	38.7						
21	116	29.6	176 26.0	12.6	51 30.6	15.7	249 43.9	13.6	348 37.7	38.7						
22	131	32.1	191 26.4	12.5	66 31.6	15.9	264 46.3	13.6	3 40.3	38.8						
23	146	34.5	206 26.8	12.4	81 32.7	16.2	279 48.8	13.6	18 42.9	38.8						
24	161	37.0	221 27.3	-16 12.3	96 33.7	+23 16.4	294 51.2	-16 13.5	33 45.5	+19 38.8						
Dif	—		+5		+11		+2		+25		0		+26		0	

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16 ^h 1			Edad: 4 ^d 0	PHE { 4 ^h : 58'8 12 ^h : 58'5 20 ^h : 58'2											
	PMG: 12 ^h 11 ^m 7					SD: 16 ^h 1		PMG: 16 ^h 06 ^m			R ^o : 54 ^m					
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R ^o	Hora	R ^o	
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m
0	177	02.2	-6 34.6	126	56.3	+16 56.6		60 N	5 21	6 09	6 50	7 26	2	***	***	***
1	192	02.3		141	25.1	+17 10.5	139	58	23	08	47	39	8	***	***	***
2	207	02.4		155	53.9		24.3	56	24	07	44	49	13	***	***	***
3	222	02.6		170	22.6		38.0	54	26	07	42	7 59	17	***	***	***
4	237	02.7		184	51.3	+17 51.6	136	52	27	06	40	8 07	20	***	***	***
5	252	02.8	-6 29.8	199	20.0	+18 05.1	135	50	5 28	6 05	6 38	8 15	23	***	***	***
6	267	03.0	-6 28.8	213	48.6	+18 18.5	134	45	5 30	6 04	6 33	8 31	29	23 57	75	
7	282	03.1		228	17.2		31.7	40	31	02	29	45	33	40	72	
8	297	03.3		242	45.7		44.8	35	31	6 01	26	8 56	37	26	68	
9	312	03.4		257	14.2	+18 57.8	130	30	31	5 59	23	9 06	40	23 14	66	
10	327	03.5		271	42.7	+19 10.7	129	20	30	56	18	24	45	22 53	61	
11	342	03.7	-6 24.0	286	11.2	+19 23.5	128	10 N	5 27	5 52	6 13	9 39	49	22 35	58	
12	357	03.8	-6 23.0	300	39.6	+19 36.1	126	0	5 23	5 48	6 08	9 54	53	22 19	54	
13	12	03.9		315	07.9	+19 48.6	125	10 S	18	43	6 04	10 08	57	22 02	51	
14	27	04.1		329	36.2	+20 01.0	124	20	11	37	5 59	24	61	21 44	47	
15	42	04.2		344	04.5		13.3	30	5 00	29	53	42	66	24	42	
16	57	04.3		358	32.7		25.4	35	4 53	24	49	10 53	69	21 12	40	
17	72	04.5	-6 18.2	13	00.9	+20 37.4	120	40	4 45	5 18	5 46	11 05	73	20 59	36	
18	87	04.6	-6 17.2	27	29.1	+20 49.3	119	45	4 35	5 11	5 41	11 20	77	20 43	32	
19	102	04.8		41	57.2	+21 01.0	117	50	22	5 02	35	38	83	23	27	
20	117	04.9		56	25.3		116	52	16	4 58	33	46	87	14	24	
21	132	05.0		70	53.3		115	54	08	53	30	11 56	90	20 04	20	
22	147	05.2		85	21.3		113	56	4 00	48	27	12 07	94	19 52	16	
23	162	05.3		99	49.3		112	58	3 51	42	23	19	101	39	11	
24	177	05.4	-6 11.5	114	17.2	+21 57.7	111	60 S	3 40	4 36	5 19	12 34	108	19 24	2	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO							
	PMG: 13 ^h 11 ^m 4		Mag: -4.7 PMG: 9 ^h 14 ^m		Mag: +0.8 PMG: 17 ^h 33 ^m		Mag: -2.3 PMG: 4 ^h 20 ^m		Mag: 0.0 PMG: 21 ^h 41 ^m							
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec						
h	°	'	°	'	°	'	°	'	°	'						
0	161	37.0	221	27.3	-16 12.3		96 33.7	+23 16.4	294 51.2	-16 13.5						
1	176	39.5	236	27.7		12.3	111 34.8		16.6	13.5						
2	191	41.9	251	28.1		12.2	126 35.8		16.8	13.5						
3	206	44.4	266	28.6		12.1	141 36.9		17.0	13.5						
4	221	46.9	281	29.0		12.0	156 37.9		17.2	13.5						
5	236	49.3	296	29.4	-16 11.9		171 39.0	+23 17.4	10 03.5	-16 13.5						
6	251	51.8	311	29.9	-16 11.8		186 40.0	+23 17.7	25 06.0	-16 13.5						
7	266	54.3	326	30.3		11.7	201 41.1		17.9	13.5						
8	281	56.7	341	30.7		11.6	216 42.1		18.1	13.5						
9	296	59.2	356	31.1		11.5	231 43.2		18.3	13.5						
10	312	01.6	11 31.6		11.4		246 44.2		18.5	13.5						
11	327	04.1	26 32.0	-16 11.3		11.3	261 45.3	+23 18.7	100 18.3	-16 13.5						
12	342	06.6	41 32.4	-16 11.2		11.2	276 46.3	+23 19.0	115 20.7	-16 13.5						
13	357	09.0	56 32.8		11.1		291 47.4		19.2	13.5						
14	12	11.5	71 33.2		11.0		306 48.4		19.4	13.5						
15	27	14.0	86 33.6		10.9		321 49.4		19.6	13.5						
16	42	16.4	101 34.0		10.8		336 50.5		19.8	13.5						
17	57	18.9	116 34.5	-16 10.7		10.7	351 51.5	+23 20.0	190 33.0	-16 13.4						
18	72	21.4	131 34.9	-16 10.6		10.6	6 52.6	+23 20.2	205 35.5	-16 13.4						
19	87	23.8	146 35.3		10.5		21 53.6		20.5	13.4						
20	102	26.3	161 35.7		10.4		36 54.7		20.7	13.4						
21	117	28.7	176 36.1		10.3		51 55.7		20.9	13.4						
22	132	31.2	191 36.5		10.2		66 56.8		21.1	13.4						
23	147	33.7	206 36.9		10.1		81 57.8		21.3	13.4						
24	162	36.1	221 37.3	-16 10.0		10.0	96 58.8	+23 21.5	295 50.3	-16 13.4						
Dif	—		+4	+1			+10	+2		+25	0		+26			

UT	SOL			 LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna		
	SD: 16 ^h 1			Edad: 5 ^d 0	PHE {	4 ^h : 57 ^m 9			12 ^h : 57 ^m 5		20 ^h : 57 ^m 2					
	PMG: 12 ^h 11 ^m 5					SD: 15 ^h 8			R°: 54 ^m							
	PMG: 17 ^h 00 ^m															
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Civil	Náutico		Hora	R°	Hora	R°	
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m
0	177	05.4	-6	11.5	114	17.2	+21	57.7	60 N	17 37	18 19	19 07	7 28	6	1 24	108
1	192	05.6		10.5	128	45.1	89	+22	08.6	58	40	19 05	7 47	14	1 06	99
2	207	05.7		09.5	143	12.9	88		19.4	56	42	19 03	8 02	21	0 52	92
3	222	05.9		08.6	157	40.7	88		30.1	54	44	20 19	16 24	39	87	
4	237	06.0		07.6	172	08.5	88		40.6	52	47	20 18	59 27	28	84	
5	252	06.1	-6	06.6	186	36.2	87	+22	51.0	50	17 48	18 21	18 58	8 38	31	0 18
6	267	06.3	-6	05.7	201	03.9	87	+23	01.2	45	17 52	18 22	18 56	9 00	36	** ** *
7	282	06.4		04.7	215	31.6	87		11.3	40	56	23 54	18 39	** ** *	**	
8	297	06.6		03.7	229	59.2	86		21.3	35	17 59	24 54	33 42	** ** *	**	
9	312	06.7		02.8	244	26.7	85		31.1	30	18 02	26 53	9 46	45	** ** *	**
10	327	06.8		01.8	258	54.3	86		40.7	20	06 28	54 10	09 48	23 54	60	
11	342	07.0	-6	00.8	273	21.8	85	+23	50.3	10 N	18 11	18 32	18 56	10 28	52	23 33
12	357	07.1	-5	59.9	287	49.2	84	+23	59.7	0	18 15	18 36	19 00	10 47	54	23 13
13	12	07.3		58.9	302	16.7	85	+24	08.9	10 S	19 40	05 11	05 58	22 53	52	
14	27	07.4		57.9	316	44.1	84		18.0	20	24 46	12 25	61 31	51	51	
15	42	07.5		57.0	331	11.4	83		26.9	30	29 53	21 11	48 65	22 06	48	
16	57	07.7		56.0	345	38.7	83		35.7	35	32 18	58 28	12 02	67	21 52	45
17	72	07.8	-5	55.0	0	06.0	83	+24	44.4	40	18 36	19 03	19 36	12 18	69	21 35
18	87	08.0	-5	54.1	14	33.3	83	+24	52.9	45	18 40	19 10	19 45	12 37	73	21 15
19	102	08.1		53.1	29	00.5	82	+25	01.2	50	45 18	19 58	13 01	78	20 50	36
20	117	08.3		52.1	43	27.7	82		09.4	52	47 22	20 04	13 80	38	33	
21	132	08.4		51.2	57	54.9	82		17.5	54	50 26	11 26	84 24	30	30	
22	147	08.5		50.2	72	22.0	81		25.4	56	53 31	18 13	41 88	20 08	26	
23	162	08.7		49.2	86	49.2	82		33.1	58	56 37	27 14	00 94	19 50	19	
24	177	08.8	-5	48.3	101	16.2	80	+25	40.7	60 S	18 59	19 43	20 38	14 22	106	19 26

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 13 ^h 07 ^m 4		Mag: -4.7 PMG: 9 ^h 13 ^m		Mag: +0.8 PMG: 17 ^h 31 ^m		Mag: -2.3 PMG: 4 ^h 16 ^m		Mag: 0.0 PMG: 21 ^h 37 ^m									
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	162	36.1	221	37.3	-16	10.0	96	58.8	+23	21.5	295	50.3	-16	13.4	34	48.0	+19	39.7
1	177	38.6	236	37.7		09.9	111	59.9		21.7	310	52.7		13.4	49	50.6		39.7
2	192	41.1	251	38.1		09.7	127	00.9		21.9	325	55.2		13.4	64	53.2		39.7
3	207	43.5	266	38.5		09.6	142	02.0		22.2	340	57.7		13.4	79	55.8		39.8
4	222	46.0	281	38.9		09.5	157	03.0		22.4	356	00.1		13.4	94	58.4		39.8
5	237	48.5	296	39.3	-16	09.4	172	04.0	+23	22.6	11	02.6	-16	13.4	110	01.0	+19	39.8
6	252	50.9	311	39.6	-16	09.3	187	05.1	+23	22.8	26	05.1	-16	13.4	125	03.6	+19	39.9
7	267	53.4	326	40.0		09.2	202	06.1		23.0	41	07.5		13.3	140	06.2		39.9
8	282	55.9	341	40.4		09.1	217	07.2		23.2	56	10.0		13.3	155	08.8		40.0
9	297	58.3	356	40.8		09.0	232	08.2		23.4	71	12.5		13.3	170	11.4		40.0
10	313	00.8	11	41.2		08.9	247	09.3		23.6	86	14.9		13.3	185	14.0		40.0
11	328	03.2	26	41.6	-16	08.7	262	10.3	+23	23.8	101	17.4	-16	13.3	200	16.6	+19	40.1
12	343	05.7	41	42.0	-16	08.6	277	11.3	+23	24.1	116	19.9	-16	13.3	215	19.2	+19	40.1
13	358	08.2	56	42.3		08.5	292	12.4		24.3	131	22.3		13.3	230	21.8		40.1
14	13	10.6	71	42.7		08.4	307	13.4		24.5	146	24.8		13.3	245	24.4		40.2
15	28	13.1	86	43.1		08.3	322	14.4		24.7	161	27.3		13.3	260	27.0		40.2
16	43	15.6	101	43.5		08.1	337	15.5		24.9	176	29.7		13.3	275	29.6		40.2
17	58	18.0	116	43.9	-16	08.0	352	16.5	+23	25.1	191	32.2	-16	13.3	290	32.2	+19	40.3
18	73	20.5	131	44.2	-16	07.9	7	17.6	+23	25.3	206	34.7	-16	13.3	305	34.8	+19	40.3
19	88	23.0	146	44.6		07.8	22	18.6		25.5	221	37.1		13.2	320	37.4		40.3
20	103	25.4	161	45.0		07.7	37	19.6		25.7	236	39.6		13.2	335	40.0		40.4
21	118	27.9	176	45.3		07.5	52	20.7		25.9	251	42.1		13.2	350	42.6		40.4
22	133	30.4	191	45.7		07.4	67	21.7		26.2	266	44.6		13.2	5	45.2		40.4
23	148	32.8	206	46.1		07.3	82	22.7		26.4	281	47.0		13.2	20	47.8		40.5
24	163	35.3	221	46.4	-16	07.2	97	23.8	+23	26.6	296	49.5	-16	13.2	35	50.4	+19	40.5
Dif	—		+4		+1		+10		+2		+25		0		+26		0	

UT	SOL			 LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16'1 PMG: 12 ^h 11 ^m 3			Edad: 6 ^d 0	PHE { 4 ^h : 56'9 12 ^h : 56'7 20 ^h : 56'4 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	177	08.8	-5 48.3	101	16.2	+25 40.7	74	60 N	5 15	6 03	6 44	7 34	18	3 12	97	
1	192	09.0		115	43.3	81	48.1	58	17	03	42	8 01	28	2 45	86	
2	207	09.1		130	10.3	80	+25 55.4	56	19	02	39	23	33	24	8	
3	222	09.3		144	37.3	80	+26 02.6	54	21	02	37	40	37	2 06	78	
4	237	09.4		159	04.3	80	09.6	52	23	02	35	8 55	40	1 52	74	
5	252	09.5	-5 43.4	173	31.3	80	+26 16.4	50	5 24	6 01	6 33	9 09	41	1 39	72	
6	267	09.7	-5 42.4	187	58.2	79	+26 23.1	45	5 26	6 00	6 30	9 36	45	1 12	69	
7	282	09.8		202	25.1	79	29.6	40	28	5 59	26	9 57	47	0 52	66	
8	297	10.0		216	52.0	79	35.9	35	29	58	23	10 15	49	34	65	
9	312	10.1		231	18.9	79	42.1	30	29	57	21	31	50	0 20	62	
10	327	10.3		245	45.7	78	48.2	20	28	54	16	10 57	52	** ** *	**	
11	342	10.4	-5 37.6	260	12.6	79	+26 54.1	10 N	5 26	5 51	6 12	11 20	54	** ** *	**	
12	357	10.6	-5 36.6	274	39.4	78	+26 59.8	0	5 23	5 47	6 08	11 41	55	** ** *	**	
13	12	10.7		289	06.2	78	+27 05.4	10 S	18	43	6 04	12 03	56	23 45	55	
14	27	10.8		303	33.0	78	10.8	20	11	37	5 59	26	58	23 22	53	
15	42	11.0		317	59.8	78	16.1	30	5 02	30	54	12 53	60	22 54	52	
16	57	11.1		332	26.6	78	21.2	35	4 55	26	51	13 09	61	37	52	
17	72	11.3	-5 31.8	346	53.3	77	+27 26.2	40	4 48	5 20	5 48	13 27	63	22 18	51	
18	87	11.4	-5 30.8	1	20.1	78	+27 31.0	45	4 38	5 14	5 44	13 50	64	21 55	50	
19	102	11.6		15	46.8	77	35.6	50	26	06	39	14 19	66	26	47	
20	117	11.7		30	13.6	78	40.1	52	20	5 02	36	33	68	21 11	47	
21	132	11.9		44	40.3	77	44.4	54	13	4 58	34	14 50	69	20 54	45	
22	147	12.0		59	07.0	77	48.6	56	4 05	53	31	15 09	73	34	43	
23	162	12.2		73	33.7	77	52.6	58	3 56	47	28	15 34	77	20 09	39	
24	177	12.3	-5 25.0	88	00.5	78	+27 56.4	60 S	3 46	4 41	5 25	16 08	86	19 35	29	
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO			
	PMG 13 ^h 03 ^m 5			Mag: -4.7 PMG: 9 ^h 13 ^m			Mag: +0.8 PMG: 17 ^h 29 ^m			Mag: -2.3 PMG: 4 ^h 12 ^m			Mag: 0.0 PMG: 21 ^h 33 ^m			
	hG ♈			hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'		
0	163	35.3	221	46.4	-16 07.2	97	23.8	+23 26.6	296	49.5	-16 13.2	35	50.4	+19 40.5		
1	178	37.7	236	46.8		112	24.8	26.8	311	52.0	13.2	50	53.0	40.5		
2	193	40.2	251	47.2		127	25.9	27.0	326	54.4	13.2	65	55.6	40.6		
3	208	42.7	266	47.5		142	26.9	27.2	341	56.9	13.2	80	58.2	40.6		
4	223	45.1	281	47.9		157	27.9	27.4	356	59.4	13.2	96	00.8	40.6		
5	238	47.6	296	48.2	-16 06.5	172	29.0	+23 27.6	12	01.9	-16 13.1	111	03.4	+19 40.7		
6	253	50.1	311	48.6	-16 06.4	187	30.0	+23 27.8	27	04.3	-16 13.1	126	06.0	+19 40.7		
7	268	52.5	326	49.0		202	31.0	28.0	42	06.8	13.1	141	08.6	40.7		
8	283	55.0	341	49.3		217	32.1	28.2	57	09.3	13.1	156	11.2	40.8		
9	298	57.5	356	49.7		232	33.1	28.4	72	11.8	13.1	171	13.8	40.8		
10	313	59.9	11	50.0		247	34.1	28.6	87	14.2	13.1	186	16.4	40.8		
11	329	02.4	26	50.4	-16 05.8	262	35.2	+23 28.8	102	16.7	-16 13.1	201	19.0	+19 40.9		
12	344	04.9	41	50.7	-16 05.6	277	36.2	+23 29.1	117	19.2	-16 13.1	216	21.6	+19 40.9		
13	359	07.3	56	51.1		292	37.2	29.3	132	21.7	13.1	231	24.2	40.9		
14	14	09.8	71	51.4		307	38.3	29.5	147	24.1	13.1	246	26.8	41.0		
15	29	12.2	86	51.7		322	39.3	29.7	162	26.6	13.0	261	29.4	41.0		
16	44	14.7	101	52.1		337	40.3	29.9	177	29.1	13.0	276	32.0	41.0		
17	59	17.2	116	52.4	-16 04.9	352	41.4	+23 30.1	192	31.6	-16 13.0	291	34.6	+19 41.1		
18	74	19.6	131	52.8	-16 04.8	7	42.4	+23 30.3	207	34.1	-16 13.0	306	37.2	+19 41.1		
19	89	22.1	146	53.1		22	43.4	30.5	222	36.5	13.0	321	39.8	41.1		
20	104	24.6	161	53.4		37	44.5	30.7	237	39.0	13.0	336	42.4	41.2		
21	119	27.0	176	53.8		52	45.5	30.9	252	41.5	13.0	351	45.0	41.2		
22	134	29.5	191	54.1		67	46.5	31.1	267	44.0	13.0	6	47.6	41.2		
23	149	32.0	206	54.5		82	47.5	31.3	282	46.4	13.0	21	50.1	41.3		
24	164	34.4	221	54.8	-16 04.0	97	48.6	+23 31.5	297	48.9	-16 12.9	36	52.7	+19 41.3		
Dif	—			+3	+1	+10	+2		+25	0		+26	0			

UT	SOL		☾ LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 16 ^h 1		Edad: 7 ^d 0	PHE { 4 ^h : 56 ^m 1 12 ^h : 55 ^m 9 20 ^h : 55 ^m 6	Dif	Dec			Dif	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	PMG: 12 ^h 11 ^m 1									Civil	Náutico	Hora	R°	Hora	R°
	hG ☉	Dec	hG ☾	Dif	Dec	Dif		h m	h m	h m	h m m	h m m	h m m		
h	°	'	°	'	°	'	°								
0	177	12.3	-5	25.0	88	00.5	+27	56.4	60 N	17 42	18 24	19 12	7 52 48	4 49 67	
1	192	12.5		24.0	102	27.2	77	+28 00.1	58	44	24	09	8 29 51	4 11 64	
2	207	12.6		23.0	116	53.9	77	03.7	56	46	24	07	8 56 52	3 45 62	
3	222	12.8		22.1	131	20.6	77	07.0	54	48	24	05	9 17 53	24 61	
4	237	12.9		21.1	145	47.4	78	10.3	52	50	24	03	35 53	3 06 61	
5	252	13.1	-5	20.1	160	14.1	77	+28 13.3	50	17 52	18 24	19 01	9 50 54	2 51 60	
6	267	13.2	-5	19.2	174	40.9	78	+28 16.2	45	17 55	18 24	18 58	10 21 54	2 21 59	
7	282	13.4		18.2	189	07.6	77	19.0	40	17 58	25	57	10 44 55	1 58 58	
8	297	13.5		17.2	203	34.4	78	21.5	35	18 01	26	55	11 04 54	39 57	
9	312	13.7		16.2	218	01.1	77	24.0	30	03	27	55	21 54	1 22 57	
10	327	13.8		15.3	232	27.9	78	26.2	20	07	29	55	11 49 55	0 54 56	
11	342	14.0	-5	14.3	246	54.7	78	+28 28.3	10 N	18 11	18 32	18 56	12 14 54	0 30 56	
12	357	14.1	-5	13.3	261	21.6	79	+28 30.3	0	18 14	18 35	18 59	12 36 55	0 08 55	
13	12	14.3		12.3	275	48.4	78	32.1	10 S	18	39	19 04	12 59 55	** ** *	
14	27	14.4		11.4	290	15.2	78	33.7	20	22	44	10	13 24 54	** ** *	
15	42	14.6		10.4	304	42.1	79	35.2	30	27	51	19	13 53 53	23 46 56	
16	57	14.7		09.4	319	09.0	79	36.6	35	29	18 55	25	14 10 53	29 57	
17	72	14.9	-5	08.5	333	35.9	79	+28 37.7	40	18 33	19 00	19 32	14 30 53	23 09 57	
18	87	15.0	-5	07.5	348	02.8	79	+28 38.7	45	18 36	19 06	19 41	14 54 53	22 45 58	
19	102	15.2		06.5	2	29.8	80	39.6	50	41	14	53	15 25 52	22 13 60	
20	117	15.3		05.5	16	56.8	80	40.3	52	43	17	59	19 59	41 52	
21	132	15.5		04.6	31	23.8	80	40.9	54	45	21	05	15 59 51	39 61	
22	147	15.6		03.6	45	50.8	80	41.3	56	48	26	12	16 22 50	21 17 62	
23	162	15.8		02.6	60	17.9	81	41.5	58	50	31	21	16 51 48	20 48 64	
24	177	15.9	-5	01.6	74	45.0	81	+28 41.6	60 S	18 53	19 36	20 30	17 34 44	20 04 69	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 12 ^h 59 ^m 6		Mag: -4.7 PMG: 9 ^h 12 ^m		Mag: +0.9 PMG: 17 ^h 28 ^m		Mag: -2.3 PMG: 4 ^h 08 ^m		Mag: 0.0 PMG: 21 ^h 29 ^m	
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♅	Dec	
h	°	'	°	'	°	'	°	'	°	'
0	164	34.4	221	54.8	-16	04.0	97	48.6	+23	31.5
1	179	36.9	236	55.1		03.8	112	49.6		31.7
2	194	39.3	251	55.4		03.7	127	50.6		31.9
3	209	41.8	266	55.8		03.5	142	51.7		32.1
4	224	44.3	281	56.1		03.4	157	52.7		32.3
5	239	46.7	296	56.4	-16	03.2	172	53.7	+23	32.5
6	254	49.2	311	56.7	-16	03.1	187	54.7	+23	32.7
7	269	51.7	326	57.1		02.9	202	55.8		32.9
8	284	54.1	341	57.4		02.8	217	56.8		33.1
9	299	56.6	356	57.7		02.6	232	57.8		33.3
10	314	59.1	11	58.0		02.5	247	58.9		33.5
11	330	01.5	26	58.4	-16	02.3	262	59.9	+23	33.7
12	345	04.0	41	58.7	-16	02.2	278	00.9	+23	33.9
13	0	06.5	56	59.0		02.0	293	01.9		34.1
14	15	08.9	71	59.3		01.9	308	03.0		34.4
15	30	11.4	86	59.6		01.7	323	04.0		34.6
16	45	13.8	101	59.9		01.6	338	05.0		34.8
17	60	16.3	117	00.2	-16	01.4	353	06.0	+23	35.0
18	75	18.8	132	00.5	-16	01.3	8	07.1	+23	35.2
19	90	21.2	147	00.8		01.1	23	08.1		35.4
20	105	23.7	162	01.2		01.0	38	09.1		35.6
21	120	26.2	177	01.5		00.8	53	10.1		35.8
22	135	28.6	192	01.8		00.6	68	11.2		36.0
23	150	31.1	207	02.1		00.5	83	12.2		36.2
24	165	33.6	222	02.4	-16	00.3	98	13.2	+23	36.4
Dif	—		+3		+2		+10		+2	
							+25		0	
									+26	
									0	

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16 ^h 1			Edad: 8 ^d 0	PHE { 4 ^h : 55 ^m .4 12 ^h : 55 ^m .2 20 ^h : 55 ^m .0			Principio del crepúsculo	Salida de Sol		Salida de Luna		Puesta de Luna			
	PMG: 12 ^h 10 ^m 8										Rº: 51 ^m					
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	Rº	Hora	Rº	
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m
0	177	15.9	-5	74	45.0	+28	41.6	1	60 N	5 09	5 57	6 38	8 40	83	5 56	27
1	192	16.1	-5	89	12.2		41.5	2	58	12	57	36	9 20	75	5 15	36
2	207	16.2	-4	103	39.3		41.3	3	56	14	57	34	9 48	70	4 47	40
3	222	16.4		118	06.5		40.9	4	54	16	57	32	10 10	68	25	42
4	237	16.5		132	33.8		40.4	5	52	18	57	31	28	66	4 07	44
5	252	16.7	-4	147	01.1	+28	39.8	6	50	5 20	5 57	6 29	10 44	64	3 51	45
6	267	16.8	-4	161	28.4	+28	38.9	7	45	5 23	5 57	6 26	11 15	61	3 20	48
7	282	17.0		175	55.8		38.0	8	40	25	56	23	39	59	2 56	49
8	297	17.1		190	23.2		36.8	9	35	26	55	21	11 58	59	36	50
9	312	17.3		204	50.6		35.6	10	30	27	55	18	12 15	57	2 19	51
10	327	17.4		219	18.1		34.2	11	20	27	52	15	12 44	55	1 50	52
11	342	17.6	-4	233	45.7	+28	32.6	12	10 N	5 26	5 50	6 11	13 08	54	1 26	53
12	357	17.7	-4	248	13.3	+28	30.9	13	0	5 23	5 47	6 08	13 31	52	1 03	53
13	12	17.9		262	40.9		29.0	14	10 S	18	43	04	13 54	50	0 40	54
14	27	18.1		277	08.6		27.0	15	20	12	38	6 00	14 18	49	0 15	55
15	42	18.2		291	36.3		24.8	16	30	5 03	31	5 56	14 46	48	***	***
16	57	18.4		306	04.1		22.6	17	35	4 57	27	53	15 03	46	***	***
17	72	18.5	-4	320	31.9	+28	20.1	18	40	4 50	5 23	5 50	15 23	44	***	***
18	87	18.7	-4	334	59.8	+28	17.5	19	45	4 41	5 17	5 46	15 47	42	23 43	64
19	102	18.8		349	27.8		14.8	20	50	30	09	42	16 17	39	23 13	68
20	117	19.0		3	55.8		11.9	21	52	24	06	40	33	36	22 58	70
21	132	19.1		18	23.9		08.9	22	54	18	5 02	38	16 50	35	40	73
22	147	19.3		32	52.0		05.8	23	56	10	4 57	35	17 12	30	22 19	76
23	162	19.4		47	20.2	+28	02.5	24	58	4 02	52	33	17 39	25	21 52	82
24	177	19.6	-4	61	48.4	+27	59.0	25	60 S	3 53	4 47	5 30	18 18	14	21 13	93

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 12 ^h 55 ^m 6		Mag: -4.7 PMG: 9 ^h 12 ^m		Mag: +0.9 PMG: 17 ^h 26 ^m		Mag: -2.3 PMG: 4 ^h 04 ^m		Mag: 0.0 PMG: 21 ^h 25 ^m									
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	165	33.6	222	02.4	-16	00.3	98	13.2	+23	36.4	298	48.5	-16	12.6	37	55.0	+19	42.1
1	180	36.0	237	02.7	-16	00.2	113	14.2		36.6	313	51.0		12.6	52	57.6		42.1
2	195	38.5	252	03.0	-16	00.0	128	15.3		36.8	328	53.5		12.6	68	00.1		42.1
3	210	41.0	267	03.3	-15	59.8	143	16.3		37.0	343	56.0		12.6	83	02.7		42.2
4	225	43.4	282	03.6		59.7	158	17.3		37.2	358	58.5		12.6	98	05.3		42.2
5	240	45.9	297	03.8	-15	59.5	173	18.3	+23	37.3	14	01.0	-16	12.6	113	07.9	+19	42.2
6	255	48.3	312	04.1	-15	59.3	188	19.3	+23	37.5	29	03.5	-16	12.6	128	10.5	+19	42.3
7	270	50.8	327	04.4		59.2	203	20.4		37.7	44	06.0		12.5	143	13.1		42.3
8	285	53.3	342	04.7		59.0	218	21.4		37.9	59	08.4		12.5	158	15.7		42.3
9	300	55.7	357	05.0		58.8	233	22.4		38.1	74	10.9		12.5	173	18.3		42.3
10	315	58.2	12	05.3		58.7	248	23.4		38.3	89	13.4		12.5	188	20.9		42.4
11	331	00.7	27	05.6	-15	58.5	263	24.4	+23	38.5	104	15.9	-16	12.5	203	23.5	+19	42.4
12	346	03.1	42	05.9	-15	58.3	278	25.5	+23	38.7	119	18.4	-16	12.5	218	26.0	+19	42.4
13	1	05.6	57	06.2		58.2	293	26.5		38.9	134	20.9		12.5	233	28.6		42.5
14	16	08.1	72	06.4		58.0	308	27.5		39.1	149	23.4		12.4	248	31.2		42.5
15	31	10.5	87	06.7		57.8	323	28.5		39.3	164	25.9		12.4	263	33.8		42.5
16	46	13.0	102	07.0		57.7	338	29.5		39.5	179	28.4		12.4	278	36.4		42.6
17	61	15.5	117	07.3	-15	57.5	353	30.6	+23	39.7	194	30.9	-16	12.4	293	39.0	+19	42.6
18	76	17.9	132	07.6	-15	57.3	8	31.6	+23	39.9	209	33.4	-16	12.4	308	41.6	+19	42.6
19	91	20.4	147	07.8		57.1	23	32.6		40.1	224	35.9		12.4	323	44.2		42.7
20	106	22.8	162	08.1		57.0	38	33.6		40.3	239	38.4		12.4	338	46.7		42.7
21	121	25.3	177	08.4		56.8	53	34.6		40.5	254	40.8		12.3	353	49.3		42.7
22	136	27.8	192	08.7		56.6	68	35.7		40.7	269	43.3		12.3	8	51.9		42.7
23	151	30.2	207	08.9		56.4	83	36.7		40.9	284	45.8		12.3	23	54.5		42.8
24	166	32.7	222	09.2	-15	56.3	98	37.7	+23	41.1	299	48.3	-16	12.3	38	57.1	+19	42.8
Dif	—		+3	+2			+10	+2			+25	0			+26			

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: 9 ^d 0 PHE { SD: 15:0 PMG: 20 ^h 35 ^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	177	19.6	-4 38.2	61	48.4	+27 59.0	35	60 N	17 47	18 28	19 17	10 03 94	6 23 9		
1	192	19.8		76	16.7 93		55.5 35	58	49	28	14	35 85	5 51 18		
2	207	19.9	36.3	90	45.1 94		51.8 37	56	51	28	11	10 58 80	27 24		
3	222	20.1	35.3	105	13.5 94		47.9 39	54	52	27	09	11 18 75	5 07 28		
4	237	20.2	34.3	119	42.0 95		43.9 40	52	54	27	06	34 72	4 51 30		
5	252	20.4	-4 33.3	134	10.6 96	+27 39.8	41	50	17 55	18 27	19 05	11 48 70	4 36 33		
6	267	20.5	-4 32.4	148	39.2 96	+27 35.6	42	45	17 58	18 27	19 01	12 16 66	4 08 36		
7	282	20.7	31.4	163	07.9 97		31.2 44	40	18 00	27	18 59	38 63	3 45 40		
8	297	20.9	30.4	177	36.6 97		26.7 45	35	02	28	57	12 57 60	26 42		
9	312	21.0	29.4	192	05.5 99		22.0 47	30	04	28	56	13 12 58	3 10 43		
10	327	21.2	28.4	206	34.4 99		17.2 48	20	08	30	55	13 39 55	2 42 47		
11	342	21.3	-4 27.5	221	03.3 99	+27 12.3	49	10 N	18 11	18 32	18 56	14 02 52	2 19 48		
12	357	21.5	-4 26.5	235	32.3 100	+27 07.3	50	0	18 14	18 35	18 59	14 23 50	1 56 51		
13	12	21.6	25.5	250	01.4 101	+27 02.1	52	10 S	17	38	19 03	14 44 47	34 53		
14	27	21.8	24.5	264	30.6 102	+26 56.8	53	20	20	42	08	15 07 44	1 10 56		
15	42	22.0	23.6	278	59.9 103		51.4 54	30	24	48	17	34 40	0 42 58		
16	57	22.1	22.6	293	29.2 103		45.8 56	35	27	52	22	15 49 38	26 59		
17	72	22.3	-4 21.6	307	58.6 104	+26 40.2	56	40	18 29	18 57	19 29	16 07 36	0 06 62		
18	87	22.4	-4 20.6	322	28.0 104	+26 34.4	58	45	18 33	19 02	19 37	16 29 32	*** ** **		
19	102	22.6	19.6	336	57.6 106		28.4 60	50	36	09	48	16 56 28	*** ** **		
20	117	22.8	18.7	351	27.2 106		22.4 60	52	38	12	19 54	17 09 25	*** ** **		
21	132	22.9	17.7	5	56.9 107		16.2 62	54	40	16	20 00	25 22	23 53 77		
22	147	23.1	16.7	20	26.6 107		09.9 63	56	42	20	06	17 42 19	35 82		
23	162	23.2	15.7	34	56.5 109	+26 03.5	64	58	45	25	14	18 04 13	23 14 87		
24	177	23.4	-4 14.8	49	26.4 109	+25 57.0	65	60 S	18 47	19 30	20 23	18 32 4	22 46 96		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 12 ^h 51 ^m 7		Mag: -4.7 PMG: 9 ^h 11 ^m		Mag: +0.9 PMG: 17 ^h 24 ^m		Mag: -2.3 PMG: 4 ^h 00 ^m		Mag: 0.0 PMG: 21 ^h 21 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	166	32.7	222	09.2	98	37.7	299	48.3	38	57.1
1	181	35.2	237	09.5	113	38.7	314	50.8	53	59.7
2	196	37.6	252	09.7	128	39.7	329	53.3	69	02.3
3	211	40.1	267	10.0	143	40.7	344	55.8	84	04.9
4	226	42.6	282	10.3	158	41.8	359	58.3	99	07.4
5	241	45.0	297	10.5	173	42.8	15	00.8	114	10.0
6	256	47.5	312	10.8	188	43.8	30	03.3	129	12.6
7	271	49.9	327	11.1	203	44.8	45	05.8	144	15.2
8	286	52.4	342	11.3	218	45.8	60	08.3	159	17.8
9	301	54.9	357	11.6	233	46.8	75	10.8	174	20.4
10	316	57.3	12	11.9	248	47.8	90	13.3	189	23.0
11	331	59.8	27	12.1	263	48.9	105	15.8	204	25.5
12	347	02.3	42	12.4	278	49.9	120	18.3	219	28.1
13	2	04.7	57	12.6	293	50.9	135	20.8	234	30.7
14	17	07.2	72	12.9	308	51.9	150	23.3	249	33.3
15	32	09.7	87	13.1	323	52.9	165	25.8	264	35.9
16	47	12.1	102	13.4	338	53.9	180	28.3	279	38.5
17	62	14.6	117	13.6	353	54.9	195	30.8	294	41.1
18	77	17.1	132	13.9	8	56.0	210	33.3	309	43.6
19	92	19.5	147	14.1	23	57.0	225	35.8	324	46.2
20	107	22.0	162	14.4	38	58.0	240	38.3	339	48.8
21	122	24.4	177	14.6	53	59.0	255	40.8	354	51.4
22	137	26.9	192	14.9	69	00.0	270	43.3	9	54.0
23	152	29.4	207	15.1	84	01.0	285	45.8	24	56.6
24	167	31.8	222	15.4	99	02.0	300	48.3	39	59.1
Dif	—		+3	+2	+10	+2	+25	0	+26	0

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna				
	SD: 16'1 PMG: 12 ^h 10 ^m 3			Edad: 10 ^d 0 PHE { SD: 14'8 PMG: 21 ^h 24 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	Rº	Hora	Rº		
h	°	'	°	°	'	°	°	h	m	h	m	h	m	h	m		
0	177	23.4	-4	49	26.4	+25	57.0	60 N	5 03	5 51	6 32	11	37	94	6 32	3	
1	192	23.6		63	56.3 ¹⁰⁹		50.3	58	06	52	31	12	00	87	6 09	10	
2	207	23.7		78	26.4 ¹¹¹		43.6	56	09	52	29	18	82		5 51	14	
3	222	23.9		92	56.6 ¹¹²		36.7	54	11	52	28	33	78		35	18	
4	237	24.0		107	26.8 ¹¹²		29.7	52	14	53	26	46	75		21	22	
5	252	24.2	-4	121	57.1 ¹¹³	+25	22.6	50	5 15	5 53	6 25	12	58	72	5 09	24	
6	267	24.4	-4	136	27.4 ¹¹³	+25	15.4	45	5 19	5 53	6 22	13	22	67	4 44	29	
7	282	24.5		150	57.9 ¹¹⁵		08.0	40	22	53	20	41	63		25	32	
8	297	24.7		165	28.4 ¹¹⁵	+25	00.6	35	23	53	18	13	57	60	4 08	35	
9	312	24.8		179	59.0 ¹¹⁶	+24	53.0	30	25	52	16	14	10	58	3 53	38	
10	327	25.0		194	29.7 ¹¹⁷		45.4	20	25	51	13	34	53		29	41	
11	342	25.2	-4	209	00.5 ¹¹⁸	+24	37.6	10 N	5 25	5 49	6 10	14	54	49	3 07	45	
12	357	25.3	-4	223	31.3 ¹¹⁸	+24	29.7	0	5 22	5 46	6 07	15	13	46	2 47	48	
13	12	25.5		238	02.2 ¹¹⁹		21.7	10 S	18	43	04	31	43		27	51	
14	27	25.6		252	33.2 ¹²⁰		13.6	20	13	39	6 01	15	51	39	2 06	54	
15	42	25.8	-4	267	04.3 ¹²¹	+24	05.4	30	5 05	33	5 57	16	14	35	1 40	58	
16	57	26.0	-3	281	35.4 ¹²¹	+23	57.1	35	4 59	29	55	27	33		25	61	
17	72	26.1	-3	296	06.6 ¹²²	+23	48.7	40	4 53	5 25	5 52	16	43	29	1 08	63	
18	87	26.3	-3	310	38.0 ¹²⁴	+23	40.2	45	4 44	5 19	5 49	17	01	25	0 47	67	
19	102	26.5		325	09.3 ¹²³		31.6	50	33	13	45	24	20		21	71	
20	117	26.6		339	40.8 ¹²⁵		22.9	52	28	09	44	34	18		0 08	74	
21	132	26.8		354	12.3 ¹²⁵		14.1	54	22	06	42	17	47	14	** ** *	**	
22	147	26.9		8	44.0 ¹²⁷	+23	05.2	56	15	5 02	40	18	01	11	** ** *	**	
23	162	27.1		23	15.6 ¹²⁶	+22	56.2	58	4 08	4 57	37	17	7		** ** *	**	
24	177	27.3	-3	37	47.4 ¹²⁸	+22	47.1	60 S	3 59	4 52	5 35	18	36	1	** ** *	**	
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO				
	PMG: 12 ^h 47 ^m 8			Mag: -4.7 PMG: 9 ^h 11 ^m			Mag: +0.9 PMG: 17 ^h 23 ^m			Mag: -2.3 PMG: 3 ^h 56 ^m			Mag: 0.0 PMG: 21 ^h 16 ^m				
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec			
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°	'	
0	167	31.8		222	15.4	-15	51.7	99	02.0	+23	45.7	300	48.3	-16	11.9	39	59.1
1	182	34.3		237	15.6		51.5	114	03.0		45.9	315	50.8		11.9	55	01.7
2	197	36.8		252	15.8		51.3	129	04.0		46.1	330	53.3		11.9	70	04.3
3	212	39.2		267	16.1		51.1	144	05.1		46.3	345	55.8		11.8	85	06.9
4	227	41.7		282	16.3		50.9	159	06.1		46.5	0	58.3		11.8	100	09.5
5	242	44.2		297	16.6	-15	50.7	174	07.1	+23	46.7	16	00.8	-16	11.8	115	12.0
6	257	46.6		312	16.8	-15	50.5	189	08.1	+23	46.8	31	03.3	-16	11.8	130	14.6
7	272	49.1		327	17.0		50.3	204	09.1		47.0	46	05.9		11.8	145	17.2
8	287	51.6		342	17.3		50.1	219	10.1		47.2	61	08.4		11.8	160	19.8
9	302	54.0		357	17.5		49.9	234	11.1		47.4	76	10.9		11.7	175	22.4
10	317	56.5		12	17.7		49.7	249	12.1		47.6	91	13.4		11.7	190	25.0
11	332	58.9		27	18.0	-15	49.5	264	13.1	+23	47.8	106	15.9	-16	11.7	205	27.5
12	348	01.4		42	18.2	-15	49.3	279	14.1	+23	48.0	121	18.4	-16	11.7	220	30.1
13	3	03.9		57	18.4		49.1	294	15.1		48.2	136	20.9		11.7	235	32.7
14	18	06.3		72	18.6		48.9	309	16.2		48.4	151	23.4		11.6	250	35.3
15	33	08.8		87	18.9		48.7	324	17.2		48.5	166	25.9		11.6	265	37.9
16	48	11.3		102	19.1		48.5	339	18.2		48.7	181	28.4		11.6	280	40.4
17	63	13.7		117	19.3	-15	48.3	354	19.2	+23	48.9	196	30.9	-16	11.6	295	43.0
18	78	16.2		132	19.5	-15	48.1	9	20.2	+23	49.1	211	33.4	-16	11.6	310	45.6
19	93	18.7		147	19.8		47.8	24	21.2		49.3	226	35.9		11.5	325	48.2
20	108	21.1		162	20.0		47.6	39	22.2		49.5	241	38.5		11.5	340	50.8
21	123	23.6		177	20.2		47.4	54	23.2		49.7	256	41.0		11.5	355	53.3
22	138	26.1		192	20.4		47.2	69	24.2		49.8	271	43.5		11.5	10	55.9
23	153	28.5		207	20.6		47.0	84	25.2		50.0	286	46.0		11.5	25	58.5
24	168	31.0		222	20.8	-15	46.8	99	26.2	+23	50.2	301	48.5	-16	11.4	41	01.1
Dif	—			+2	+2			+10	+2			+25	0			+26	

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16'1			Edad: 11 ^d 0 PHE { 4 ^h : 54'2 12 ^h : 54'1 20 ^h : 54'1 R°: 43 ^m											
	PMG: 12 ^h 10 ^m 0			SD: 14'8 PMG: 22 ^h 09 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Civil	Náutico		Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	m	h m m	m
0	177	27.3	-3 51.2	37	47.4	+22 47.1	92	60 N	17 52	18 33	19 22	13 11 90	6 35	0	
1	192	27.4	50.3	52	19.3 ¹²⁹	37.9	92	58	53	33	18	27 84	19	5	
2	207	27.6	49.3	66	51.2 ¹²⁹	28.6	93	56	55	32	15	40 80	6 05	9	
3	222	27.8	48.3	81	23.2 ¹³⁰	19.2	94	54	56	31	12	13 51 77	5 53	13	
4	237	27.9	47.3	95	55.3 ¹³¹	09.8	94	52	57	31	10	14 01 74	43	15	
5	252	28.1	-3 46.3	110	27.4 ¹³¹	+22 00.2	96	50	17 58	18 30	19 08	14 10 71	5 33	18	
6	267	28.3	-3 45.3	124	59.6 ¹³²	+21 50.5	97	45	18 00	18 30	19 04	14 29 66	5 13	23	
7	282	28.4	44.4	139	31.9 ¹³³	40.8	97	40	02	29	19 01	44 62	4 57	27	
8	297	28.6	43.4	154	04.3 ¹³⁴	31.0	98	35	04	29	18 59	14 57 58	43	30	
9	312	28.7	42.4	168	36.8 ¹³⁵	21.0 ¹⁰⁰		30	06	30	57	15 08 56	31	33	
10	327	28.9	41.4	183	09.3 ¹³⁵	11.0 ¹⁰⁰		20	08	30	56	27 51	4 10	37	
11	342	29.1	-3 40.4	197	41.9 ¹³⁶	+21 00.9 ¹⁰¹		10 N	18 11	18 32	18 56	15 43 47	3 52	41	
12	357	29.2	-3 39.5	212	14.6 ¹³⁷	+20 50.8 ¹⁰¹		0	18 13	18 34	18 58	15 59 43	3 35	45	
13	12	29.4	38.5	226	47.3 ¹³⁷	40.5 ¹⁰³		10 S	16	37	19 01	16 14 39	18	48	
14	27	29.6	37.5	241	20.1 ¹³⁸	30.1 ¹⁰⁴		20	19	41	07	30 35	3 00	52	
15	42	29.7	36.5	255	53.0 ¹³⁹	19.7 ¹⁰⁴		30	22	46	14	16 49 30	2 38	57	
16	57	29.9	35.5	270	26.0 ¹⁴⁰	+20 09.2 ¹⁰⁵		35	24	49	19	17 00 27	26	59	
17	72	30.1	-3 34.5	284	59.0 ¹⁴⁰	+19 58.6 ¹⁰⁶		40	18 26	18 53	19 26	17 12 24	2 11	63	
18	87	30.2	-3 33.6	299	32.1 ¹⁴¹	+19 47.9 ¹⁰⁷		45	18 29	18 58	19 33	17 26 21	1 54	67	
19	102	30.4	32.6	314	05.3 ¹⁴²	37.2 ¹⁰⁷		50	32	19 05	44	44 16	32	73	
20	117	30.6	31.6	328	38.5 ¹⁴²	26.4 ¹⁰⁸		52	34	08	49	17 52 14	22	75	
21	132	30.7	30.6	343	11.8 ¹⁴³	15.5 ¹⁰⁹		54	35	11	19 54	18 01 11	1 10	78	
22	147	30.9	29.6	357	45.2 ¹⁴⁴	+19 04.5 ¹¹⁰		56	37	15	20 01	12 7	0 57	82	
23	162	31.1	28.6	12	18.6 ¹⁴⁴	+18 53.4 ¹¹¹		58	39	19	08	24 3	41	87	
24	177	31.2	-3 27.7	26	52.1 ¹⁴⁵	+18 42.3 ¹¹¹		60 S	18 41	19 24	20 16	18 37 **	0 22	93	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO			
	PMG: 12 ^h 43 ^m 8		Mag: -4.7 PMG: 9 ^h 10 ^m		Mag: +0.9 PMG: 17 ^h 21 ^m		Mag: -2.3 PMG: 3 ^h 52 ^m		Mag: 0.0 PMG: 21 ^h 12 ^m			
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec		
h	°	'	°	'	°	'	°	'	°	'		
0	168	31.0	222	20.8	99	26.2	+23 50.2	301	48.5	-16 11.4	41 01.1	+19 44.2
1	183	33.4	237	21.1	114	27.2	50.4	316	51.0	11.4	56 03.7	44.3
2	198	35.9	252	21.3	129	28.2	50.6	331	53.5	11.4	71 06.2	44.3
3	213	38.4	267	21.5	144	29.2	50.8	346	56.0	11.4	86 08.8	44.3
4	228	40.8	282	21.7	159	30.2	51.0	1	58.5	11.4	101 11.4	44.3
5	243	43.3	297	21.9	174	31.2	+23 51.1	17	01.1	-16 11.3	116 14.0	+19 44.4
6	258	45.8	312	22.1	189	32.2	+23 51.3	32	03.6	-16 11.3	131 16.5	+19 44.4
7	273	48.2	327	22.3	204	33.2	51.5	47	06.1	11.3	146 19.1	44.4
8	288	50.7	342	22.5	219	34.2	51.7	62	08.6	11.3	161 21.7	44.5
9	303	53.2	357	22.7	234	35.2	51.9	77	11.1	11.3	176 24.3	44.5
10	318	55.6	12	22.9	249	36.3	52.1	92	13.6	11.2	191 26.9	44.5
11	333	58.1	27	23.1	264	37.3	+23 52.2	107	16.1	-16 11.2	206 29.4	+19 44.5
12	349	00.5	42	23.3	279	38.3	+23 52.4	122	18.7	-16 11.2	221 32.0	+19 44.6
13	4	03.0	57	23.5	294	39.3	52.6	137	21.2	11.2	236 34.6	44.6
14	19	05.5	72	23.7	309	40.3	52.8	152	23.7	11.2	251 37.2	44.6
15	34	07.9	87	23.9	324	41.3	53.0	167	26.2	11.1	266 39.7	44.7
16	49	10.4	102	24.1	339	42.3	53.2	182	28.7	11.1	281 42.3	44.7
17	64	12.9	117	24.3	354	43.3	+23 53.3	197	31.2	-16 11.1	296 44.9	+19 44.7
18	79	15.3	132	24.5	9	44.3	+23 53.5	212	33.7	-16 11.1	311 47.5	+19 44.7
19	94	17.8	147	24.7	24	45.3	53.7	227	36.3	11.1	326 50.0	44.8
20	109	20.3	162	24.9	39	46.3	53.9	242	38.8	11.0	341 52.6	44.8
21	124	22.7	177	25.1	54	47.3	54.1	257	41.3	11.0	356 55.2	44.8
22	139	25.2	192	25.3	69	48.3	54.3	272	43.8	11.0	11 57.8	44.9
23	154	27.7	207	25.5	84	49.3	54.4	287	46.3	11.0	27 00.3	44.9
24	169	30.1	222	25.7	99	50.3	+23 54.6	302	48.9	-16 10.9	42 02.9	+19 44.9
Dif	—		+2	+2	+10	+2		+25	0		+26	

ALMANAQUE NÁUTICO PERSEIS

UT	SOL			☉ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna				
	SD: 16 ^h 1			Edad: 13 ^d 0	PHE { 4 ^h : 54 ⁰ 12 ^h : 54 ⁰ 20 ^h : 54 ⁰	SD: 14 ^h 7			PMG: 23 ^h 32 ^m	R°: 40 ^m								
	hG ☉	Dec									hG ☾	Dif	Dec	Dif	Civil	Náutico	Hora	R°
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	m	h	m	m
0	177	35.3	-3	04.1	16	34.7	+13	55.4	60 N	17 57	18 38	19 27	16 07	83		6 34	**	
1	192	35.4		03.1	31	09.6 ¹⁵⁹		42.7 ¹²⁷	58	58	37	23	13 79			27 2		
2	207	35.6		02.1	45	44.6 ¹⁶⁰		30.0 ¹²⁷	56	17 59	36	20	18 77			21 5		
3	222	35.8		01.1	60	19.7 ¹⁶¹		17.2 ¹²⁸	54	18 00	35	16	23 74			15 8		
4	237	35.9	-3	00.1	74	54.8 ¹⁶¹	+13	04.4 ¹²⁸	52	01	34	14	27 71			10 10		
5	252	36.1	-2	59.1	89	29.9 ¹⁶¹	+12	51.5 ¹²⁹	50	18 01	18 34	19 11	16 31	69		6 05	12	
6	267	36.3	-2	58.2	104	05.1 ¹⁶²	+12	38.5 ¹³⁰	45	18 03	18 32	19 06	16 40	64		5 55	17	
7	282	36.5		57.2	118	40.4 ¹⁶³		25.6 ¹²⁹	40	04	31	03	47 60			46 21		
8	297	36.6		56.2	133	15.7 ¹⁶³	+12	12.5 ¹³¹	35	06	31	19 00	53 56			39 24		
9	312	36.8		55.2	147	51.0 ¹⁶³	+11	59.4 ¹³¹	30	07	31	18 59	16 58	54		32 27		
10	327	37.0		54.2	162	26.3 ¹⁶³		46.3 ¹³¹	20	09	31	57	17 07	48		21 32		
11	342	37.1	-2	53.2	177	01.7 ¹⁶⁴	+11	33.2 ¹³¹	10 N	18 11	18 32	18 56	17 15	44		5 11	36	
12	357	37.3	-2	52.2	191	37.2 ¹⁶⁵	+11	20.0 ¹³²	0	18 13	18 33	18 57	17 23	39		5 02	40	
13	12	37.5		51.3	206	12.7 ¹⁶⁵	+11	06.7 ¹³³	10 S	15	36	19 00	30 35			4 52	44	
14	27	37.7		50.3	220	48.2 ¹⁶⁵	+10	53.4 ¹³³	20	17	39	05	38 31			42 49		
15	42	37.8		49.3	235	23.7 ¹⁶⁵		40.1 ¹³³	30	20	44	12	47 26			30 54		
16	57	38.0		48.3	249	59.3 ¹⁶⁶		26.7 ¹³⁴	35	21	47	16	52 23			23 57		
17	72	38.2	-2	47.3	264	34.9 ¹⁶⁶	+10	13.3 ¹³⁴	40	18 23	18 50	19 22	17 58	19		4 16	60	
18	87	38.3	-2	46.3	279	10.6 ¹⁶⁷	+9	59.8 ¹³⁵	45	18 25	18 55	19 30	18 04	16		4 06	65	
19	102	38.5		45.4	293	46.3 ¹⁶⁷		46.4 ¹³⁴	50	28	19 00	39	12 12			3 55	70	
20	117	38.7		44.4	308	22.0 ¹⁶⁷		32.8 ¹³⁶	52	29	03	44	16 9			50 72		
21	132	38.9		43.4	322	57.8 ¹⁶⁸		19.3 ¹³⁵	54	30	06	49	20 7			44 75		
22	147	39.0		42.4	337	33.6 ¹⁶⁸	+9	05.7 ¹³⁶	56	32	09	19 55	25 4			38 77		
23	162	39.2		41.4	352	09.4 ¹⁶⁸	+8	52.0 ¹³⁷	58	33	13	20 01	30 1			31 80		
24	177	39.4	-2	40.4	6	45.2 ¹⁶⁸	+8	38.4 ¹³⁶	60 S	18 35	19 17	20 09	18 35	**		3 23	84	
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO					
	PMG: 12 ^h 36 ^m 0			Mag: -4.6 PMG: 9 ^h 10 ^m			Mag: +0.9 PMG: 17 ^h 18 ^m			Mag: -2.3 PMG: 3 ^h 44 ^m			Mag: 0.0 PMG: 21 ^h 04 ^m					
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	170	29.3	222	29.9	-15	35.5	100	14.2	+23	58.9	303	49.4	-16	10.4	43	04.7	+19	45.6
1	185	31.7	237	30.1		35.2	115	15.2		59.1	318	51.9		10.4	58	07.2		45.6
2	200	34.2	252	30.3		35.0	130	16.2		59.2	333	54.5		10.4	73	09.8		45.6
3	215	36.6	267	30.4		34.7	145	17.2		59.4	348	57.0		10.3	88	12.4		45.6
4	230	39.1	282	30.6		34.5	160	18.2		59.6	3 59.5		10.3		103	14.9		45.7
5	245	41.6	297	30.8	-15	34.2	175	19.1	+23	59.8	19	02.0	-16	10.3	118	17.5	+19	45.7
6	260	44.0	312	30.9	-15	34.0	190	20.1	+23	59.9	34	04.6	-16	10.3	133	20.1	+19	45.7
7	275	46.5	327	31.1		33.7	205	21.1	+24	00.1	49	07.1		10.2	148	22.7		45.7
8	290	49.0	342	31.2		33.4	220	22.1		00.3	64	09.6		10.2	163	25.2		45.8
9	305	51.4	357	31.4		33.2	235	23.1		00.5	79	12.2		10.2	178	27.8		45.8
10	320	53.9	12	31.6		32.9	250	24.1		00.6	94	14.7		10.2	193	30.4		45.8
11	335	56.4	27	31.7	-15	32.7	265	25.1	+24	00.8	109	17.2	-16	10.1	208	32.9	+19	45.8
12	350	58.8	42	31.9	-15	32.4	280	26.1	+24	01.0	124	19.7	-16	10.1	223	35.5	+19	45.9
13	6	01.3	57	32.0		32.1	295	27.1		01.2	139	22.3		10.1	238	38.1		45.9
14	21	03.8	72	32.2		31.9	310	28.1		01.3	154	24.8		10.1	253	40.6		45.9
15	36	06.2	87	32.3		31.6	325	29.1		01.5	169	27.3		10.0	268	43.2		46.0
16	51	08.7	102	32.5		31.3	340	30.0		01.7	184	29.9		10.0	283	45.8		46.0
17	66	11.1	117	32.6	-15	31.1	355	31.0	+24	01.9	199	32.4	-16	10.0	298	48.3	+19	46.0
18	81	13.6	132	32.8	-15	30.8	10	32.0	+24	02.0	214	34.9	-16	10.0	313	50.9	+19	46.0
19	96	16.1	147	32.9		30.5	25	33.0		02.2	229	37.5		09.9	328	53.5		46.1
20	111	18.5	162	33.1		30.3	40	34.0		02.4	244	40.0		09.9	343	56.0		46.1
21	126	21.0	177	33.2		30.0	55	35.0		02.5	259	42.5		09.9	358	58.6		46.1
22	141	23.5	192	33.3		29.7	70	36.0		02.7	274	45.1		09.9	14	01.2		46.1
23	156	25.9	207	33.5		29.4	85	37.0		02.9	289	47.6		09.8	29	03.7		46.2
24	171	28.4	222	33.6	-15	29.2	100	38.0	+24	03.1	304	50.1	-16	09.8	44	06.3	+19	46.2
Dif	—	+2		+3	+10		+2	+25		0	+26		0					

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna						
	SD: 16'1 PMG: 12 ^h 09 ^m 2			Edad: 14 ^d 0 PHE { SD: 14'7 PMG: **h **m															
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°				
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	m	°			
0	177	39.4	-2	40.4	6	45.2	+8	38.4	60 N	4	50	5	39	6	20	17	30		
1	192	39.5		39.4	21	21.1 ¹⁶⁹		24.7 ¹³⁷	58	55	41	19		32	79	29	1		
2	207	39.7		38.5	35	57.0 ¹⁶⁹	+8	10.9 ¹³⁸	56	4	58	42	19		35	75	26	4	
3	222	39.9		37.5	50	32.9 ¹⁶⁹	+7	57.2 ¹³⁷	54	5	01	43	18		37	73	23	6	
4	237	40.1		36.5	65	08.9 ¹⁷⁰		43.4 ¹³⁸	52	04	44	17		38	71	20	9		
5	252	40.2	-2	35.5	79	44.9 ¹⁷⁰	+7	29.6 ¹³⁸	50	5	07	5	44	6	16	17	40	11	
6	267	40.4	-2	34.5	94	20.9 ¹⁷⁰	+7	15.7 ¹³⁹	45	5	12	5	46	6	15	17	44	15	
7	282	40.6		33.5	108	56.9 ¹⁷⁰	+7	01.8 ¹³⁹	40	15	47	14		47	59	07	19		
8	297	40.8		32.5	123	32.9 ¹⁷⁰	+6	47.9 ¹³⁹	35	18	47	12		49	56	6	03	22	
9	312	40.9		31.6	138	09.0 ¹⁷¹		34.0 ¹³⁹	30	20	48	11		52	53	5	59	25	
10	327	41.1		30.6	152	45.1 ¹⁷¹		20.0 ¹⁴⁰	20	22	48	10		55	48	53	30		
11	342	41.3	-2	29.6	167	21.2 ¹⁷¹	+6	06.1 ¹³⁹	10 N	5	22	5	47	6	08	17	59	35	
12	357	41.5	-2	28.6	181	57.3 ¹⁷¹	+5	52.1 ¹⁴⁰	0	5	21	5	45	6	06	18	02	39	
13	12	41.6		27.6	196	33.4 ¹⁷¹		38.0 ¹⁴¹	10 S	19	43	04		05	35	36	44		
14	27	41.8		26.6	211	09.6 ¹⁷²		24.0 ¹⁴⁰	20	14	40	6	02	09	30	31	48		
15	42	42.0		25.6	225	45.7 ¹⁷¹	+5	09.9 ¹⁴¹	30	08	36	5	59	13	25	24	53		
16	57	42.1		24.7	240	21.9 ¹⁷²	+4	55.8 ¹⁴¹	35	5	03	33	58	15	22	20	56		
17	72	42.3	-2	23.7	254	58.1 ¹⁷²	+4	41.7 ¹⁴¹	40	4	57	5	29	5	56	18	17	59	
18	87	42.5	-2	22.7	269	34.3 ¹⁷²	+4	27.5 ¹⁴²	45	4	50	5	25	5	54	18	20	16	
19	102	42.7		21.7	284	10.5 ¹⁷²	+4	13.4 ¹⁴¹	50	41	19	52		24	11	05	63		
20	117	42.8		20.7	298	46.7 ¹⁷²	+3	59.2 ¹⁴²	52	36	17	51		25	9	5	02	70	
21	132	43.0		19.7	313	23.0 ¹⁷³		45.0 ¹⁴²	54	31	14	49		27	7	4	59	73	
22	147	43.2		18.7	327	59.2 ¹⁷²		30.8 ¹⁴²	56	25	10	48		29	4	55	76		
23	162	43.4		17.7	342	35.5 ¹⁷³		16.6 ¹⁴²	58	18	07	46		31	1	51	79		
24	177	43.5	-2	16.8	357	11.7 ¹⁷²	+3	02.3 ¹⁴³	60 S	4	11	5	02	5	45	18	33	**	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO							
	PMG: 12 ^h 32 ^m 0		Mag: -4.6 PMG: 9 ^h 10 ^m			Mag: +1.0 PMG: 17 ^h 16 ^m			Mag: -2.3 PMG: 3 ^h 40 ^m			Mag: 0.0 PMG: 21 ^h 00 ^m							
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec						
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'					
0	171	28.4	222	33.6	-15	29.2	100	38.0	+24	03.1	304	50.1	-16	09.8	44	06.3	+19	46.2	
1	186	30.9	237	33.8		28.9	115	38.9		03.2	319	52.7		09.8	59	08.9		46.2	
2	201	33.3	252	33.9		28.6	130	39.9		03.4	334	55.2		09.8	74	11.4		46.2	
3	216	35.8	267	34.1		28.3	145	40.9		03.6	349	57.7		09.7	89	14.0		46.3	
4	231	38.2	282	34.2		28.1	160	41.9		03.7	5	00.3		09.7	104	16.6		46.3	
5	246	40.7	297	34.3	-15	27.8	175	42.9	+24	03.9	20	02.8	-16	09.7	119	19.1	+19	46.3	
6	261	43.2	312	34.5	-15	27.5	190	43.9	+24	04.1	35	05.3	-16	09.6	134	21.7	+19	46.3	
7	276	45.6	327	34.6		27.2	205	44.9		04.2	50	07.9		09.6	149	24.3		46.4	
8	291	48.1	342	34.7		27.0	220	45.9		04.4	65	10.4		09.6	164	26.8		46.4	
9	306	50.6	357	34.9		26.7	235	46.8		04.6	80	13.0		09.6	179	29.4		46.4	
10	321	53.0	12	35.0		26.4	250	47.8		04.8	95	15.5		09.5	194	32.0		46.4	
11	336	55.5	27	35.1	-15	26.1	265	48.8	+24	04.9	110	18.0	-16	09.5	209	34.5	+19	46.5	
12	351	58.0	42	35.3	-15	25.8	280	49.8	+24	05.1	125	20.6	-16	09.5	224	37.1	+19	46.5	
13	7	00.4	57	35.4		25.5	295	50.8		05.3	140	23.1		09.5	239	39.7		46.5	
14	22	02.9	72	35.5		25.3	310	51.8		05.4	155	25.6		09.4	254	42.2		46.5	
15	37	05.4	87	35.7		25.0	325	52.8		05.6	170	28.2		09.4	269	44.8		46.6	
16	52	07.8	102	35.8		24.7	340	53.7		05.8	185	30.7		09.4	284	47.4		46.6	
17	67	10.3	117	35.9	-15	24.4	355	54.7	+24	05.9	200	33.3	-16	09.4	299	49.9	+19	46.6	
18	82	12.7	132	36.0	-15	24.1	10	55.7	+24	06.1	215	35.8	-16	09.3	314	52.5	+19	46.6	
19	97	15.2	147	36.2		23.8	25	56.7		06.3	230	38.3		09.3	329	55.0		46.7	
20	112	17.7	162	36.3		23.5	40	57.7		06.4	245	40.9		09.3	344	57.6		46.7	
21	127	20.1	177	36.4		23.2	55	58.7		06.6	260	43.4		09.2	0	00.2		46.7	
22	142	22.6	192	36.5		23.0	70	59.6		06.8	275	46.0		09.2	15	02.7		46.7	
23	157	25.1	207	36.7		22.7	86	00.6		06.9	290	48.5		09.2	30	05.3		46.8	
24	172	27.5	222	36.8	-15	22.4	101	01.6	+24	07.1	305	51.1	-16	09.2	45	07.9	+19	46.8	
Dif	—		+1			+3	+10		+2		+25		0		+26				

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: 15 ^d 0 PHE { 4 ^h : 54'2 12 ^h : 54'2 20 ^h : 54'3 PMG: 0 ^h 12 ^m R°: 39 ^m											
	hG ☉	Dec	hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	h m	h m	h m	h m	m	h m	m
0	177	43.5	-2 16.8	357	11.7	+3 02.3	60 N	18 02	18 43	19 32	18 52	84	6 31	**
1	192	43.7	15.8	11	48.0 ¹⁷³	+2 48.1 ¹⁴²	58	02	42	28	51	80	30	2
2	207	43.9	14.8	26	24.2 ¹⁷²	33.8 ¹⁴³	56	03	40	24	50	77	30	4
3	222	44.1	13.8	41	00.5 ¹⁷³	19.5 ¹⁴³	54	04	39	20	50	74	29	7
4	237	44.2	12.8	55	36.8 ¹⁷³	+2 05.2 ¹⁴³	52	04	38	17	49	72	29	8
5	252	44.4	-2 11.8	70	13.0 ¹⁷²	+1 50.9 ¹⁴³	50	18 05	18 37	19 15	18 49	69	6 28	11
6	267	44.6	-2 10.8	84	49.3 ¹⁷³	+1 36.6 ¹⁴³	45	18 06	18 35	19 09	18 47	65	6 27	15
7	282	44.8	09.9	99	25.6 ¹⁷³	22.3 ¹⁴³	40	07	34	05	46	61	26	19
8	297	45.0	08.9	114	01.8 ¹⁷²	+1 08.0 ¹⁴³	35	07	33	02	45	57	25	23
9	312	45.1	07.9	128	38.1 ¹⁷³	+0 53.6 ¹⁴⁴	30	08	32	19 00	45	54	24	26
10	327	45.3	06.9	143	14.3 ¹⁷²	39.3 ¹⁴³	20	10	32	18 57	43	49	23	31
11	342	45.5	-2 05.9	157	50.6 ¹⁷³	+0 24.9 ¹⁴⁴	10 N	18 11	18 32	18 56	18 42	44	6 22	35
12	357	45.7	-2 04.9	172	26.8 ¹⁷²	+0 10.5 ¹⁴⁴	0	18 12	18 33	18 57	18 41	40	6 21	39
13	12	45.8	03.9	187	03.1 ¹⁷³	-0 03.8 ¹⁴³	10 S	14	35	18 59	40	36	20	43
14	27	46.0	02.9	201	39.3 ¹⁷²	18.2 ¹⁴⁴	20	15	37	19 03	39	31	19	48
15	42	46.2	02.0	216	15.5 ¹⁷²	32.6 ¹⁴⁴	30	17	41	09	38	26	17	54
16	57	46.4	-2 01.0	230	51.7 ¹⁷²	-0 46.9 ¹⁴³	35	18	44	13	37	23	16	57
17	72	46.5	-2 00.0	245	27.9 ¹⁷²	-1 01.3 ¹⁴⁴	40	18 20	18 47	19 19	18 36	20	6 15	60
18	87	46.7	-1 59.0	260	04.1 ¹⁷²	-1 15.7 ¹⁴⁴	45	18 22	18 51	19 26	18 36	15	6 14	64
19	102	46.9	58.0	274	40.3 ¹⁷²	30.1 ¹⁴⁴	50	24	56	34	35	11	13	69
20	117	47.1	57.0	289	16.4 ¹⁷¹	44.5 ¹⁴⁴	52	24	18 58	39	34	9	12	71
21	132	47.2	56.0	303	52.6 ¹⁷²	-1 58.8 ¹⁴³	54	25	19 01	43	34	6	12	73
22	147	47.4	55.0	318	28.7 ¹⁷¹	-2 13.2 ¹⁴⁴	56	27	04	49	33	4	11	76
23	162	47.6	54.1	333	04.8 ¹⁷¹	27.6 ¹⁴⁴	58	28	07	19 55	32	2	10	79
24	177	47.8	-1 53.1	347	40.9 ¹⁷¹	-2 42.0 ¹⁴⁴	60 S	18 29	19 11	20 02	18 32	**	6 09	83
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 12 ^h 28 ^m 1		Mag: -4.6 PMG: 9 ^h 09 ^m		Mag: +1.0 PMG: 17 ^h 15 ^m		Mag: -2.3 PMG: 3 ^h 36 ^m		Mag: 0.0 PMG: 20 ^h 56 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	172	27.5	222 36.8	-15 22.4	101 01.6	+24 07.1	305 51.1	-16 09.2	45 07.9	+19 46.8				
1	187	30.0	237 36.9	22.1	116 02.6	07.3	320 53.6	09.1	60 10.4	46.8				
2	202	32.5	252 37.0	21.8	131 03.6	07.4	335 56.1	09.1	75 13.0	46.8				
3	217	34.9	267 37.1	21.5	146 04.6	07.6	350 58.7	09.1	90 15.5	46.9				
4	232	37.4	282 37.3	21.2	161 05.5	07.8	6 01.2	09.0	105 18.1	46.9				
5	247	39.8	297 37.4	-15 20.9	176 06.5	+24 07.9	21 03.8	-16 09.0	120 20.7	+19 46.9				
6	262	42.3	312 37.5	-15 20.6	191 07.5	+24 08.1	36 06.3	-16 09.0	135 23.2	+19 46.9				
7	277	44.8	327 37.6	20.3	206 08.5	08.3	51 08.9	09.0	150 25.8	47.0				
8	292	47.2	342 37.7	20.0	221 09.5	08.4	66 11.4	08.9	165 28.4	47.0				
9	307	49.7	357 37.8	19.7	236 10.4	08.6	81 13.9	08.9	180 30.9	47.0				
10	322	52.2	12 37.9	19.4	251 11.4	08.7	96 16.5	08.9	195 33.5	47.0				
11	337	54.6	27 38.1	-15 19.1	266 12.4	+24 08.9	111 19.0	-16 08.8	210 36.0	+19 47.1				
12	352	57.1	42 38.2	-15 18.8	281 13.4	+24 09.1	126 21.6	-16 08.8	225 38.6	+19 47.1				
13	7	59.6	57 38.3	18.5	296 14.4	09.2	141 24.1	08.8	240 41.2	47.1				
14	23	02.0	72 38.4	18.2	311 15.3	09.4	156 26.7	08.8	255 43.7	47.1				
15	38	04.5	87 38.5	17.9	326 16.3	09.6	171 29.2	08.7	270 46.3	47.1				
16	53	07.0	102 38.6	17.6	341 17.3	09.7	186 31.8	08.7	285 48.8	47.2				
17	68	09.4	117 38.7	-15 17.3	356 18.3	+24 09.9	201 34.3	-16 08.7	300 51.4	+19 47.2				
18	83	11.9	132 38.8	-15 17.0	11 19.3	+24 10.1	216 36.9	-16 08.6	315 54.0	+19 47.2				
19	98	14.3	147 38.9	16.7	26 20.2	10.2	231 39.4	08.6	330 56.5	47.2				
20	113	16.8	162 39.0	16.4	41 21.2	10.4	246 42.0	08.6	345 59.1	47.3				
21	128	19.3	177 39.1	16.0	56 22.2	10.5	261 44.5	08.6	1 01.6	47.3				
22	143	21.7	192 39.2	15.7	71 23.2	10.7	276 47.1	08.5	16 04.2	47.3				
23	158	24.2	207 39.3	15.4	86 24.2	10.9	291 49.6	08.5	31 06.7	47.3				
24	173	26.7	222 39.4	-15 15.1	101 25.1	+24 11.0	306 52.2	-16 08.5	46 09.3	+19 47.4				
Dif	—		+1	+3	+10	+2	+25	0	+26	0				

UT	SOL			LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16 ^h 1			Edad: 16 ^d 0 PHE { 4 ^h : 54 ^m 4 12 ^h : 54 ^m 5 20 ^h : 54 ^m 6											
	PMG: 12 ^h 08 ^m 7			SD: 14 ^h 8 PMG: 0 ^h 51 ^m R ^o : 40 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R ^o	Hora	R ^o
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	m
0	177	47.8	-1	347	40.9	-2	42.0	60 N	4	44	5	33	6	14	20 16 87
1	192	48.0		2	17.0 ¹⁷¹	-2	56.3 ¹⁴³	58	49	35	14		11	83	6 29 **
2	207	48.1		16	53.0 ¹⁷⁰	-3	10.7 ¹⁴⁴	56	53	36	13		07	80	34 4
3	222	48.3		31	29.1 ¹⁷¹		25.0 ¹⁴³	54	4	56	38	13		04	76
4	237	48.5		46	05.1 ¹⁷⁰		39.4 ¹⁴⁴	52	5	00	39	12		20	01 74
5	252	48.7	-1	60	41.0 ¹⁶⁹	-3	53.7 ¹⁴³	50	5	02	5	40	6	12	19 58 71
6	267	48.8	-1	75	17.0 ¹⁷⁰	-4	08.1 ¹⁴⁴	45	5	08	5	42	6	11	19 52 66
7	282	49.0		89	52.9 ¹⁶⁹		22.4 ¹⁴³	40	12	43	10		47	62	45 20
8	297	49.2		104	28.8 ¹⁶⁹		36.7 ¹⁴³	35	15	44	10		42	59	48 23
9	312	49.4		119	04.7 ¹⁶⁹	-4	51.0 ¹⁴³	30	17	45	09		39	55	50 26
10	327	49.6		133	40.6 ¹⁶⁹	-5	05.3 ¹⁴³	20	20	46	08		32	50	54 31
11	342	49.7	-1	148	16.4 ¹⁶⁸	-5	19.6 ¹⁴³	10 N	5	21	5	46	6	07	19 26 46
12	357	49.9	-1	162	52.2 ¹⁶⁸	-5	33.8 ¹⁴²	0	5	21	5	45	6	05	19 21 41
13	12	50.1		177	27.9 ¹⁶⁷	-5	48.1 ¹⁴³	10 S	19		43	04		16	37
14	27	50.3		192	03.6 ¹⁶⁷	-6	02.3 ¹⁴²	20	15		41	03		10	32
15	42	50.5		206	39.3 ¹⁶⁷		16.5 ¹⁴²	30	09		37	01		04	27
16	57	50.6		221	15.0 ¹⁶⁷		30.7 ¹⁴²	35	5	05	34	6	00	19	00 24
17	72	50.8	-1	235	50.6 ¹⁶⁶	-6	44.9 ¹⁴²	40	4	59	5	31	5	58	18 56 21
18	87	51.0	-1	250	26.2 ¹⁶⁶	-6	59.1 ¹⁴²	45	4	53	5	27	5	57	18 51 17
19	102	51.2		265	01.7 ¹⁶⁵	-7	13.2 ¹⁴¹	50	44		23	55		46	12
20	117	51.4		279	37.2 ¹⁶⁵		27.3 ¹⁴¹	52	40		20	54		43	10
21	132	51.5		294	12.7 ¹⁶⁵		41.4 ¹⁴¹	54	35		18	53		40	8
22	147	51.7		308	48.1 ¹⁶⁴	-7	55.5 ¹⁴¹	56	30		15	52		37	5
23	162	51.9		323	23.5 ¹⁶⁴	-8	09.6 ¹⁴¹	58	24		11	51		34	2
24	177	52.1	-1	337	58.8 ¹⁶³	-8	23.6 ¹⁴⁰	60 S	4	16	5	08	5	50	18 30 **

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 12 ^h 24 ^m 2		Mag: -4.6 PMG: 9 ^h 09 ^m		Mag: +1.0 PMG: 17 ^h 13 ^m		Mag: -2.3 PMG: 3 ^h 32 ^m		Mag: 0.0 PMG: 20 ^h 52 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	173	26.7	222	39.4	-15	15.1	306	52.2	-16	08.5
1	188	29.1	237	39.5		14.8	321	54.7		08.4
2	203	31.6	252	39.6		14.5	336	57.3		08.4
3	218	34.1	267	39.7		14.2	351	59.8		08.4
4	233	36.5	282	39.8		13.9	7	02.4		08.3
5	248	39.0	297	39.9	-15	13.5	22	04.9	-16	08.3
6	263	41.4	312	40.0	-15	13.2	37	07.5	-16	08.3
7	278	43.9	327	40.1		12.9	52	10.0		08.3
8	293	46.4	342	40.2		12.6	67	12.6		08.2
9	308	48.8	357	40.3		12.3	82	15.1		08.2
10	323	51.3	12	40.4		11.9	97	17.7		08.2
11	338	53.8	27	40.5	-15	11.6	112	20.2	-16	08.1
12	353	56.2	42	40.6	-15	11.3	127	22.8	-16	08.1
13	8	58.7	57	40.6		11.0	142	25.3		08.1
14	24	01.2	72	40.7		10.7	157	27.9		08.0
15	39	03.6	87	40.8		10.3	172	30.4		08.0
16	54	06.1	102	40.9		10.0	187	33.0		08.0
17	69	08.6	117	41.0	-15	09.7	202	35.5	-16	07.9
18	84	11.0	132	41.1	-15	09.4	217	38.1	-16	07.9
19	99	13.5	147	41.2		09.0	232	40.7		07.9
20	114	15.9	162	41.2		08.7	247	43.2		07.8
21	129	18.4	177	41.3		08.4	262	45.8		07.8
22	144	20.9	192	41.4		08.0	277	48.3		07.8
23	159	23.3	207	41.5		07.7	292	50.9		07.8
24	174	25.8	222	41.6	-15	07.4	307	53.4	-16	07.7
Dif	—		+1	+3	+10	+2	+26	0	+26	0

UT	SOL			☉ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16 ^h 1 PMG: 12 ^h 08 ^m 4			Edad: 17 ^d 0 PHE { 4 ^h : 54 ^m 7 12 ^h : 54 ^m 8 20 ^h : 54 ^m 9 PMG: 1 ^h 31 ^m R°: 41 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	
0	177	52.1	-1 29.4	337	58.8	-8 23.6		60 N	18 07	18 48	19 38	21 43 92	6 28 **		
1	192	52.2		352	34.1 ¹⁶³	37.6 ¹⁴⁰		58	07	46	33	34 88	33 3		
2	207	52.4		7	09.4 ¹⁶³	-8 51.6 ¹⁴⁰		56	07	44	28	27 83	38 6		
3	222	52.6		21	44.6 ¹⁶²	-9 05.5 ¹³⁹		54	07	43	24	20 80	43 8		
4	237	52.8		36	19.7 ¹⁶¹	19.5 ¹⁴⁰		52	08	41	21	15 77	47 11		
5	252	53.0	-1 24.4	50	54.8 ¹⁶¹	-9 33.4 ¹³⁹		50	18 08	18 40	19 18	21 09 75	6 50 14		
6	267	53.1	-1 23.4	65	29.9 ¹⁶¹	-9 47.2 ¹³⁸		45	18 08	18 38	19 12	20 58 69	6 58 19		
7	282	53.3		80	04.9 ¹⁶⁰	-10 01.1 ¹³⁹		40	09	36	07	49 64	7 05 22		
8	297	53.5		94	39.8 ¹⁵⁹	14.9 ¹³⁸		35	09	34	04	41 61	11 26		
9	312	53.7		109	14.7 ¹⁵⁹	28.7 ¹³⁸		30	09	33	19 01	34 58	16 29		
10	327	53.9		123	49.6 ¹⁵⁹	42.4 ¹³⁷		20	10	32	18 58	22 53	25 34		
11	342	54.1	-1 18.5	138	24.4 ¹⁵⁸	-10 56.1 ¹³⁷		10 N	18 11	18 32	18 56	20 12 48	7 33 38		
12	357	54.2	-1 17.5	152	59.1 ¹⁵⁷	-11 09.8 ¹³⁷		0	18 12	18 32	18 56	20 02 44	7 40 43		
13	12	54.4		167	33.8 ¹⁵⁷	23.4 ¹³⁶		10 S	13	34	18 58	19 53 40	48 47		
14	27	54.6		182	08.4 ¹⁵⁶	37.0 ¹³⁶		20	14	36	19 01	42 36	7 56 51		
15	42	54.8		196	43.0 ¹⁵⁶	-11 50.6 ¹³⁶		30	15	39	07	31 30	8 05 57		
16	57	55.0		211	17.5 ¹⁵⁵	-12 04.1 ¹³⁵		35	16	41	11	24 28	10 60		
17	72	55.1	-1 12.6	225	51.9 ¹⁵⁴	-12 17.6 ¹³⁵		40	18 17	18 44	19 15	19 17 24	8 16 64		
18	87	55.3	-1 11.6	240	26.3 ¹⁵⁴	-12 31.0 ¹³⁴		45	18 18	18 47	19 22	19 08 20	8 23 68		
19	102	55.5		255	00.6 ¹⁵³	44.4 ¹³⁴		50	19	51	30	18 58 15	32 73		
20	117	55.7		269	34.9 ¹⁵³	-12 57.8 ¹³⁴		52	20	54	34	53 13	36 75		
21	132	55.9		284	09.0 ¹⁵¹	-13 11.1 ¹³³		54	21	56	38	48 10	40 78		
22	147	56.0		298	43.2 ¹⁵²	24.4 ¹³³		56	21	18 59	43	42 7	45 81		
23	162	56.2		313	17.2 ¹⁵⁰	37.6 ¹³²		58	22	19 02	49	36 3	51 84		
24	177	56.4	-1 05.7	327	51.2 ¹⁵⁰	-13 50.8 ¹³²		60 S	18 23	19 05	19 56	18 29 **	8 57 89		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 12 ^h 20 ^m 3		Mag: -4.6 PMG: 9 ^h 09 ^m			Mag: +1.0 PMG: 17 ^h 12 ^m			Mag: -2.3 PMG: 3 ^h 28 ^m			Mag: 0.0 PMG: 20 ^h 48 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	°	'	°	'	°	°	'	°	°	'	°	
0	174	25.8	222	41.6	-15 07.4	101	48.5	+24 14.8	307	53.4	-16 07.7	47	10.7	+19 47.9	
1	189	28.3	237	41.7	07.0	116	49.5	15.0	322	56.0	07.7	62	13.2	47.9	
2	204	30.7	252	41.7	06.7	131	50.5	15.1	337	58.6	07.7	77	15.8	48.0	
3	219	33.2	267	41.8	06.4	146	51.5	15.3	353	01.1	07.6	92	18.3	48.0	
4	234	35.7	282	41.9	06.0	161	52.4	15.4	8	03.7	07.6	107	20.9	48.0	
5	249	38.1	297	42.0	-15 05.7	176	53.4	+24 15.6	23	06.2	-16 07.6	122	23.4	+19 48.0	
6	264	40.6	312	42.0	-15 05.4	191	54.4	+24 15.7	38	08.8	-16 07.5	137	26.0	+19 48.0	
7	279	43.1	327	42.1	05.0	206	55.3	15.9	53	11.3	07.5	152	28.5	48.1	
8	294	45.5	342	42.2	04.7	221	56.3	16.1	68	13.9	07.5	167	31.1	48.1	
9	309	48.0	357	42.3	04.4	236	57.3	16.2	83	16.5	07.4	182	33.6	48.1	
10	324	50.4	12	42.3	04.0	251	58.2	16.4	98	19.0	07.4	197	36.2	48.1	
11	339	52.9	27	42.4	-15 03.7	266	59.2	+24 16.5	113	21.6	-16 07.4	212	38.7	+19 48.1	
12	354	55.4	42	42.5	-15 03.3	282	00.2	+24 16.7	128	24.1	-16 07.3	227	41.3	+19 48.2	
13	9	57.8	57	42.6	03.0	297	01.2	16.8	143	26.7	07.3	242	43.8	48.2	
14	25	00.3	72	42.6	02.7	312	02.1	17.0	158	29.3	07.3	257	46.4	48.2	
15	40	02.8	87	42.7	02.3	327	03.1	17.1	173	31.8	07.2	272	48.9	48.2	
16	55	05.2	102	42.8	02.0	342	04.1	17.3	188	34.4	07.2	287	51.5	48.3	
17	70	07.7	117	42.8	-15 01.6	357	05.0	+24 17.4	203	37.0	-16 07.2	302	54.0	+19 48.3	
18	85	10.2	132	42.9	-15 01.3	12	06.0	+24 17.6	218	39.5	-16 07.1	317	56.6	+19 48.3	
19	100	12.6	147	43.0	00.9	27	07.0	17.7	233	42.1	07.1	332	59.1	48.3	
20	115	15.1	162	43.0	00.6	42	07.9	17.9	248	44.6	07.1	348	01.7	48.3	
21	130	17.5	177	43.1	-15 00.2	57	08.9	18.0	263	47.2	07.0	3	04.2	48.4	
22	145	20.0	192	43.2	-14 59.9	72	09.9	18.2	278	49.8	07.0	18	06.8	48.4	
23	160	22.5	207	43.2	59.5	87	10.8	18.3	293	52.3	07.0	33	09.3	48.4	
24	175	24.9	222	43.3	-14 59.2	102	11.8	+24 18.5	308	54.9	-16 06.9	48	11.9	+19 48.4	
Dif	—		+1		+3	+10		+2	+26		0	+26		0	

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16 ^h 1			Edad: 18 ^d 0 PHE { 4 ^h : 55 ^m 1 12 ^h : 55 ^m 2 20 ^h : 55 ^m 4												
	PMG: 12 ^h 08 ^m 1			PMG: 2 ^h 12 ^m R°: 45 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	°	'	°	'	°	h	m	h	m		h	m	m
0	177	56.4	-1	05.7	327	51.2	-13	50.8	60 N	4	38	5	27	6	08	23 15 99
1	192	56.6		04.7	342	25.1 ¹⁴⁹	-14	03.9 ¹³¹	58	43	29		08	23	02	92
2	207	56.8		03.7	356	59.0 ¹⁴⁹		17.0 ¹³¹	56	47	31		08	22	50	87
3	222	57.0		02.7	11	32.7 ¹⁴⁷		30.0 ¹³⁰	54	51	33		08	40	83	51
4	237	57.1		01.7	26	06.4 ¹⁴⁷		43.0 ¹³⁰	52	55	34		08	32	79	6
5	252	57.3	-1	00.7	40	40.1 ¹⁴⁷	-14	55.9 ¹²⁹	50	4	58	5	36	6	08	22
6	267	57.5	-0	59.7	55	13.6 ¹⁴⁵	-15	08.8 ¹²⁹	45	5	04	5	38	6	07	22
7	282	57.7		58.7	69	47.1 ¹⁴⁵		21.6 ¹²⁸	40	09	40		07	21	53	67
8	297	57.9		57.7	84	20.5 ¹⁴⁴		34.4 ¹²⁸	35	12	42		07	42	63	37
9	312	58.0		56.8	98	53.8 ¹⁴³		47.1 ¹²⁷	30	15	43		07	32	60	45
10	327	58.2		55.8	113	27.1 ¹⁴³	-15	59.8 ¹²⁷	20	19	44		06	15	55	7
11	342	58.4	-0	54.8	128	00.3 ¹⁴²	-16	12.4 ¹²⁶	10 N	5	20	5	45	6	05	21
12	357	58.6	-0	53.8	142	33.4 ¹⁴¹	-16	24.9 ¹²⁵	0	5	20	5	44	6	05	20
13	12	58.8		52.8	157	06.4 ¹⁴⁰		37.4 ¹²⁵	10 S	19	43		04	33	43	35
14	27	59.0		51.8	171	39.3 ¹³⁹	-16	49.8 ¹²⁴	20	16	41		03	18	40	8
15	42	59.1		50.8	186	12.2 ¹³⁹	-17	02.1 ¹²³	30	10	38		02	20	01	36
16	57	59.3		49.8	200	44.9 ¹³⁷		14.4 ¹²³	35	06	36		01	19	52	32
17	72	59.5	-0	48.9	215	17.6 ¹³⁷	-17	26.6 ¹²²	40	5	02	5	33	6	00	19
18	87	59.7	-0	47.9	229	50.2 ¹³⁶	-17	38.8 ¹²²	45	4	56	5	30	5	59	19
19	102	59.9		46.9	244	22.7 ¹³⁵	-17	50.9 ¹²¹	50	48	26		58	13	20	45
20	118	00.1		45.9	258	55.1 ¹³⁴	-18	02.9 ¹²⁰	52	44	24		58	19	06	17
21	133	00.2		44.9	273	27.5 ¹³⁴		14.8 ¹¹⁹	54	39	22		57	18	58	14
22	148	00.4		43.9	287	59.7 ¹³²		26.7 ¹¹⁹	56	34	19		56	49	11	10
23	163	00.6		42.9	302	31.9 ¹³²		38.5 ¹¹⁸	58	29	16		55	39	6	15
24	178	00.8	-0	41.9	317	04.0 ¹³¹	-18	50.2 ¹¹⁷	60 S	4	22	5	13	5	55	18

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 12 ^h 16 ^m 3		Mag: -4.6 PMG: 9 ^h 09 ^m		Mag: +1.0 PMG: 17 ^h 10 ^m		Mag: -2.3 PMG: 3 ^h 24 ^m		Mag: 0.0 PMG: 20 ^h 44 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	175	24.9	222	43.3	-14	59.2	102	11.8	+24	18.5
1	190	27.4	237	43.3		58.8	117	12.8		18.6
2	205	29.9	252	43.4		58.5	132	13.7		18.8
3	220	32.3	267	43.5		58.1	147	14.7		18.9
4	235	34.8	282	43.5		57.8	162	15.7		19.1
5	250	37.3	297	43.6	-14	57.4	177	16.6	+24	19.2
6	265	39.7	312	43.6	-14	57.1	192	17.6	+24	19.4
7	280	42.2	327	43.7		56.7	207	18.6		19.5
8	295	44.7	342	43.7		56.3	222	19.5		19.7
9	310	47.1	357	43.8		56.0	237	20.5		19.8
10	325	49.6	12	43.9		55.6	252	21.5		20.0
11	340	52.0	27	43.9	-14	55.3	267	22.4	+24	20.1
12	355	54.5	42	44.0	-14	54.9	282	23.4	+24	20.3
13	10	57.0	57	44.0		54.5	297	24.4		20.4
14	25	59.4	72	44.1		54.2	312	25.3		20.6
15	41	01.9	87	44.1		53.8	327	26.3		20.7
16	56	04.4	102	44.2		53.4	342	27.3		20.9
17	71	06.8	117	44.2	-14	53.1	357	28.2	+24	21.0
18	86	09.3	132	44.3	-14	52.7	12	29.2	+24	21.2
19	101	11.8	147	44.3		52.3	27	30.2		21.3
20	116	14.2	162	44.4		52.0	42	31.1		21.5
21	131	16.7	177	44.4		51.6	57	32.1		21.6
22	146	19.1	192	44.5		51.2	72	33.0		21.7
23	161	21.6	207	44.5		50.9	87	34.0		21.9
24	176	24.1	222	44.5	-14	50.5	102	35.0	+24	22.0
Dif	—		+1		+4		+10		+1	
							+26		0	
									+25	

UT	SOL			LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16 ^h 1			Edad: 19 ^d 0 PHE { 4 ^h : 55 ^s 5 12 ^h : 55 ^s 7 20 ^h : 55 ^s 9						Civil			Náutico		Hora R°	
	PMG: 12 ^h 07 ^m 8			SD: 15 ^h 1 PMG: 2 ^h 57 ^m R°: 49 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		h m	h m	h m	h m	m	Hora	R°	
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m <td>m</td> <td>h m</td> <td>m</td>	m	h m	m	
0	178	00.8	-0 41.9	317	04.0	-18 50.2		60 N	18 12	18 53	19 43	*** ** *		6 26	1	
1	193	01.0	40.9	331	35.9 ¹²⁹	-19 01.9 ¹¹⁷		58	11	51	38	*** ** *		40	7	
2	208	01.2	40.0	346	07.8 ¹²⁹	13.5 ¹¹⁶		56	11	48	33	*** ** *		6 52	13	
3	223	01.3	39.0	0	39.6 ¹²⁸	25.0 ¹¹⁵		54	11	47	28	*** ** *		7 03	16	
4	238	01.5	38.0	15	11.3 ¹²⁷	36.4 ¹¹⁴		52	11	45	25	23 51	80	12	20	
5	253	01.7	-0 37.0	29	42.9 ¹²⁶	-19 47.7 ¹¹³		50	18 11	18 43	19 21	23 40	78	7 21	22	
6	268	01.9	-0 36.0	44	14.5 ¹²⁶	-19 59.0 ¹¹³		45	18 11	18 40	19 15	23 18	72	7 39	28	
7	283	02.1	35.0	58	45.9 ¹²⁴	-20 10.2 ¹¹²		40	11	38	09	23 00	68	7 54	31	
8	298	02.3	34.0	73	17.2 ¹²³	21.3 ¹¹¹		35	11	36	05	22 45	65	8 06	35	
9	313	02.4	33.0	87	48.4 ¹²²	32.3 ¹¹⁰		30	11	35	19 02	32 63		17	38	
10	328	02.6	32.1	102	19.6 ¹²²	43.2 ¹⁰⁹		20	11	33	18 58	22 10	59	36	43	
11	343	02.8	-0 31.1	116	50.6 ¹²⁰	-20 54.1 ¹⁰⁹		10 N	18 11	18 32	18 56	21 51	56	8 53	46	
12	358	03.0	-0 30.1	131	21.5 ¹¹⁹	-21 04.8 ¹⁰⁷		0	18 11	18 32	18 56	21 34	52	9 09	49	
13	13	03.2	29.1	145	52.4 ¹¹⁹	15.5 ¹⁰⁷		10 S	11	32	57	21 16	49	24	54	
14	28	03.4	28.1	160	23.1 ¹¹⁷	26.0 ¹⁰⁵		20	12	34	18 59	20 58	45	9 41	57	
15	43	03.5	27.1	174	53.8 ¹¹⁷	36.5 ¹⁰⁵		30	12	36	19 04	37 41		10 01	61	
16	58	03.7	26.1	189	24.3 ¹¹⁵	46.9 ¹⁰⁴		35	13	38	08	24 39		12	64	
17	73	03.9	-0 25.1	203	54.8 ¹¹⁵	-21 57.2 ¹⁰³		40	18 13	18 40	19 12	20 10	36	10 25	68	
18	88	04.1	-0 24.1	218	25.1 ¹¹³	-22 07.4 ¹⁰²		45	18 14	18 43	19 18	19 53	32	10 41	71	
19	103	04.3	23.2	232	55.3 ¹¹²	17.5 ¹⁰¹		50	15	47	25	33 27		11 00	77	
20	118	04.5	22.2	247	25.5 ¹¹²	27.5 ¹⁰⁰		52	15	49	29	23 24		09	80	
21	133	04.6	21.2	261	55.5 ¹¹⁰	37.4 ⁹⁹		54	16	51	33	12 21		20	83	
22	148	04.8	20.2	276	25.4 ¹⁰⁹	47.2 ⁹⁸		56	16	53	37	19 00	17	31	88	
23	163	05.0	19.2	290	55.3 ¹⁰⁹	-22 56.9 ⁹⁷		58	17	56	43	18 45	12	11 45	93	
24	178	05.2	-0 18.2	305	25.0 ¹⁰⁷	-23 06.5 ⁹⁶		60 S	18 17	18 59	19 49	18 29	3	12 01	101	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 12 ^h 12 ^m 4		Mag: -4.6 PMG: 9 ^h 09 ^m		Mag: +1.0 PMG: 17 ^h 09 ^m		Mag: -2.3 PMG: 3 ^h 20 ^m		Mag: 0.0 PMG: 20 ^h 40 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	176	24.1	222	44.5	-14 50.5		309	56.6	-16 06.1	
1	191	26.5	237	44.6	50.1	117 35.9	22.2	324	59.1	06.1
2	206	29.0	252	44.6	49.8	132 36.9	22.3	340	01.7	06.0
3	221	31.5	267	44.7	49.4	147 37.9	22.5	355	04.3	06.0
4	236	33.9	282	44.7	49.0	162 38.8	22.6	10	06.8	05.9
5	251	36.4	297	44.8	-14 48.6	177 39.8	+24 22.8	25	09.4	-16 05.9
6	266	38.9	312	44.8	-14 48.3	192 40.7	+24 22.9	40	12.0	-16 05.9
7	281	41.3	327	44.8	47.9	207 41.7	23.0	55	14.6	05.8
8	296	43.8	342	44.9	47.5	222 42.7	23.2	70	17.1	05.8
9	311	46.3	357	44.9	47.1	237 43.6	23.3	85	19.7	05.8
10	326	48.7	12	45.0	46.7	252 44.6	23.5	100	22.3	05.7
11	341	51.2	27	45.0	-14 46.4	267 45.5	+24 23.6	115	24.9	-16 05.7
12	356	53.6	42	45.0	-14 46.0	282 46.5	+24 23.8	130	27.4	-16 05.7
13	11	56.1	57	45.1	45.6	297 47.5	23.9	145	30.0	05.6
14	26	58.6	72	45.1	45.2	312 48.4	24.0	160	32.6	05.6
15	42	01.0	87	45.1	44.8	327 49.4	24.2	175	35.2	05.5
16	57	03.5	102	45.2	44.5	342 50.3	24.3	190	37.8	05.5
17	72	06.0	117	45.2	-14 44.1	357 51.3	+24 24.5	205	40.3	-16 05.5
18	87	08.4	132	45.2	-14 43.7	12 52.3	+24 24.6	220	42.9	-16 05.4
19	102	10.9	147	45.3	43.3	27 53.2	24.8	235	45.5	05.4
20	117	13.4	162	45.3	42.9	42 54.2	24.9	250	48.1	05.4
21	132	15.8	177	45.3	42.5	57 55.1	25.0	265	50.6	05.3
22	147	18.3	192	45.4	42.1	72 56.1	25.2	280	53.2	05.3
23	162	20.8	207	45.4	41.7	87 57.0	25.3	295	55.8	05.2
24	177	23.2	222	45.4	-14 41.4	102 58.0	+24 25.5	310	58.4	-16 05.2
Dif	—		0	+4	+10	+1	+26	0	+25	0

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16'1			Edad: 20 ^d 0	PHE { 4 ^h : 56'1 12 ^h : 56'3 20 ^h : 56'5	SD: 15'2		Principio del crepúsculo		Salida de Luna	Puesta de Luna					
	PMG: 12 ^h 07 ^m 5					PMG: 3 ^h 46 ^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	05.2	-0 18.2	305	25.0	-23 06.5		60 N	4 31	5 21	6 02	0 54	104	6 27	5	
1	193	05.4		319	54.6	16.0	95	58	37	23	03	34	94	6 47	16	
2	208	05.6		334	24.1	25.3	93	56	42	26	03	17	88	7 05	21	
3	223	05.8		348	53.5	34.6	93	54	46	28	03	0 03	84	19	26	
4	238	05.9		3	22.9	43.8	92	52	50	30	03	** ** *	**	32	29	
5	253	06.1	-0 13.3	17	52.1	-23 52.8	90	50	4 53	5 31	6 03	** ** *	**	7 43	32	
6	268	06.3	-0 12.3	32	21.2	-24 01.8	90	45	5 00	5 34	6 04	** ** *	**	8 07	36	
7	283	06.5		46	50.2	10.6	88	40	05	37	04	** ** *	**	25	41	
8	298	06.7		61	19.0	19.3	87	35	09	39	04	23	50	41	43	
9	313	06.9		75	47.8	27.9	86	30	13	40	04	35	63	8 55	45	
10	328	07.1		90	16.5	36.4	85	20	17	42	04	23	09	9 19	48	
11	343	07.2	-0 07.3	104	45.1	-24 44.7	83	10 N	5 19	5 43	6 04	22	47	9 39	52	
12	358	07.4	-0 06.4	119	13.6	-24 53.0	83	0	5 20	5 44	6 04	22	26	9 58	54	
13	13	07.6		133	41.9	-25 01.1	81	10 S	19	43	04	22	05	10 18	56	
14	28	07.8		148	10.2	09.1	80	20	16	42	04	21	43	10 38	60	
15	43	08.0		162	38.4	16.9	78	30	12	39	03	18	49	11 02	63	
16	58	08.2		177	06.4	24.7	78	35	08	38	03	21	03	16	65	
17	73	08.4	-0 01.4	191	34.4	-25 32.3	76	40	5 04	5 35	6 03	20	46	11 33	67	
18	88	08.5	-0 00.4	206	02.2	-25 39.8	75	45	4 58	5 33	6 02	20	25	11 52	71	
19	103	08.7	+0 00.6	220	30.0	47.1	73	50	51	29	01	20	00	12 17	75	
20	118	08.9		234	57.6	-25 54.4	73	52	47	27	01	19	47	29	78	
21	133	09.1		249	25.2	-26 01.4	70	54	43	25	01	33	33	43	81	
22	148	09.3		263	52.6	08.4	84	56	39	23	00	19	17	12 59	85	
23	163	09.5		278	20.0	15.2	68	58	34	21	6 00	18	57	13 18	91	
24	178	09.7	+0 05.5	292	47.2	-26 21.9	67	60 S	4 28	5 18	5 59	18	32	13 42	102	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG 12 ^h 08 ^m 5		Mag: -4.6 PMG: 9 ^h 09 ^m		Mag: +1.0 PMG: 17 ^h 07 ^m		Mag: -2.4 PMG: 3 ^h 16 ^m		Mag: +0.1 PMG: 20 ^h 36 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	177	23.2	222	45.4	-14 41.4	102	58.0	+24 25.5	310	58.4	-16 05.2	50	14.1	+19 49.4
1	192	25.7	237	45.4	41.0	117	59.0	25.6	326	01.0	05.2	65	16.6	49.4
2	207	28.1	252	45.5	40.6	132	59.9	25.7	341	03.5	05.1	80	19.1	49.4
3	222	30.6	267	45.5	40.2	148	00.9	25.9	356	06.1	05.1	95	21.7	49.5
4	237	33.1	282	45.5	39.8	163	01.8	26.0	11	08.7	05.1	110	24.2	49.5
5	252	35.5	297	45.5	-14 39.4	178	02.8	+24 26.2	26	11.3	-16 05.0	125	26.8	+19 49.5
6	267	38.0	312	45.6	-14 39.0	193	03.7	+24 26.3	41	13.9	-16 05.0	140	29.3	+19 49.5
7	282	40.5	327	45.6	38.6	208	04.7	26.4	56	16.4	04.9	155	31.8	49.5
8	297	42.9	342	45.6	38.2	223	05.7	26.6	71	19.0	04.9	170	34.4	49.5
9	312	45.4	357	45.6	37.8	238	06.6	26.7	86	21.6	04.9	185	36.9	49.6
10	327	47.9	12 45.7	37.4	37.4	253	07.6	26.8	101	24.2	04.8	200	39.5	49.6
11	342	50.3	27 45.7	-14 37.0	37.0	268	08.5	+24 27.0	116	26.8	-16 04.8	215	42.0	+19 49.6
12	357	52.8	42 45.7	-14 36.6	36.6	283	09.5	+24 27.1	131	29.4	-16 04.7	230	44.5	+19 49.6
13	12	55.2	57 45.7	36.2	36.2	298	10.4	27.3	146	31.9	04.7	245	47.1	49.6
14	27	57.7	72 45.7	35.8	35.8	313	11.4	27.4	161	34.5	04.7	260	49.6	49.7
15	43	00.2	87 45.8	35.4	35.4	328	12.3	27.5	176	37.1	04.6	275	52.1	49.7
16	58	02.6	102 45.8	35.0	35.0	343	13.3	27.7	191	39.7	04.6	290	54.7	49.7
17	73	05.1	117 45.8	-14 34.6	34.6	358	14.3	+24 27.8	206	42.3	-16 04.5	305	57.2	+19 49.7
18	88	07.6	132 45.8	-14 34.2	34.2	13	15.2	+24 27.9	221	44.9	-16 04.5	320	59.8	+19 49.7
19	103	10.0	147 45.8	33.8	33.8	28	16.2	28.1	236	47.5	04.5	336	02.3	49.7
20	118	12.5	162 45.8	33.4	33.4	43	17.1	28.2	251	50.0	04.4	351	04.8	49.8
21	133	15.0	177 45.9	33.0	33.0	58	18.1	28.3	266	52.6	04.4	6	07.4	49.8
22	148	17.4	192 45.9	32.6	32.6	73	19.0	28.5	281	55.2	04.3	21	09.9	49.8
23	163	19.9	207 45.9	32.1	32.1	88	20.0	28.6	296	57.8	04.3	36	12.4	49.8
24	178	22.4	222 45.9	-14 31.7	31.7	103	20.9	+24 28.7	312	00.4	-16 04.3	51	15.0	+19 49.8
Dif	—		0 +4			+10 +1			+26 0			+25 0		

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16 ^h 1 PMG: 12 ^h 07 ^m 2			Edad: 21 ^d 0 PHE { 4 ^h : 56 ^m 7 12 ^h : 57 ^m 0 20 ^h : 57 ^m 2 PMG: 4 ^h 39 ^m R°: 57 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	'	°	'	°	h m	h m	h m	h m	h m	m	
0	178	09.7	+0 05.5	292	47.2	-26 21.9	66	60 N	18 17	18 58	19 49	2 38 99	6 32 21	
1	193	09.8		307	14.4	82	66	58	16	55	42	2 08 86	7 03 33	
2	208	10.0		321	41.4	80	64	56	15	53	37	1 45 81	26 38	
3	223	10.2		336	08.3	79	63	54	15	50	32	27 77	7 45 42	
4	238	10.4		350	35.2	79	61	52	15	48	28	1 11 74	8 01 44	
5	253	10.6	+0 10.4	5	01.9	77	60	50	18 14	18 46	19 25	0 58 72	8 15 46	
6	268	10.8	+0 11.4	19	28.6	77	58	45	18 13	18 43	19 17	0 30 69	8 43 49	
7	283	11.0		33	55.1	75	57	40	13	40	12	0 08 67	9 06 50	
8	298	11.1		48	21.6	75	55	35	12	38	07	** ** *	24 53	
9	313	11.3		62	48.0	74	54	30	12	36	19 04	** ** *	9 40 54	
10	328	11.5		77	14.2	72	53	20	11	33	18 59	** ** *	10 07 56	
11	343	11.7	+0 16.4	91	40.4	72	51	10 N	18 11	18 32	18 56	23 45 60	10 31 56	
12	358	11.9	+0 17.3	106	06.5	71	49	0	18 10	18 31	18 55	23 22 60	10 52 58	
13	13	12.1		120	32.5	70	48	10 S	10	31	56	23 00 59	11 14 59	
14	28	12.3		134	58.4	69	47	20	10	32	18 58	22 35 59	11 38 60	
15	43	12.4		149	24.3	69	45	30	10	34	19 02	22 07 58	12 05 62	
16	58	12.6		163	50.0	67	43	35	10	35	05	21 51 57	21 63	
17	73	12.8	+0 22.3	178	15.7	67	42	40	18 10	18 37	19 09	21 31 57	12 40 64	
18	88	13.0	+0 23.3	192	41.2	65	40	45	18 10	18 40	19 14	21 08 56	13 03 65	
19	103	13.2		207	06.7	65	38	50	10	43	21	20 38 55	32 68	
20	118	13.4		221	32.1	64	37	52	11	44	24	24 53	13 47 68	
21	133	13.6		235	57.4	63	35	54	11	46	28	20 06 53	14 04 69	
22	148	13.8		250	22.7	63	34	56	11	48	32	19 46 51	24 71	
23	163	13.9		264	47.9	62	32	58	11	50	37	19 20 48	14 49 75	
24	178	14.1	+0 29.2	279	13.0	61	30	60 S	18 11	18 53	19 42	18 45 42	15 24 82	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO		
	PMG: 12 ^h 04 ^m 5		Mag: -4.6 PMG: 9 ^h 09 ^m		Mag: +1.1 PMG: 17 ^h 06 ^m		Mag: -2.4 PMG: 3 ^h 11 ^m		Mag: +0.1 PMG: 20 ^h 32 ^m		
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	
0	178	22.4	222	45.9	-14 31.7	103 20.9	+24 28.7	312 00.4	-16 04.3	51 15.0	+19 49.8
1	193	24.8	237	45.9		118 21.9	28.9	327 03.0	04.2	66 17.5	49.9
2	208	27.3	252	45.9		133 22.8	29.0	342 05.6	04.2	81 20.1	49.9
3	223	29.7	267	45.9		148 23.8	29.1	357 08.2	04.1	96 22.6	49.9
4	238	32.2	282	46.0		163 24.7	29.3	12 10.7	04.1	111 25.1	49.9
5	253	34.7	297	46.0	-14 29.7	178 25.7	+24 29.4	27 13.3	-16 04.1	126 27.7	+19 49.9
6	268	37.1	312	46.0	-14 29.3	193 26.6	+24 29.6	42 15.9	-16 04.0	141 30.2	+19 49.9
7	283	39.6	327	46.0		208 27.6	29.7	57 18.5	04.0	156 32.7	50.0
8	298	42.1	342	46.0		223 28.5	29.8	72 21.1	03.9	171 35.3	50.0
9	313	44.5	357	46.0		238 29.5	29.9	87 23.7	03.9	186 37.8	50.0
10	328	47.0	12 46.0		253 30.4	30.1	102 26.3	03.9		201 40.3	50.0
11	343	49.5	27 46.0	-14 27.2	268 31.4	+24 30.2	117 28.9	-16 03.8		216 42.9	+19 50.0
12	358	51.9	42 46.0	-14 26.8	283 32.4	+24 30.3	132 31.5	-16 03.8		231 45.4	+19 50.1
13	13	54.4	57 46.0		298 33.3	30.5	147 34.0	03.7		246 47.9	50.1
14	28	56.9	72 46.0		313 34.3	30.6	162 36.6	03.7		261 50.5	50.1
15	43	59.3	87 46.0		328 35.2	30.7	177 39.2	03.7		276 53.0	50.1
16	59	01.8	102 46.0		343 36.2	30.9	192 41.8	03.6		291 55.5	50.1
17	74	04.2	117 46.0	-14 24.6	358 37.1	+24 31.0	207 44.4	-16 03.6		306 58.1	+19 50.1
18	89	06.7	132 46.0	-14 24.2	13 38.0	+24 31.1	222 47.0	-16 03.5		322 00.6	+19 50.2
19	104	09.2	147 46.0		28 39.0	31.3	237 49.6	03.5		337 03.1	50.2
20	119	11.6	162 46.0		43 39.9	31.4	252 52.2	03.5		352 05.7	50.2
21	134	14.1	177 46.0		58 40.9	31.5	267 54.8	03.4		7 08.2	50.2
22	149	16.6	192 46.0		73 41.8	31.6	282 57.4	03.4		22 10.7	50.2
23	164	19.0	207 46.0		88 42.8	31.8	298 00.0	03.3		37 13.3	50.2
24	179	21.5	222 46.0	-14 21.6	103 43.7	+24 31.9	313 02.6	-16 03.3		52 15.8	+19 50.3
Dif	—		0 +4		+10 +1		+26 0		+25 0		

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16 ^h 1			Edad: 22 ^d 0	PHE {	4 ^h : 57 ^m .4 12 ^h : 57 ^m .7 20 ^h : 58 ^m .0								
	PMG: 12 ^h 06 ^m 9													
	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	14.1	+0 29.2	279	13.0	-28 18.1	60 N	4 24	5 15	5 56	4 17	60	6 53	65
1	193	14.3		293	38.0	21.0	58	31	18	57	3 34	61	7 36	64
2	208	14.5		308	02.9	23.7	56	36	20	58	3 06	61	8 04	64
3	223	14.7		322	27.8	26.2	54	41	23	58	2 44	61	27	63
4	238	14.9		336	52.6	28.6	52	45	25	59	25	62	8 45	63
5	253	15.1	+0 34.1	351	17.3	-28 30.8	50	4 49	5 27	5 59	2 10	61	9 01	63
6	268	15.2	+0 35.1	5	42.0	-28 32.8	45	4 56	5 31	6 00	1 39	61	9 32	63
7	283	15.4		20	06.6	34.6	40	5 02	34	01	1 15	60	9 56	63
8	298	15.6		34	31.2	36.3	35	07	36	01	0 55	60	10 17	61
9	313	15.8		48	55.7	37.8	30	10	38	02	38	60	10 34	61
10	328	16.0		63	20.1	39.1	20	15	41	03	0 09	60	11 03	61
11	343	16.2	+0 40.1	77	44.5	-28 40.3	10 N	5 18	5 42	6 03	** ** *	**	11 27	61
12	358	16.4	+0 41.0	92	08.8	-28 41.2	0	5 19	5 43	6 04	** ** *	**	11 50	61
13	13	16.6		106	33.1	42.0	10 S	19	43	04	23 59	62	12 13	60
14	28	16.7		120	57.3	42.6	20	17	42	04	34 63		12 38	59
15	43	16.9		135	21.4	43.1	30	13	41	04	23 05	65	13 07	58
16	58	17.1		149	45.6	43.3	35	10	39	05	22 48	66	24	58
17	73	17.3	+0 46.0	164	09.6	-28 43.4	40	5 06	5 38	6 05	22 28	68	13 44	57
18	88	17.5	+0 47.0	178	33.7	-28 43.3	45	5 01	5 35	6 05	22 04	69	14 08	56
19	103	17.7		192	57.7	43.0	50	4 54	32	05	21 33	71	40	53
20	118	17.9		207	21.6	42.5	52	51	31	05	21 17	73	14 55	53
21	133	18.1		221	45.5	41.9	54	47	29	05	20 59	75	15 13	52
22	148	18.2		236	09.4	41.0	56	43	27	04	37 77		15 35	50
23	163	18.4		250	33.3	40.0	58	38	25	04	20 08	81	16 04	45
24	178	18.6	+0 52.9	264	57.1	-28 38.8	60 S	4 33	5 23	6 04	19 27	89	16 46	37
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 12 ^h 00 ^m 6		Mag: -4.5 PMG: 9 ^h 09 ^m			Mag: +1.1 PMG: 17 ^h 04 ^m			Mag: -2.4 PMG: 3 ^h 07 ^m			Mag: +0.1 PMG: 20 ^h 27 ^m		
	hG ♈		hG ♀			hG ♂			hG ♃			hG ♄		
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'
0	179	21.5	222	46.0	-14 21.6	103	43.7	+24 31.9	313	02.6	-16 03.3	52	15.8	+19 50.3
1	194	24.0	237	46.0	21.2	118	44.7	32.0	328	05.2	03.2	67	18.3	50.3
2	209	26.4	252	46.0	20.8	133	45.6	32.2	343	07.8	03.2	82	20.9	50.3
3	224	28.9	267	46.0	20.4	148	46.6	32.3	358	10.4	03.2	97	23.4	50.3
4	239	31.4	282	46.0	19.9	163	47.5	32.4	13	13.0	03.1	112	25.9	50.3
5	254	33.8	297	46.0	-14 19.5	178	48.5	+24 32.6	28	15.6	-16 03.1	127	28.5	+19 50.3
6	269	36.3	312	46.0	-14 19.1	193	49.4	+24 32.7	43	18.1	-16 03.0	142	31.0	+19 50.4
7	284	38.7	327	46.0	18.6	208	50.4	32.8	58	20.7	03.0	157	33.5	50.4
8	299	41.2	342	46.0	18.2	223	51.3	32.9	73	23.3	03.0	172	36.0	50.4
9	314	43.7	357	46.0	17.7	238	52.3	33.1	88	25.9	02.9	187	38.6	50.4
10	329	46.1	12	46.0	17.3	253	53.2	33.2	103	28.5	02.9	202	41.1	50.4
11	344	48.6	27	46.0	-14 16.9	268	54.2	+24 33.3	118	31.1	-16 02.8	217	43.6	+19 50.4
12	359	51.1	42	46.0	-14 16.4	283	55.1	+24 33.4	133	33.7	-16 02.8	232	46.2	+19 50.5
13	14	53.5	57	46.0	16.0	298	56.1	33.6	148	36.3	02.7	247	48.7	50.5
14	29	56.0	72	46.0	15.5	313	57.0	33.7	163	38.9	02.7	262	51.2	50.5
15	44	58.5	87	46.0	15.1	328	57.9	33.8	178	41.5	02.7	277	53.8	50.5
16	60	00.9	102	45.9	14.7	343	58.9	33.9	193	44.1	02.6	292	56.3	50.5
17	75	03.4	117	45.9	-14 14.2	358	59.8	+24 34.1	208	46.7	-16 02.6	307	58.8	+19 50.5
18	90	05.8	132	45.9	-14 13.8	14	00.8	+24 34.2	223	49.3	-16 02.5	323	01.3	+19 50.6
19	105	08.3	147	45.9	13.3	29	01.7	34.3	238	51.9	02.5	338	03.9	50.6
20	120	10.8	162	45.9	12.9	44	02.7	34.4	253	54.5	02.4	353	06.4	50.6
21	135	13.2	177	45.9	12.4	59	03.6	34.6	268	57.1	02.4	8	08.9	50.6
22	150	15.7	192	45.9	12.0	74	04.6	34.7	283	59.7	02.3	23	11.5	50.6
23	165	18.2	207	45.9	11.5	89	05.5	34.8	299	02.3	02.3	38	14.0	50.6
24	180	20.6	222	45.8	-14 11.1	104	06.4	+24 34.9	314	04.9	-16 02.3	53	16.5	+19 50.6
Dif	—		0			+4			+9			+26		
			</											

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna				
	SD: 16 ^h 0			Edad: 23 ^d 0	PHE {	4 ^h : 58 ^h /2 12 ^h : 58 ^h /5 20 ^h : 58 ^h /7			Final del crepúsculo			Salida de Luna		Puesta de Luna				
	PMG: 12 ^h 06 ^m 6								SD: 15 ^h 8			PMG: 6 ^h 36 ^m			R°: 61 ^m			
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°			
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	m	h m m	m			
0	178	18.6	+0 52.9	264	57.1	-28 38.8	14	60 N	18 21	19 03	19 54	5 17 19	7 58 108					
1	193	18.8		279	20.9	37.4	14	58	20	19 00	47	4 35 32	8 40 95					
2	208	19.0	54.8	293	44.6	35.8	16	56	20	18 57	42	4 07 38	9 08 88					
3	223	19.2	55.8	308	08.4	34.1	17	54	19	54	37	3 45 42	30 84					
4	238	19.4	56.8	322	32.1	32.1	20	52	18	52	32	27 44	9 48 81					
5	253	19.6	+0 57.8	336	55.8	-28 30.0	21	50	18 17	18 50	19 28	3 11 46	10 04 79					
6	268	19.7	+0 58.8	351	19.5	-28 27.7	23	45	18 16	18 45	19 20	2 40 50	10 35 75					
7	283	19.9	+0 59.8	5	43.1	25.2	25	40	15	42	14	2 15 53	10 59 72					
8	298	20.1	+1 00.8	20	06.8	22.5	27	35	14	39	09	1 55 54	11 18 70					
9	313	20.3	01.8	34	30.4	19.6	29	30	13	37	19 05	38 56	11 35 68					
10	328	20.5	02.7	48	54.1	16.6	30	20	12	34	18 59	1 09 58	12 04 65					
11	343	20.7	+1 03.7	63	17.7	-28 13.3	33	10 N	18 11	18 32	18 56	0 45 59	12 28 63					
12	358	20.9	+1 04.7	77	41.3	-28 09.9	34	0	18 10	18 31	18 55	0 22 60	12 51 60					
13	13	21.1	05.7	92	04.9	06.3	36	10 S	09	30	54	*** ** *	13 13 58					
14	28	21.2	06.7	106	28.6	-28 02.5	38	20	08	30	56	*** ** *	13 37 56					
15	43	21.4	07.7	120	52.2	-27 58.5	40	30	08	32	18 59	*** ** *	14 05 52					
16	58	21.6	08.7	135	15.8	54.3	42	35	07	33	19 02	23 54 73	22 50					
17	73	21.8	+1 09.6	149	39.4	-27 49.9	44	40	18 07	18 34	19 05	23 36 75	14 41 47					
18	88	22.0	+1 10.6	164	03.1	-27 45.4	45	45	18 07	18 36	19 10	23 13 79	15 04 44					
19	103	22.2	11.6	178	26.7	40.6	48	50	06	38	16	22 44 85	33 40					
20	118	22.4	12.6	192	50.4	35.7	49	52	06	39	19	30 87	15 48 37					
21	133	22.6	13.6	207	14.1	30.6	51	54	06	41	22	22 14 90	16 05 33					
22	148	22.7	14.6	221	37.8	25.3	53	56	06	42	26	21 54 95	25 29					
23	163	22.9	15.5	236	01.5	19.8	55	58	05	44	31	21 29 103	16 49 23					
24	178	23.1	+1 16.5	250	25.2	-27 14.1	57	60 S	18 05	18 46	19 36	20 56 114	17 23 12					
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 11 ^h 56 ^m 7		Mag: -4.5 PMG: 9 ^h 09 ^m				Mag: +1.1 PMG: 17 ^h 03 ^m				Mag: -2.4 PMG: 3 ^h 03 ^m				Mag: +0.1 PMG: 20 ^h 23 ^m			
	hG ♈		hG ♀	Dec			hG ♂	Dec			hG ♃	Dec			hG ♄	Dec		
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°	°		
0	180	20.6	222	45.8	-14 11.1	104	06.4	+24 34.9	314	04.9	-16 02.3	53	16.5	+19 50.6				
1	195	23.1	237	45.8	10.6	119	07.4	35.1	329	07.5	02.2	68	19.0	50.7				
2	210	25.6	252	45.8	10.2	134	08.3	35.2	344	10.1	02.2	83	21.6	50.7				
3	225	28.0	267	45.8	09.7	149	09.3	35.3	359	12.7	02.1	98	24.1	50.7				
4	240	30.5	282	45.8	09.3	164	10.2	35.4	14	15.3	02.1	113	26.6	50.7				
5	255	33.0	297	45.8	-14 08.8	179	11.2	+24 35.6	29	17.9	-16 02.0	128	29.1	+19 50.7				
6	270	35.4	312	45.7	-14 08.4	194	12.1	+24 35.7	44	20.6	-16 02.0	143	31.7	+19 50.7				
7	285	37.9	327	45.7	07.9	209	13.0	35.8	59	23.2	02.0	158	34.2	50.8				
8	300	40.3	342	45.7	07.5	224	14.0	35.9	74	25.8	01.9	173	36.7	50.8				
9	315	42.8	357	45.7	07.0	239	14.9	36.0	89	28.4	01.9	188	39.2	50.8				
10	330	45.3	12	45.7	06.6	254	15.9	36.2	104	31.0	01.8	203	41.8	50.8				
11	345	47.7	27	45.6	-14 06.1	269	16.8	+24 36.3	119	33.6	-16 01.8	218	44.3	+19 50.8				
12	0	50.2	42	45.6	-14 05.6	284	17.8	+24 36.4	134	36.2	-16 01.7	233	46.8	+19 50.8				
13	15	52.7	57	45.6	05.2	299	18.7	36.5	149	38.8	01.7	248	49.3	50.8				
14	30	55.1	72	45.6	04.7	314	19.6	36.6	164	41.4	01.6	263	51.9	50.9				
15	45	57.6	87	45.6	04.3	329	20.6	36.8	179	44.0	01.6	278	54.4	50.9				
16	61	00.1	102	45.5	03.8	344	21.5	36.9	194	46.6	01.6	293	56.9	50.9				
17	76	02.5	117	45.5	-14 03.3	359	22.5	+24 37.0	209	49.2	-16 01.5	308	59.4	+19 50.9				
18	91	05.0	132	45.5	-14 02.9	14	23.4	+24 37.1	224	51.8	-16 01.5	324	02.0	+19 50.9				
19	106	07.5	147	45.5	02.4	29	24.3	37.2	239	54.4	01.4	339	04.5	50.9				
20	121	09.9	162	45.4	01.9	44	25.3	37.4	254	57.0	01.4	354	07.0	51.0				
21	136	12.4	177	45.4	01.5	59	26.2	37.5	269	59.6	01.3	9	09.5	51.0				
22	151	14.8	192	45.4	01.0	74	27.2	37.6	285	02.3	01.3	24	12.1	51.0				
23	166	17.3	207	45.4	00.5	89	28.1	37.7	300	04.9	01.2	39	14.6	51.0				
24	181	19.8	222	45.3	-14 00.1	104	29.0	+24 37.8	315	07.5	-16 01.2	54	17.1	+19 51.0				
Dif	—		0		+5	+9		+1	+26		0	+25		0				

UT	SOL			 LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna				
	SD: 16'0			Edad: 24 ^d 0	PHE {	4 ^h : 59'0 12 ^h : 59'3 20 ^h : 59'5	SD: 16'0		PMG: 7 ^h 37 ^m	R ^o : 59 ^m		Náutico	Civil	Hora	R ^o	Hora	R ^o	
	hG ☉	Dec																hG ☾
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m	h	m
0	178	23.1	+1 16.5	250	25.2	-27 14.1	58	60 N	4 18	5 08	5 50	5 36	5	9 46	118			
1	193	23.3		264	48.9	08.3	58	58	25	12	51	5 07	16	10 15	107			
2	208	23.5		279	12.7	02.3	60	56	30	15	52	4 45	22	36	101			
3	223	23.7		293	36.5	26 56.0	63	54	36	18	53	27	26	10 54	96			
4	238	23.9		308	00.3	49.6	64	52	40	20	54	4 11	31	11 09	92			
5	253	24.1	+1 21.5	322	24.2	-26 43.1	65	50	4 44	5 22	5 55	3 57	34	11 23	88			
6	268	24.3	+1 22.4	336	48.1	-26 36.3	68	45	4 52	5 27	5 56	3 30	39	11 50	82			
7	283	24.4		351	12.0	29.3	70	40	4 59	30	57	3 08	43	12 11	77			
8	298	24.6		5	36.0	22.2	71	35	5 04	33	58	2 49	47	28	74			
9	313	24.8		20	00.0	14.9	73	30	08	35	5 59	34	49	12 43	72			
10	328	25.0		34	24.0	-26 07.4	75	20	13	39	6 01	2 07	53	13 09	66			
11	343	25.2	+1 27.4	48	48.1	-25 59.8	76	10 N	5 17	5 41	6 02	1 44	56	13 31	62			
12	358	25.4	+1 28.4	63	12.2	-25 51.9	79	0	5 18	5 42	6 03	1 22	60	13 51	58			
13	13	25.6		77	36.3	43.9	80	10 S	19	43	04	1 01	62	14 11	55			
14	28	25.8		92	00.5	35.7	82	20	17	43	05	0 37	67	33	50			
15	43	25.9		106	24.8	27.3	84	30	14	42	06	0 10	70	14 57	46			
16	58	26.1		120	49.0	18.8	85	35	11	41	06	** ** *	**	15 12	42			
17	73	26.3	+1 33.3	135	13.4	-25 10.1	87	40	5 08	5 40	6 07	** ** *	**	15 28	39			
18	88	26.5	+1 34.3	149	37.8	-25 01.2	89	45	5 04	5 38	6 07	** ** *	**	15 48	35			
19	103	26.7		164	02.2	-24 52.1	91	50	4 58	36	08	** ** *	**	16 13	29			
20	118	26.9		178	26.7	42.9	92	52	55	34	08	23 57	94	25	25			
21	133	27.1		192	51.2	33.5	94	54	51	33	08	44	98	38	22			
22	148	27.3		207	15.8	23.9	96	56	48	32	09	29	103	16 54	17			
23	163	27.5		221	40.5	14.2	97	58	43	30	09	23 12	108	17 12	12			
24	178	27.6	+1 40.2	236	05.2	-24 04.3	99	60 S	4 38	5 28	6 09	22 50	116	17 35	3			
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO					
	PMG: 11 ^h 52 ^m 7			Mag: -4.5 PMG: 9 ^h 09 ^m			Mag: +1.1 PMG: 17 ^h 01 ^m			Mag: -2.4 PMG: 2 ^h 59 ^m			Mag: +0.1 PMG: 20 ^h 19 ^m					
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec				
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°
0	181	19.8	222	45.3	-14 00.1	104	29.0	+24 37.8	315	07.5	-16 01.2	54	17.1	+19 51.0				
1	196	22.2	237	45.3	-13 59.6	119	30.0	38.0	330	10.1	01.1	69	19.6	51.0				
2	211	24.7	252	45.3	59.1	134	30.9	38.1	345	12.7	01.1	84	22.2	51.0				
3	226	27.2	267	45.3	58.7	149	31.9	38.2	0	15.3	01.1	99	24.7	51.1				
4	241	29.6	282	45.2	58.2	164	32.8	38.3	15	17.9	01.0	114	27.2	51.1				
5	256	32.1	297	45.2	-13 57.7	179	33.7	+24 38.4	30	20.5	-16 01.0	129	29.7	+19 51.1				
6	271	34.6	312	45.2	-13 57.2	194	34.7	+24 38.5	45	23.1	-16 00.9	144	32.2	+19 51.1				
7	286	37.0	327	45.1	56.8	209	35.6	38.7	60	25.7	00.9	159	34.8	51.1				
8	301	39.5	342	45.1	56.3	224	36.5	38.8	75	28.4	00.8	174	37.3	51.1				
9	316	42.0	357	45.1	55.8	239	37.5	38.9	90	31.0	00.8	189	39.8	51.1				
10	331	44.4	12	45.0	55.3	254	38.4	39.0	105	33.6	00.7	204	42.3	51.2				
11	346	46.9	27	45.0	-13 54.9	269	39.4	+24 39.1	120	36.2	-16 00.7	219	44.8	+19 51.2				
12	1	49.3	42	45.0	-13 54.4	284	40.3	+24 39.2	135	38.8	-16 00.6	234	47.4	+19 51.2				
13	16	51.8	57	44.9	53.9	299	41.2	39.3	150	41.4	00.6	249	49.9	51.2				
14	31	54.3	72	44.9	53.4	314	42.2	39.5	165	44.0	00.5	264	52.4	51.2				
15	46	56.7	87	44.9	52.9	329	43.1	39.6	180	46.6	00.5	279	54.9	51.2				
16	61	59.2	102	44.8	52.5	344	44.0	39.7	195	49.3	00.4	294	57.4	51.2				
17	77	01.7	117	44.8	-13 52.0	359	45.0	+24 39.8	210	51.9	-16 00.4	310	00.0	+19 51.3				
18	92	04.1	132	44.8	-13 51.5	14	45.9	+24 39.9	225	54.5	-16 00.4	325	02.5	+19 51.3				
19	107	06.6	147	44.7	51.0	29	46.8	40.0	240	57.1	00.3	340	05.0	51.3				
20	122	09.1	162	44.7	50.5	44	47.8	40.1	255	59.7	00.3	355	07.5	51.3				
21	137	11.5	177	44.7	50.0	59	48.7	40.3	271	02.3	00.2	10	10.0	51.3				
22	152	14.0	192	44.6	49.6	74	49.7	40.4	286	04.9	00.2	25	12.6	51.3				
23	167	16.5	207	44.6	49.1	89	50.6	40.5	301	07.6	00.1	40	15.1	51.3				
24	182	18.9	222	44.5	-13 48.6	104	51.5	+24 40.6	316	10.2	-16 00.1	55	17.6	+19 51.4				
Dif	—			0 +5			+9 +1			+26 0			+25 0			0		

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16'0 PMG: 12 ^h 06 ^m 0			Edad: 25 ^d 0 PHE { 4 ^h : 59'8 12 ^h : 60'0 20 ^h : 60'2 PMG: 8 ^h 36 ^m R°: 56 ^m					Civil	Náutico	Hora	R°	Hora	R°	
	hG ☉	Dec		hG ☾	Dif	Dec									Dif
h	°	'	°	°	'	°	°	h m	h m	h m	h m m	h m m	h m m	h m m	
0	178	27.6	+1 40.2	236	05.2	-24 04.3	60 N	18 26	19 08	20 00	5 41 1	11 44	116		
1	193	27.8		250	29.9	57 -23 54.2	58	25	04	19 52	23 8	12 02	109		
2	208	28.0		264	54.7	58 44.0	56	24	19 01	46	5 07 13	17	103		
3	223	28.2		279	19.6	59 33.6	54	22	18 58	41	4 53 18	30	98		
4	238	28.4		293	44.5	59 23.1	52	21	55	36	42 21	41	95		
5	253	28.6	+1 45.1	308	09.5	60 -23 12.4	50	18 21	18 53	19 32	4 31 24	12 51	91		
6	268	28.8	+1 46.1	322	34.6	61 -23 01.5	45	18 19	18 48	19 23	4 09 30	13 12	84		
7	283	29.0		336	59.7	61 -22 50.4	40	17	44	16	3 51 35	28	80		
8	298	29.2		351	24.9	62 39.3	35	16	41	11	36 39	42	76		
9	313	29.3		5	50.2	63 27.9	30	14	38	06	23 42	13 55	71		
10	328	29.5		20	15.5	63 16.4	20	12	34	19 00	3 00 48	14 15	66		
11	343	29.7	+1 51.0	34	40.9	64 -22 04.8	10 N	18 11	18 32	18 56	2 40 53	14 33	60		
12	358	29.9	+1 52.0	49	06.3	64 -21 53.0	0	18 09	18 30	18 54	2 22 57	14 49	56		
13	13	30.1		63	31.8	65 41.0	10 S	08	29	53	2 03 62	15 06	51		
14	28	30.3		77	57.4	66 28.9	20	07	29	54	1 44 66	23	46		
15	43	30.5		92	23.0	66 16.7	30	05	29	57	20 72	43	40		
16	58	30.7		106	48.7	67 -21 04.3	35	04	30	18 59	1 07 75	15 54	37		
17	73	30.8	+1 56.9	121	14.5	68 -20 51.8	40	18 04	18 31	19 02	0 51 79	16 07	33		
18	88	31.0	+1 57.9	135	40.3	68 -20 39.1	45	18 03	18 32	19 06	0 32 84	16 23	27		
19	103	31.2		150	06.2	69 26.3	50	02	34	12	0 09 90	42	21		
20	118	31.4	+1 59.8	164	32.2	70 13.3	52	01	35	14	** ** *	16 50	19		
21	133	31.6	+2 00.8	178	58.3	71 -20 00.2	54	01	36	17	** ** *	17 00	15		
22	148	31.8		193	24.4	71 -19 47.0	56	00	37	21	** ** *	11	11		
23	163	32.0		207	50.6	72 33.6	58	18 00	39	25	** ** *	24	6		
24	178	32.2	+2 03.8	222	16.8	72 -19 20.1	60 S	17 59	18 40	19 29	** ** *	17 38	1		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG 11 ^h 48 ^m 8		Mag: -4.5 PMG: 9 ^h 09 ^m			Mag: +1.1 PMG: 17 ^h 00 ^m			Mag: -2.4 PMG: 2 ^h 55 ^m			Mag: +0.1 PMG: 20 ^h 15 ^m			
	hG ♈	Dec	hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	'	°	°	'	°	°	'	°	°	'	°	
0	182	18.9	222	44.5	-13 48.6	104	51.5	+24 40.6	316	10.2	-16 00.1	55	17.6	+19 51.4	
1	197	21.4	237	44.5	48.1	119	52.5	40.7	331	12.8	-16 00.0	70	20.1	51.4	
2	212	23.8	252	44.5	47.6	134	53.4	40.8	346	15.4	-16 00.0	85	22.6	51.4	
3	227	26.3	267	44.4	47.1	149	54.3	40.9	1	18.0	-15 59.9	100	25.2	51.4	
4	242	28.8	282	44.4	46.6	164	55.3	41.0	16	20.6	59.9	115	27.7	51.4	
5	257	31.2	297	44.3	-13 46.1	179	56.2	+24 41.2	31	23.3	-15 59.8	130	30.2	+19 51.4	
6	272	33.7	312	44.3	-13 45.6	194	57.1	+24 41.3	46	25.9	-15 59.8	145	32.7	+19 51.4	
7	287	36.2	327	44.3	45.1	209	58.1	41.4	61	28.5	59.7	160	35.2	51.4	
8	302	38.6	342	44.2	44.6	224	59.0	41.5	76	31.1	59.7	175	37.7	51.5	
9	317	41.1	357	44.2	44.2	239	59.9	41.6	91	33.7	59.6	190	40.3	51.5	
10	332	43.6	12	44.1	43.7	255	00.9	41.7	106	36.4	59.6	205	42.8	51.5	
11	347	46.0	27	44.1	-13 43.2	270	01.8	+24 41.8	121	39.0	-15 59.5	220	45.3	+19 51.5	
12	2	48.5	42	44.0	-13 42.7	285	02.7	+24 41.9	136	41.6	-15 59.5	235	47.8	+19 51.5	
13	17	50.9	57	44.0	42.2	300	03.7	42.0	151	44.2	59.4	250	50.3	51.5	
14	32	53.4	72	44.0	41.7	315	04.6	42.1	166	46.8	59.4	265	52.8	51.5	
15	47	55.9	87	43.9	41.2	330	05.5	42.3	181	49.5	59.3	280	55.4	51.6	
16	62	58.3	102	43.9	40.7	345	06.5	42.4	196	52.1	59.3	295	57.9	51.6	
17	78	00.8	117	43.8	-13 40.2	0	07.4	+24 42.5	211	54.7	-15 59.3	311	00.4	+19 51.6	
18	93	03.3	132	43.8	-13 39.7	15	08.3	+24 42.6	226	57.3	-15 59.2	326	02.9	+19 51.6	
19	108	05.7	147	43.7	39.2	30	09.2	42.7	241	59.9	59.2	341	05.4	51.6	
20	123	08.2	162	43.7	38.7	45	10.2	42.8	257	02.6	59.1	356	07.9	51.6	
21	138	10.7	177	43.6	38.2	60	11.1	42.9	272	05.2	59.1	11	10.4	51.6	
22	153	13.1	192	43.6	37.6	75	12.0	43.0	287	07.8	59.0	26	13.0	51.6	
23	168	15.6	207	43.5	37.1	90	13.0	43.1	302	10.4	59.0	41	15.5	51.7	
24	183	18.1	222	43.5	-13 36.6	105	13.9	+24 43.2	317	13.1	-15 58.9	56	18.0	+19 51.7	
Dif	—		0	+5		+9	+1		+26	0		+25	0		

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna							
	SD: 16'0 PMG: 12 ^h 05 ^m 7			Edad: 26 ^d 0 PHE { 4 ^h : 60'4 12 ^h : 60'6 20 ^h : 60'7 R°: 54 ^m																
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°					
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	m			
0	178	32.2	+2	03.8	222	16.8	−19	20.1	60 N	4 11	5 02	5 44	5 42	0	13	40	111			
1	193	32.4		04.7	236	43.1	73	−19	06.5	58	18	06	46		31	4	13 51 106			
2	208	32.5		05.7	251	09.5	74	−18	52.8	56	25	10	47		20	9	14 00 101			
3	223	32.7		06.7	265	36.0	75		38.9	54	30	13	48		11	13	08 98			
4	238	32.9		07.7	280	02.5	75		24.9	52	35	15	49		5	03	16 94			
5	253	33.1	+2	08.7	294	29.1	76	−18	10.7	50	4 39	5 18	5 50		4 55	19	14 22 91			
6	268	33.3	+2	09.6	308	55.7	76	−17	56.5	45	4 48	5 23	5 52		4 39	25	14 36 85			
7	283	33.5		10.6	323	22.5	78		42.1	40	4 55	27	54		26	30	48 79			
8	298	33.7		11.6	337	49.2	77		27.6	35	5 01	30	56		15	34	14 58 74			
9	313	33.9		12.6	352	16.1	79	−17	13.0	30	05	33	57		4 05	38	15 06 71			
10	328	34.1		13.6	6	43.0	79	−16	58.3	20	11	37	5 59		3 48	44	21 64			
11	343	34.2	+2	14.5	21	10.0	80	−16	43.4	10 N	5 15	5 40	6 01		3 33	49	15 33 59			
12	358	34.4	+2	15.5	35	37.1	81	−16	28.5	0	5 18	5 42	6 02		3 19	54	15 45 53			
13	13	34.6		16.5	50	04.2	81	−16	13.4	10 S	19		43	04	3 05	59	15 57 47			
14	28	34.8		17.5	64	31.4	82	−15	58.2	20	18		43	05	2 50	64	16 09 42			
15	43	35.0		18.5	78	58.6	82		43.0	30	15		43	07	32	71	23 36			
16	58	35.2		19.5	93	25.9	83		27.6	35	13		43	08	22	75	31 32			
17	73	35.4	+2	20.4	107	53.3	84	−15	12.1	40	5 10	5 42	6 09		2 10	79	16 40 28			
18	88	35.6	+2	21.4	122	20.7	84	−14	56.5	45	5 06	5 40	6 10		1 56	85	16 50 23			
19	103	35.7		22.4	136	48.2	85		40.8	50	5 01	39	11		39	91	17 03 17			
20	118	35.9		23.4	151	15.8	86		25.0	52	4 58	38	11		31	94	09 14			
21	133	36.1		24.4	165	43.4	86	−14	09.2	54	55	37	12		22	98	15 11			
22	148	36.3		25.3	180	11.1	87	−13	53.2	56	52	36	13		12	102	22 8			
23	163	36.5		26.3	194	38.8	87		37.1	58	48	34	13		1 00	107	30 4			
24	178	36.7	+2	27.3	209	06.6	88	−13	21.0	60 S	4 44	5 33	6 14		0 46	113	17 39 0			
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO							
	PMG: 11 ^h 44 ^m 9			Mag: −4.5 PMG: 9 ^h 09 ^m			Mag: +1.1 PMG: 16 ^h 58 ^m			Mag: −2.4 PMG: 2 ^h 51 ^m			Mag: +0.1 PMG: 20 ^h 11 ^m							
	hG ♈		Dec	hG ♀		Dec	hG ♂		Dec	hG ♃		Dec	hG ♄		Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	183	18.1			222	43.5	−13	36.6	105	13.9	+24	43.2	317	13.1	−15	58.9	56	18.0	+19	51.7
1	198	20.5			237	43.4		36.1	120	14.8		43.3	332	15.7		58.9	71	20.5		51.7
2	213	23.0			252	43.4		35.6	135	15.8		43.4	347	18.3		58.8	86	23.0		51.7
3	228	25.4			267	43.3		35.1	150	16.7		43.5	2	20.9		58.8	101	25.5		51.7
4	243	27.9			282	43.3		34.6	165	17.6		43.6	17	23.6		58.7	116	28.0		51.7
5	258	30.4			297	43.2	−13	34.1	180	18.6	+24	43.8	32	26.2	−15	58.7	131	30.5	+19	51.7
6	273	32.8			312	43.2	−13	33.6	195	19.5	+24	43.9	47	28.8	−15	58.6	146	33.1	+19	51.7
7	288	35.3			327	43.1		33.1	210	20.4		44.0	62	31.4		58.6	161	35.6		51.8
8	303	37.8			342	43.1		32.5	225	21.3		44.1	77	34.1		58.5	176	38.1		51.8
9	318	40.2			357	43.0		32.0	240	22.3		44.2	92	36.7		58.5	191	40.6		51.8
10	333	42.7			12	43.0		31.5	255	23.2		44.3	107	39.3		58.4	206	43.1		51.8
11	348	45.2			27	42.9	−13	31.0	270	24.1	+24	44.4	122	41.9	−15	58.4	221	45.6	+19	51.8
12	3	47.6			42	42.9	−13	30.5	285	25.1	+24	44.5	137	44.6	−15	58.3	236	48.1	+19	51.8
13	18	50.1			57	42.8		30.0	300	26.0		44.6	152	47.2		58.3	251	50.6		51.8
14	33	52.6			72	42.8		29.5	315	26.9		44.7	167	49.8		58.2	266	53.2		51.8
15	48	55.0			87	42.7		28.9	330	27.8		44.8	182	52.4		58.2	281	55.7		51.8
16	63	57.5			102	42.6		28.4	345	28.8		44.9	197	55.1		58.1	296	58.2		51.9
17	78	59.9			117	42.6	−13	27.9	0	29.7	+24	45.0	212	57.7	−15	58.1	312	00.7	+19	51.9
18	94	02.4			132	42.5	−13	27.4	15	30.6	+24	45.1	228	00.3	−15	58.0	327	03.2	+19	51.9
19	109	04.9			147	42.5		26.9	30	31.5		45.2	243	03.0		58.0	342	05.7		51.9
20	124	07.3			162	42.4		26.3	45	32.5		45.3	258	05.6		57.9	357	08.2		51.9
21	139	09.8			177	42.4		25.8	60	33.4		45.4	273	08.2		57.9	12	10.7		51.9
22	154	12.3			192	42.3		25.3	75	34.3		45.5	288	10.8		57.8	27	13.2		51.9
23	169	14.7			207	42.2		24.8	90	35.3		45.6	303	13.5		57.7	42	15.7		51.9
24	184	17.2			222	42.2	−13	24.2	105	36.2	+24	45.7	318	16.1	−15	57.7	57	18.3	+19	52.0
Dif	—		−1		+5		+9		+1		+26		+1		+25		0			

UT	SOL			● LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna			Puesta de Luna						
	SD: 16 ^h 0 PMG: 12 ^h 05 ^m 4			Edad: 27 ^d 0 PHE { 4 ^h : 60 ^h 9 12 ^h : 61 ^h 0 20 ^h : 61 ^h 0 R°: 51 ^m						Civil			Náutico		Hora R°		Hora R°					
	hG ☉	Dec		hG ☾	Dif	Dec	Dif															
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	h	m	m		
0	178	36.7	+2	27.3	209	06.6	-13	21.0	60 N	18	31	19	13	20	05	5	42	**	15	31	108	
1	193	36.9		28.3	223	34.5	89	-13	04.7 ¹⁶³	58	29		09	19	58	35	3		37	103		
2	208	37.1		29.3	238	02.4	89	-12	48.4 ¹⁶³	56	28		05		51	29	7		41	100		
3	223	37.3		30.2	252	30.4	90		32.0 ¹⁶⁴	54	26		19	02	45	24	10		46	95		
4	238	37.4		31.2	266	58.4	90	-12	15.5 ¹⁶⁵	52	25		18	59	40	19	13		50	92		
5	253	37.6	+2	32.2	281	26.5	91	-11	58.9 ¹⁶⁶	50	18	24	18	56	19	35	5	14	16	15	53	89
6	268	37.8	+2	33.2	295	54.6	91	-11	42.3 ¹⁶⁶	45	18	21	18	51	19	25	5	04	22	16	01	83
7	283	38.0		34.2	310	22.8	92		25.5 ¹⁶⁸	40	19		46		18	4	56	27		07	78	
8	298	38.2		35.1	324	51.0	92	-11	08.7 ¹⁶⁸	35	17		42		12	49	31		12	73		
9	313	38.4		36.1	339	19.3	93	-10	51.9 ¹⁶⁸	30	16		40		08	43	34		17	69		
10	328	38.6		37.1	353	47.6	93		34.9 ¹⁷⁰	20	13		35	19	01	32	41		25	62		
11	343	38.8	+2	38.1	8	16.0	94	-10	17.9 ¹⁷⁰	10 N	18	11	18	32	18	56	4	22	47	16	32	56
12	358	39.0	+2	39.1	22	44.4	94	-10	00.8 ¹⁷¹	0	18	09	18	29	18	53	4	13	52	16	38	51
13	13	39.1		40.0	37	12.9	95	-9	43.7 ¹⁷¹	10 S		07		28		52	4	04	58		44	46
14	28	39.3		41.0	51	41.4	95		26.5 ¹⁷²	20		05		27		52	3	54	64		51	40
15	43	39.5		42.0	66	10.0	96	-9	09.2 ¹⁷³	30		03		27		54	43	70		16	59	33
16	58	39.7		43.0	80	38.6	96	-8	51.9 ¹⁷³	35		02		27		56	37	74		17	03	30
17	73	39.9	+2	43.9	95	07.3	97	-8	34.5 ¹⁷⁴	40	18	00	18	27	18	59	3	29	79	17	08	25
18	88	40.1	+2	44.9	109	36.0	97	-8	17.1 ¹⁷⁴	45	17	59	18	28	19	02	3	21	83	17	13	21
19	103	40.3		45.9	124	04.7	97	-7	59.6 ¹⁷⁵	50		57		30		07	10	90		20	15	
20	118	40.5		46.9	138	33.5	98		42.1 ¹⁷⁵	52		57		30		09	05	93		23	13	
21	133	40.6		47.9	153	02.3	98		24.5 ¹⁷⁶	54		56		31		12	3	00	96		26	10
22	148	40.8		48.8	167	31.1	98	-7	06.9 ¹⁷⁶	56		55		32		15	2	54	100		30	6
23	163	41.0		49.8	182	00.0	99	-6	49.2 ¹⁷⁷	58		54		33		19	47	104		34	3	
24	178	41.2	+2	50.8	196	29.0 ¹⁰⁰	100	-6	31.5 ¹⁷⁷	60 S	17	53	18	34	19	23	2	39	109	17	39	**
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO									
	PMG: 11 ^h 40 ^m 9			Mag: -4.5 PMG: 9 ^h 09 ^m			Mag: +1.1 PMG: 16 ^h 57 ^m			Mag: -2.4 PMG: 2 ^h 46 ^m			Mag: +0.1 PMG: 20 ^h 07 ^m									
h	hG ♈	hG ♎	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec	hG ♆	Dec									
0	184	17.2	222 42.2	-13 24.2	105 36.2	+24 45.7	318 16.1	-15 57.7	57 18.3	+19 52.0												
1	199	19.7	237 42.1	23.7	120 37.1	45.8	333 18.7	57.6	72 20.8	52.0												
2	214	22.1	252 42.1	23.2	135 38.0	45.9	348 21.4	57.6	87 23.3	52.0												
3	229	24.6	267 42.0	22.6	150 39.0	46.0	3 24.0	57.5	102 25.8	52.0												
4	244	27.0	282 41.9	22.1	165 39.9	46.1	18 26.6	57.5	117 28.3	52.0												
5	259	29.5	297 41.9	-13 21.6	180 40.8	+24 46.2	33 29.3	-15 57.4	132 30.8	+19 52.0												
6	274	32.0	312 41.8	-13 21.1	195 41.7	+24 46.3	48 31.9	-15 57.4	147 33.3	+19 52.0												
7	289	34.4	327 41.8	20.5	210 42.7	46.4	63 34.5	57.3	162 35.8	52.0												
8	304	36.9	342 41.7	20.0	225 43.6	46.5	78 37.2	57.3	177 38.3	52.0												
9	319	39.4	357 41.6	19.5	240 44.5	46.6	93 39.8	57.2	192 40.8	52.1												
10	334	41.8	12 41.6	18.9	255 45.4	46.7	108 42.4	57.2	207 43.3	52.1												
11	349	44.3	27 41.5	-13 18.4	270 46.4	+24 46.8	123 45.1	-15 57.1	222 45.8	+19 52.1												
12	4	46.8	42 41.4	-13 17.9	285 47.3	+24 46.9	138 47.7	-15 57.1	237 48.3	+19 52.1												
13	19	49.2	57 41.4	17.3	300 48.2	47.0	153 50.3	57.0	252 50.9	52.1												
14	34	51.7	72 41.3	16.8	315 49.1	47.1	168 53.0	57.0	267 53.4	52.1												
15	49	54.2	87 41.2	16.3	330 50.1	47.2	183 55.6	56.9	282 55.9	52.1												
16	64	56.6	102 41.2	15.7	345 51.0	47.3	198 58.2	56.9	297 58.4	52.1												
17	79	59.1	117 41.1	-13 15.2	0 51.9	+24 47.4	214 00.9	-15 56.8	313 00.9	+19 52.1												
18	95	01.5	132 41.1	-13 14.6	15 52.8	+24 47.5	229 03.5	-15 56.8	328 03.4	+19 52.1												
19	110	04.0	147 41.0	14.1	30 53.7	47.6	244 06.1	56.7	343 05.9	52.2												
20	125	06.5	162 40.9	13.6	45 54.7	47.7	259 08.8	56.7	358 08.4	52.2												
21	140	08.9	177 40.9	13.0	60 55.6	47.8	274 11.4	56.6	13 10.9	52.2												
22	155	11.4	192 40.8	12.5	75 56.5	47.9	289 14.0	56.5	28 13.4	52.2												
23	170	13.9	207 40.7	11.9	90 57.4	48.0	304 16.7	56.5	43 15.9	52.2												
24	185	16.3	222 40.6	-13 11.4	105 58.4	+24 48.1	319 19.3	-15 56.4	58 18.4	+19 52.2												
Dif	—		-1	+5	+9	+1	+26	+1	+25	0												

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna								
	SD: 16'0 PMG: 12 ^h 05 ^m 1			Edad: 28 ^d 0 PHE { 4 ^h : 61'0 12 ^h : 61'0 20 ^h : 61'0 R°: 51 ^m																	
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°						
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	m				
0	178	41.2	+2	50.8	196	29.0	-6	31.5	60 N	4	04	4	56	5	38	5	41	**			
1	193	41.4		51.8	210	57.9	99	-6	13.7 ¹⁷⁸	58	12	5	00	40		38	3	20	102		
2	208	41.6		52.8	225	26.9	100	-5	55.9 ¹⁷⁸	56	19		04	42		36	6	21	98		
3	223	41.8		53.7	239	55.9	100		38.1 ¹⁷⁸	54	25		08	43		34	9	21	95		
4	238	42.0		54.7	254	25.0	101		20.2 ¹⁷⁹	52	30		11	45		32	12	22	91		
5	253	42.2	+2	55.7	268	54.0	100	-5	02.3 ¹⁷⁹	50	4	35	5	13	5	46	5	30	15		
6	268	42.3	+2	56.7	283	23.2	102	-4	44.4 ¹⁷⁹	45	4	44	5	19	5	49	5	26	20		
7	283	42.5		57.6	297	52.3	101		26.5 ¹⁷⁹	40	52		24	51		23	25	25	77		
8	298	42.7		58.6	312	21.5	102	-4	08.5 ¹⁸⁰	35	4	58		28	53	20	29	25	73		
9	313	42.9	+2	59.6	326	50.6	101	-3	50.5 ¹⁸⁰	30	5	03		31	55	17	33	26	69		
10	328	43.1	+3	00.6	341	19.8	102		32.5 ¹⁸⁰	20	10		35	5	57	13	39	27	62		
11	343	43.3	+3	01.5	355	49.1	103	-3	14.4 ¹⁸¹	10 N	5	14	5	39	6	00	5	09	45		
12	358	43.5	+3	02.5	10	18.3	102	-2	56.4 ¹⁸⁰	0	5	17	5	41	6	02	5	05	51		
13	13	43.7		03.5	24	47.6	103		38.3 ¹⁸¹	10 S	18		43	04		5	02	56	30	46	
14	28	43.8		04.5	39	16.9	103		20.2 ¹⁸¹	20	18		44	06		4	58	62	31	40	
15	43	44.0		05.5	53	46.2	103	-2	02.1 ¹⁸¹	30	17		44	08		53	69	32	33		
16	58	44.2		06.4	68	15.5	103	-1	44.0 ¹⁸¹	35	15		44	09		51	73	33	29		
17	73	44.4	+3	07.4	82	44.9	104	-1	25.9 ¹⁸¹	40	5	12	5	44	6	11	4	48	77		
18	88	44.6	+3	08.4	97	14.2	103	-1	07.8 ¹⁸¹	45	5	09	5	43	6	12	4	44	83		
19	103	44.8		09.4	111	43.6	104	-0	49.6 ¹⁸²	50	04		42	14		40	89	35	15		
20	118	45.0		10.3	126	12.9	103		31.5 ¹⁸¹	52	5	02		41	15		38	92	36	12	
21	133	45.2		11.3	140	42.3	104	-0	13.4 ¹⁸¹	54	4	59		41	16		36	95	36	9	
22	148	45.3		12.3	155	11.7	104	+0	04.7 ¹⁸¹	56			40	17		34	98	36	7		
23	163	45.5		13.3	169	41.1	104		22.8 ¹⁸¹	58	53		39	18		31	103	37	3		
24	178	45.7	+3	14.2	184	10.5	104	+0	41.0 ¹⁸²	60 S	4	49	5	38	6	19	4	28	107		
																		17	38	**	
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO								
	PMG: 11 ^h 37 ^m 0			Mag: -4.5 PMG: 9 ^h 09 ^m			Mag: +1.1 PMG: 16 ^h 55 ^m			Mag: -2.4 PMG: 2 ^h 42 ^m			Mag: +0.1 PMG: 20 ^h 03 ^m								
	hG ♈			hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec							
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'			
0	185	16.3	222	40.6	-13	11.4	105	58.4	+24	48.1	319	19.3	-15	56.4	58	18.4	+19	52.2			
1	200	18.8	237	40.6		10.8	120	59.3		48.2	334	22.0		56.4	73	20.9		52.2			
2	215	21.3	252	40.5		10.3	136	00.2		48.3	349	24.6		56.3	88	23.4		52.2			
3	230	23.7	267	40.4		09.7	151	01.1		48.3	4	27.2		56.3	103	25.9		52.2			
4	245	26.2	282	40.4		09.2	166	02.0		48.4	19	29.9		56.2	118	28.4		52.3			
5	260	28.6	297	40.3	-13	08.6	181	03.0	+24	48.5	34	32.5	-15	56.2	133	30.9	+19	52.3			
6	275	31.1	312	40.2	-13	08.1	196	03.9	+24	48.6	49	35.1	-15	56.1	148	33.4	+19	52.3			
7	290	33.6	327	40.2		07.5	211	04.8		48.7	64	37.8		56.1	163	35.9		52.3			
8	305	36.0	342	40.1		07.0	226	05.7		48.8	79	40.4		56.0	178	38.4		52.3			
9	320	38.5	357	40.0		06.4	241	06.7		48.9	94	43.1		56.0	193	40.9		52.3			
10	335	41.0	12	39.9		05.9	256	07.6		49.0	109	45.7		55.9	208	43.4		52.3			
11	350	43.4	27	39.9	-13	05.3	271	08.5	+24	49.1	124	48.3	-15	55.9	223	45.9	+19	52.3			
12	5	45.9	42	39.8	-13	04.8	286	09.4	+24	49.2	139	51.0	-15	55.8	238	48.4	+19	52.3			
13	20	48.4	57	39.7		04.2	301	10.3		49.3	154	53.6		55.7	253	51.0		52.3			
14	35	50.8	72	39.7		03.7	316	11.3		49.4	169	56.3		55.7	268	53.5		52.4			
15	50	53.3	87	39.6		03.1	331	12.2		49.5	184	58.9		55.6	283	56.0		52.4			
16	65	55.8	102	39.5		02.6	346	13.1		49.6	200	01.6		55.6	298	58.5		52.4			
17	80	58.2	117	39.4	-13	02.0	1	14.0	+24	49.6	215	04.2	-15	55.5	314	01.0	+19	52.4			
18	96	00.7	132	39.4	-13	01.4	16	14.9	+24	49.7	230	06.8	-15	55.5	329	03.5	+19	52.4			
19	111	03.1	147	39.3		00.9	31	15.9		49.8	245	09.5		55.4	344	06.0		52.4			
20	126	05.6	162	39.2	-13	00.3	46	16.8		49.9	260	12.1		55.4	359	08.5		52.4			
21	141	08.1	177	39.1	-12	59.8	61	17.7		50.0	275	14.8		55.3	14	11.0		52.4			
22	156	10.5	192	39.1		59.2	76	18.6		50.1	290	17.4		55.3	29	13.5		52.4			
23	171	13.0	207	39.0		58.6	91	19.5		50.2	305	20.1		55.2	44	16.0		52.4			
24	186	15.5	222	38.9	-12	58.1	106	20.4	+24	50.3	320	22.7	-15	55.1	59	18.5	+19	52.4			
Dif	—			-1			+6			+9			+1			+26			+1		

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16'0 PMG: 12 ^h 04 ^m 8			Edad: 29 ^d 0 PHE { SD: 16'6 PMG: 12 ^h 08 ^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	45.7	+3 14.2	184	10.5	+0 41.0		60 N	18 36	19 19	20 11	5 40 **	19 06	107
1	193	45.9		198	39.9 ¹⁰⁴	+0 59.1 ¹⁸¹		58	34	14	20 03	41 3	19 02	103
2	208	46.1	16.2	213	09.4 ¹⁰⁵	+1 17.1 ¹⁸⁰		56	32	10	19 55	42 6	18 59	98
3	223	46.3	17.2	227	38.8 ¹⁰⁴	35.2 ¹⁸¹		54	30	06	49	43 9	56	95
4	238	46.5	18.1	242	08.2 ¹⁰⁴	+1 53.3 ¹⁸¹		52	28	19 02	44	44 12	53	92
5	253	46.7	+3 19.1	256	37.6 ¹⁰⁴	+2 11.3 ¹⁸⁰		50	18 27	18 59	19 39	5 45 15	18 51	89
6	268	46.8	+3 20.1	271	07.0 ¹⁰⁴	+2 29.4 ¹⁸¹		45	18 24	18 53	19 28	5 46 21	18 46	82
7	283	47.0	21.1	285	36.5 ¹⁰⁵	+2 47.4 ¹⁸⁰		40	21	48	20	48 25	42	77
8	298	47.2	22.0	300	05.9 ¹⁰⁴	+3 05.3 ¹⁷⁹		35	19	44	14	49 30	38	73
9	313	47.4	23.0	314	35.3 ¹⁰⁴	23.3 ¹⁸⁰		30	17	41	09	50 34	35	69
10	328	47.6	24.0	329	04.7 ¹⁰⁴	41.2 ¹⁷⁹		20	13	36	19 01	52 40	29	63
11	343	47.8	+3 25.0	343	34.1 ¹⁰⁴	+3 59.1 ¹⁷⁹		10 N	18 11	18 32	18 56	5 54 46	18 25	56
12	358	48.0	+3 25.9	358	03.5 ¹⁰⁴	+4 17.0 ¹⁷⁹		0	18 08	18 29	18 53	5 56 51	18 20	51
13	13	48.2	26.9	12	32.9 ¹⁰⁴	34.8 ¹⁷⁸		10 S	06	27	51	5 58 56	16	46
14	28	48.3	27.9	27	02.2 ¹⁰³	+4 52.6 ¹⁷⁸		20	03	25	51	6 00 62	11	40
15	43	48.5	28.9	41	31.6 ¹⁰⁴	+5 10.4 ¹⁷⁸		30	18 00	24	52	02 69	05	35
16	58	48.7	29.8	56	00.9 ¹⁰³	28.1 ¹⁷⁷		35	17 59	24	53	04 72	18 02	31
17	73	48.9	+3 30.8	70	30.3 ¹⁰⁴	+5 45.8 ¹⁷⁷		40	17 57	18 24	18 56	6 05 77	17 59	26
18	88	49.1	+3 31.8	84	59.6 ¹⁰³	+6 03.5 ¹⁷⁷		45	17 55	18 25	18 59	6 07 82	17 55	21
19	103	49.3	32.8	99	28.9 ¹⁰³	21.1 ¹⁷⁶		50	53	25	19 03	09 89	50	16
20	118	49.5	33.7	113	58.2 ¹⁰³	38.6 ¹⁷⁵		52	52	26	05	10 91	48	13
21	133	49.7	34.7	128	27.4 ¹⁰²	+6 56.1 ¹⁷⁵		54	51	26	07	11 95	45	10
22	148	49.8	35.7	142	56.7 ¹⁰³	+7 13.6 ¹⁷⁵		56	50	27	10	12 99	43	6
23	163	50.0	36.6	157	25.9 ¹⁰²	31.0 ¹⁷⁴		58	48	27	13	14 102	40	3
24	178	50.2	+3 37.6	171	55.1 ¹⁰²	+7 48.4 ¹⁷⁴		60 S	17 47	18 28	19 17	6 15 107	17 36	**
UT	ARIES		VENUS		MARTE			JÚPITER			SATURNO			
	PMG: 11 ^h 33 ^m 1		Mag: -4.5 PMG: 9 ^h 09 ^m		Mag: +1.2 PMG: 16 ^h 54 ^m			Mag: -2.4 PMG: 2 ^h 38 ^m			Mag: +0.1 PMG: 19 ^h 59 ^m			
	hG ♈		hG ♀	Dec	hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	°	'	°	'	°	'	°	'	°	'	
0	186	15.5	222 38.9	-12 58.1		106 20.4	+24 50.3	320 22.7	-15 55.1	59 18.5	+19 52.4			
1	201	17.9	237 38.8	57.5		121 21.4	50.4	335 25.3	55.1	74 21.0	52.5			
2	216	20.4	252 38.8	57.0		136 22.3	50.5	350 28.0	55.0	89 23.5	52.5			
3	231	22.9	267 38.7	56.4		151 23.2	50.5	5 30.6	55.0	104 26.0	52.5			
4	246	25.3	282 38.6	55.8		166 24.1	50.6	20 33.3	54.9	119 28.5	52.5			
5	261	27.8	297 38.5	-12 55.3		181 25.0	+24 50.7	35 35.9	-15 54.9	134 31.0	+19 52.5			
6	276	30.3	312 38.4	-12 54.7		196 25.9	+24 50.8	50 38.6	-15 54.8	149 33.5	+19 52.5			
7	291	32.7	327 38.4	54.1		211 26.9	50.9	65 41.2	54.8	164 36.0	52.5			
8	306	35.2	342 38.3	53.5		226 27.8	51.0	80 43.9	54.7	179 38.4	52.5			
9	321	37.6	357 38.2	53.0		241 28.7	51.1	95 46.5	54.6	194 40.9	52.5			
10	336	40.1	12 38.1	52.4		256 29.6	51.2	110 49.2	54.6	209 43.4	52.5			
11	351	42.6	27 38.0	-12 51.8		271 30.5	+24 51.2	125 51.8	-15 54.5	224 45.9	+19 52.5			
12	6	45.0	42 38.0	-12 51.3		286 31.4	+24 51.3	140 54.4	-15 54.5	239 48.4	+19 52.6			
13	21	47.5	57 37.9	50.7		301 32.4	51.4	155 57.1	54.4	254 50.9	52.6			
14	36	50.0	72 37.8	50.1		316 33.3	51.5	170 59.7	54.4	269 53.4	52.6			
15	51	52.4	87 37.7	49.5		331 34.2	51.6	186 02.4	54.3	284 55.9	52.6			
16	66	54.9	102 37.6	49.0		346 35.1	51.7	201 05.0	54.3	299 58.4	52.6			
17	81	57.4	117 37.6	-12 48.4		1 36.0	+24 51.8	216 07.7	-15 54.2	315 00.9	+19 52.6			
18	96	59.8	132 37.5	-12 47.8		16 36.9	+24 51.8	231 10.3	-15 54.1	330 03.4	+19 52.6			
19	112	02.3	147 37.4	47.2		31 37.9	51.9	246 13.0	54.1	345 05.9	52.6			
20	127	04.7	162 37.3	46.7		46 38.8	52.0	261 15.6	54.0	0 08.4	52.6			
21	142	07.2	177 37.2	46.1		61 39.7	52.1	276 18.3	54.0	15 10.9	52.6			
22	157	09.7	192 37.1	45.5		76 40.6	52.2	291 20.9	53.9	30 13.4	52.6			
23	172	12.1	207 37.1	44.9		91 41.5	52.3	306 23.6	53.9	45 15.9	52.6			
24	187	14.6	222 37.0	-12 44.3		106 42.4	+24 52.3	321 26.2	-15 53.8	60 18.4	+19 52.7			
Dif	—		-1	+6	+9		+1	+26		+1	+25		0	

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'0 PMG: 12 ^h 04 ^m 5			Edad: 0 ^d 6 PHE { 4 ^h : 60'5 12 ^h : 60'3 20 ^h : 60'1 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	50.2	+3	37.6	171	55.1	+7 48.4	60 N	3 57	4 50	5 32	5 39 **	20 53	11 0	
1	193	50.4		38.6	186	24.3 ¹⁰²	+8 05.7 ¹⁷³	58	4 06	54	34	44 4	45 104		
2	208	50.6		39.6	200	53.5 ¹⁰²	22.9 ¹⁷²	56	13	4 59	36	48 8	37 100		
3	223	50.8		40.5	215	22.6 ¹⁰¹	40.1 ¹⁷²	54	19	5 03	38	52 12	31 95		
4	238	51.0		41.5	229	51.7 ¹⁰¹	+8 57.2 ¹⁷¹	52	25	06	40	5 56 15	25 92		
5	253	51.2	+3	42.5	244	20.8 ¹⁰¹	+9 14.2 ¹⁷⁰	50	4 30	5 09	5 42	6 00 17	20 20 88		
6	268	51.3	+3	43.5	258	49.8 ¹⁰⁰	+9 31.2 ¹⁷⁰	45	4 40	5 15	5 45	6 07 23	20 08 82		
7	283	51.5		44.4	273	18.9 ¹⁰¹	+9 48.2 ¹⁷⁰	40	48	20	48	13 28	19 59 77		
8	298	51.7		45.4	287	47.9 ¹⁰⁰	+10 05.0 ¹⁶⁸	35	4 55	25	50	19 32	51 73		
9	313	51.9		46.4	302	16.8 ⁹⁹	21.8 ¹⁶⁸	30	5 00	28	52	24 35	44 69		
10	328	52.1		47.3	316	45.8 ¹⁰⁰	38.5 ¹⁶⁷	20	08	34	56	32 42	32 63		
11	343	52.3	+3	48.3	331	14.7 ⁹⁹	+10 55.1 ¹⁶⁶	10 N	5 13	5 38	5 59	6 40 47	19 21 58		
12	358	52.5	+3	49.3	345	43.6 ⁹⁹	+11 11.7 ¹⁶⁶	0	5 16	5 41	6 01	6 47 52	19 11 53		
13	13	52.7		50.3	0	12.4 ⁹⁸	28.2 ¹⁶⁵	10 S	18	43	04	6 54 57	19 02 48		
14	28	52.8		51.2	14	41.2 ⁹⁸	+11 44.6 ¹⁶⁴	20	19	44	06	7 02 63	18 51 43		
15	43	53.0		52.2	29	10.0 ⁹⁸	+12 00.9 ¹⁶³	30	18	45	09	11 69	40 37		
16	58	53.2		53.2	43	38.7 ⁹⁷	17.1 ¹⁶²	35	16	46	11	16 73	33 33		
17	73	53.4	+3	54.1	58	07.4 ⁹⁷	+12 33.3 ¹⁶²	40	5 14	5 46	6 13	7 22 77	18 25 30		
18	88	53.6	+3	55.1	72	36.1 ⁹⁷	+12 49.4 ¹⁶¹	45	5 11	5 46	6 15	7 29 82	18 16 25		
19	103	53.8		56.1	87	04.7 ⁹⁶	+13 05.4 ¹⁶⁰	50	07	45	17	38 88	06 18		
20	118	54.0		57.1	101	33.3 ⁹⁶	21.2 ¹⁵⁸	52	05	45	18	41 92	18 01 16		
21	133	54.2		58.0	116	01.9 ⁹⁶	37.0 ¹⁵⁸	54	03	44	19	46 95	17 55 13		
22	148	54.3	+3	59.0	130	30.4 ⁹⁵	+13 52.8 ¹⁵⁸	56	5 00	44	21	51 99	49 9		
23	163	54.5	+4	00.0	144	58.8 ⁹⁴	+14 08.4 ¹⁵⁶	58	4 57	43	22	7 56 104	43 4		
24	178	54.7	+4	00.9	159	27.2 ⁹⁴	+14 23.9 ¹⁵⁵	60 S	4 54	5 42	6 24	8 02 109	17 35 0		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO			
	PMG: 11 ^h 29 ^m 1		Mag: -4.5 PMG: 9 ^h 10 ^m		Mag: +1.2 PMG: 16 ^h 52 ^m		Mag: -2.4 PMG: 2 ^h 34 ^m		Mag: +0.1 PMG: 19 ^h 55 ^m			
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec		
h	°	'	°	'	°	'	°	'	°	'		
0	187	14.6	222	37.0	106	42.4	+24 52.3	321	26.2	-15 53.8	60 18.4	+19 52.7
1	202	17.1	237	36.9	121	43.3	52.4	336	28.9	53.7	75 20.9	52.7
2	217	19.5	252	36.8	136	44.3	52.5	351	31.5	53.7	90 23.4	52.7
3	232	22.0	267	36.7	151	45.2	52.6	6	34.2	53.6	105 25.9	52.7
4	247	24.5	282	36.6	166	46.1	52.7	21	36.8	53.6	120 28.4	52.7
5	262	26.9	297	36.6	181	47.0	+24 52.8	36	39.5	-15 53.5	135 30.9	+19 52.7
6	277	29.4	312	36.5	196	47.9	+24 52.8	51	42.1	-15 53.5	150 33.4	+19 52.7
7	292	31.9	327	36.4	211	48.8	52.9	66	44.8	53.4	165 35.9	52.7
8	307	34.3	342	36.3	226	49.7	53.0	81	47.5	53.3	180 38.3	52.7
9	322	36.8	357	36.2	241	50.7	53.1	96	50.1	53.3	195 40.8	52.7
10	337	39.2	12	36.1	256	51.6	53.2	111	52.8	53.2	210 43.3	52.7
11	352	41.7	27	36.0	271	52.5	+24 53.2	126	55.4	-15 53.2	225 45.8	+19 52.7
12	7	44.2	42	35.9	286	53.4	+24 53.3	141	58.1	-15 53.1	240 48.3	+19 52.7
13	22	46.6	57	35.9	301	54.3	53.4	157	00.7	53.1	255 50.8	52.8
14	37	49.1	72	35.8	316	55.2	53.5	172	03.4	53.0	270 53.3	52.8
15	52	51.6	87	35.7	331	56.1	53.6	187	06.0	52.9	285 55.8	52.8
16	67	54.0	102	35.6	346	57.0	53.6	202	08.7	52.9	300 58.3	52.8
17	82	56.5	117	35.5	1	58.0	+24 53.7	217	11.3	-15 52.8	316 00.8	+19 52.8
18	97	59.0	132	35.4	16	58.9	+24 53.8	232	14.0	-15 52.8	331 03.3	+19 52.8
19	113	01.4	147	35.3	31	59.8	53.9	247	16.7	52.7	346 05.8	52.8
20	128	03.9	162	35.2	47	00.7	54.0	262	19.3	52.7	1 08.3	52.8
21	143	06.3	177	35.1	62	01.6	54.0	277	22.0	52.6	16 10.7	52.8
22	158	08.8	192	35.1	77	02.5	54.1	292	24.6	52.5	31 13.2	52.8
23	173	11.3	207	35.0	92	03.4	54.2	307	27.3	52.5	46 15.7	52.8
24	188	13.7	222	34.9	107	04.3	+24 54.3	322	29.9	-15 52.4	61 18.2	+19 52.8
Dif	—		-1	+6	+9	+1		+27	+1		+25	0

UT	SOL			● LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16'0 PMG: 12 ^h 04 ^m 2			Edad: 1 ^d 6 PHE { 4 ^h : 59'9 12 ^h : 59'6 20 ^h : 59'3 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	178	54.7	+4 00.9	159	27.2	+14 23.9	60 N	18 41	19 24	20 17	5 38	1	22 43	112	
1	193	54.9	01.9	173	55.6	94 39.3	58	38	19	08	48	6	29	104	
2	208	55.1	02.9	188	24.0	94 +14 54.6	56	36	14	20 00	5 56	11	17	98	
3	223	55.3	03.8	202	52.3	93 +15 09.8	54	34	10	19 53	6 04	15	22 06	93	
4	238	55.5	04.8	217	20.5	92 25.0	52	32	06	47	11	18	21 57	89	
5	253	55.6	+4 05.8	231	48.7	92 +15 40.0	50	18 30	19 03	19 42	6 17	21	21 48	86	
6	268	55.8	+4 06.7	246	16.9	92 +15 54.9	45	18 26	18 56	19 31	6 30	27	21 30	80	
7	283	56.0	07.7	260	45.0	91 +16 09.7	40	23	50	23	41	32	16	75	
8	298	56.2	08.7	275	13.1	91 24.4	35	20	46	16	51	35	21 04	71	
9	313	56.4	09.7	289	41.1	90 38.9	30	18	42	10	6 59	39	20 53	69	
10	328	56.6	10.6	304	09.1	90 +16 53.4	20	14	36	19 02	7 14	45	35	63	
11	343	56.8	+4 11.6	318	37.0	89 +17 07.7	10 N	18 11	18 32	18 56	7 27	49	20 19	59	
12	358	56.9	+4 12.6	333	04.9	89 +17 22.0	0	18 07	18 28	18 52	7 39	54	20 04	55	
13	13	57.1	13.5	347	32.7	88 36.1	10 S	04	26	50	7 51	59	19 50	51	
14	28	57.3	14.5	2	00.5	88 +17 50.1	20	18 01	23	49	8 05	63	34	47	
15	43	57.5	15.5	16	28.3	88 +18 04.0	30	17 58	22	50	20	69	17	41	
16	58	57.7	16.4	30	56.0	87 17.8	35	56	21	51	29	72	19 06	39	
17	73	57.9	+4 17.4	45	23.6	86 +18 31.4	40	17 54	18 21	18 52	8 39	77	18 55	34	
18	88	58.1	+4 18.4	59	51.2	86 +18 44.9	45	17 52	18 21	18 55	8 51	82	18 41	30	
19	103	58.2	19.3	74	18.8	86 +18 58.3	50	49	21	18 58	9 06	88	24	24	
20	118	58.4	20.3	88	46.3	85 +19 11.6	52	47	21	19 00	13	91	17	21	
21	133	58.6	21.3	103	13.7	84 24.7	54	46	21	02	21	95	18 08	18	
22	148	58.8	22.2	117	41.1	84 37.7	56	45	21	05	30	99	17 58	14	
23	163	59.0	23.2	132	08.5	84 +19 50.6	58	43	22	07	40	105	47	8	
24	178	59.2	+4 24.2	146	35.8	83 +20 03.3	60 S	17 41	18 22	19 11	9 51	112	17 35	1	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO				
	PMG: 11 ^h 25 ^m 2		Mag: -4.4 PMG: 9 ^h 10 ^m		Mag: +1.2 PMG: 16 ^h 51 ^m		Mag: -2.4 PMG: 2 ^h 30 ^m		Mag: +0.1 PMG: 19 ^h 51 ^m				
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec			
h	°	'	°	'	°	'	°	'	°	'			
0	188	13.7	222 34.9	-12 30.2	107 04.3	+24 54.3	322 29.9	-15 52.4	61 18.2	+19 52.8			
1	203	16.2	237 34.8	29.6	122 05.2	54.3	337 32.6	52.4	76 20.7	52.8			
2	218	18.7	252 34.7	29.0	137 06.1	54.4	352 35.3	52.3	91 23.2	52.8			
3	233	21.1	267 34.6	28.4	152 07.1	54.5	7 37.9	52.2	106 25.7	52.8			
4	248	23.6	282 34.5	27.8	167 08.0	54.6	22 40.6	52.2	121 28.2	52.9			
5	263	26.1	297 34.4	-12 27.2	182 08.9	+24 54.7	37 43.2	-15 52.1	136 30.7	+19 52.9			
6	278	28.5	312 34.3	-12 26.6	197 09.8	+24 54.7	52 45.9	-15 52.1	151 33.2	+19 52.9			
7	293	31.0	327 34.2	25.9	212 10.7	54.8	67 48.5	52.0	166 35.6	52.9			
8	308	33.5	342 34.1	25.3	227 11.6	54.9	82 51.2	51.9	181 38.1	52.9			
9	323	35.9	357 34.0	24.7	242 12.5	55.0	97 53.9	51.9	196 40.6	52.9			
10	338	38.4	12 33.9	24.1	257 13.4	55.0	112 56.5	51.8	211 43.1	52.9			
11	353	40.8	27 33.9	-12 23.5	272 14.3	+24 55.1	127 59.2	-15 51.8	226 45.6	+19 52.9			
12	8	43.3	42 33.8	-12 22.9	287 15.2	+24 55.2	143 01.8	-15 51.7	241 48.1	+19 52.9			
13	23	45.8	57 33.7	22.3	302 16.2	55.3	158 04.5	51.7	256 50.6	52.9			
14	38	48.2	72 33.6	21.7	317 17.1	55.3	173 07.2	51.6	271 53.1	52.9			
15	53	50.7	87 33.5	21.1	332 18.0	55.4	188 09.8	51.5	286 55.5	52.9			
16	68	53.2	102 33.4	20.5	347 18.9	55.5	203 12.5	51.5	301 58.0	52.9			
17	83	55.6	117 33.3	-12 19.9	2	19.8	+24 55.5	218 15.1	-15 51.4	317 00.5	+19 52.9		
18	98	58.1	132 33.2	-12 19.2	17	20.7	+24 55.6	233 17.8	-15 51.4	332 03.0	+19 52.9		
19	114	00.6	147 33.1	18.6	32	21.6	55.7	248 20.5	51.3	347 05.5	52.9		
20	129	03.0	162 33.0	18.0	47	22.5	55.8	263 23.1	51.2	2	08.0	53.0	
21	144	05.5	177 32.9	17.4	62	23.4	55.8	278 25.8	51.2	17	10.5	53.0	
22	159	07.9	192 32.8	16.8	77	24.3	55.9	293 28.5	51.1	32	13.0	53.0	
23	174	10.4	207 32.7	16.2	92	25.2	56.0	308 31.1	51.1	47	15.4	53.0	
24	189	12.9	222 32.6	-12 15.6	107	26.1	+24 56.1	323 33.8	-15 51.0	62	17.9	+19 53.0	
Dif	—	—	-1	+6	+9	+1	+27	+1	+25	0			

UT	SOL			● LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna			Puesta de Luna			
	SD: 16 ^h 0 PMG: 12 ^h 03 ^m 9			Edad: 2 ^d 6 PHE { 4 ^h : 59 ^h 0 12 ^h : 58 ^h 7 20 ^h : 58 ^h 4 PMG: 14 ^h 46 ^m R°: 56 ^m															
	hG ☉ Dec			hG ☾ Dif Dec Dif						Náutico	Civil		Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m	
0	178	59.2	+4	24.2	146	35.8	+20	03.3	60 N	3	50	4	43	5	26	5	39	3	
1	193	59.4		25.1	161	03.0	82	16.0 ¹²⁷	58	3	59		49	29		5	54	11	
2	208	59.5		26.1	175	30.3	83	28.4 ¹²⁴	56	4	07		53	31		6	07	17	
3	223	59.7		27.1	189	57.4	81	40.8 ¹²⁴	54	14	4	57	33			19	21		
4	238	59.9		28.0	204	24.5	81	+20 53.0 ¹²²	52	20	5	01	35			29	25		
5	254	00.1	+4	29.0	218	51.6	81	+21 05.1 ¹²¹	50	4	25	5	05	5	37	6	38	28	
6	269	00.3	+4	30.0	233	18.6	80	+21 17.0 ¹¹⁹	45	4	36	5	12	5	41	6	57	34	
7	284	00.5		30.9	247	45.6	80	28.8 ¹¹⁸	40		45		17	44		7	13	38	
8	299	00.7		31.9	262	12.5	79	40.4 ¹¹⁶	35		52		22	47		26	42		
9	314	00.8		32.9	276	39.4	79	+21 52.0 ¹¹⁶	30	4	58	26		50		38	44		
10	329	01.0		33.8	291	06.2	78	+22 03.3 ¹¹³	20	5	06	32		54		7	59	48	
11	344	01.2	+4	34.8	305	33.0	78	+22 14.5 ¹¹²	10 N	5	12	5	36	5	57	8	16	53	
12	359	01.4	+4	35.8	319	59.8	78	+22 25.6 ¹¹¹	0	5	16	5	40	6	01	8	33	56	
13	14	01.6		36.7	334	26.5	77	36.6 ¹¹⁰	10 S	18		43		04		8	50	59	
14	29	01.8		37.7	348	53.1	76	47.3 ¹⁰⁷	20	19		45	07			9	08	63	
15	44	02.0		38.6	3	19.7	76	+22 58.0 ¹⁰⁷	30	19		47	11			29	68		
16	59	02.1		39.6	17	46.3	76	+23 08.5 ¹⁰⁵	35	18		47	13			41	71		
17	74	02.3	+4	40.6	32	12.8	75	+23 18.8 ¹⁰³	40	5	16	5	48	6	15	9	56	74	
18	89	02.5	+4	41.5	46	39.3	75	+23 29.0 ¹⁰²	45	5	14	5	48	6	17	10	13	78	
19	104	02.7		42.5	61	05.7	74	39.0 ¹⁰⁰	50	11		48	20			34	84		
20	119	02.9		43.5	75	32.1	74	48.9 ⁹⁹	52	09		48	22			44	87		
21	134	03.1		44.4	89	58.5	74	+23 58.6 ⁹⁷	54	07		48	23			10	56	90	
22	149	03.3		45.4	104	24.8	73	+24 08.2 ⁹⁶	56	05		48	25			11	09	95	
23	164	03.4		46.4	118	51.1	73	17.6 ⁹⁴	58	5	02	47	27			25	101		
24	179	03.6	+4	47.3	133	17.4	73	+24 26.9 ⁹³	60 S	4	59	5	47	6	29	11	43	112	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 11 ^h 21 ^m 3		Mag: -4.4 PMG: 9 ^h 10 ^m		Mag: +1.2 PMG: 16 ^h 49 ^m		Mag: -2.4 PMG: 2 ^h 25 ^m		Mag: +0.1 PMG: 19 ^h 48 ^m	
	hG ♈		hG ♀ Dec		hG ♂ Dec		hG ♃ Dec		hG ♄ Dec	
h	°	'	°	'	°	'	°	'	°	'
0	189	12.9	222	32.6	-12	15.6	107	26.1	+24	56.1
1	204	15.3	237	32.5		14.9	122	27.0		56.1
2	219	17.8	252	32.4		14.3	137	28.0		56.2
3	234	20.3	267	32.3		13.7	152	28.9		56.3
4	249	22.7	282	32.2		13.1	167	29.8		56.3
5	264	25.2	297	32.1	-12	12.5	182	30.7	+24	56.4
6	279	27.7	312	32.0	-12	11.8	197	31.6	+24	56.5
7	294	30.1	327	31.9		11.2	212	32.5		56.5
8	309	32.6	342	31.8		10.6	227	33.4		56.6
9	324	35.1	357	31.7		10.0	242	34.3		56.7
10	339	37.5	12	31.6		09.3	257	35.2		56.8
11	354	40.0	27	31.5	-12	08.7	272	36.1	+24	56.8
12	9	42.4	42	31.4	-12	08.1	287	37.0	+24	56.9
13	24	44.9	57	31.3		07.5	302	37.9		57.0
14	39	47.4	72	31.2		06.8	317	38.8		57.0
15	54	49.8	87	31.1		06.2	332	39.7		57.1
16	69	52.3	102	31.0		05.6	347	40.6		57.2
17	84	54.8	117	30.9	-12	05.0	2	41.5	+24	57.2
18	99	57.2	132	30.8	-12	04.3	17	42.4	+24	57.3
19	114	59.7	147	30.7		03.7	32	43.3		57.4
20	130	02.2	162	30.6		03.1	47	44.2		57.4
21	145	04.6	177	30.5		02.4	62	45.2		57.5
22	160	07.1	192	30.4		01.8	77	46.1		57.6
23	175	09.6	207	30.3		01.2	92	47.0		57.6
24	190	12.0	222	30.2	-12	00.5	107	47.9	+24	57.7
Dif	—		-1		+6		+9		+1	
							+27		+1	
									+25	
									0	

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 16'0 PMG: 12 ^h 03 ^m 6			Edad: 3 ^d 6 SD: 15'9 PMG: 15 ^h 42 ^m	PHE { 4 ^h : 58'1 12 ^h : 57'8 20 ^h : 57'5 R°: 57 ^m										
	hG ☉	Dec				hG ☾			Dif	Dec	Dif	Civil	Náutico	Hora	R°
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	179	03.6	+4	47.3	133	17.4	+24	26.9	91	18	46	19	29	20	23
1	194	03.8		48.3	147	43.6	72	36.0	91	58	43		23	13	
2	209	04.0		49.2	162	09.7	71	44.9	89	56	40	18	20	05	
3	224	04.2		50.2	176	35.9	72	+24	53.7	88	37	14	19	58	
4	239	04.4		51.2	191	02.0	71	+25	02.3	86	52	35	10	51	
5	254	04.5	+4	52.1	205	28.1	71	+25	10.8	85	50	18	33	19	46
6	269	04.7	+4	53.1	219	54.1	70	+25	19.1	83	45	18	29	18	58
7	284	04.9		54.1	234	20.1	70	27.2	81	40	25	52	25		
8	299	05.1		55.0	248	46.1	70	35.2	80	35	22	47	18		
9	314	05.3		56.0	263	12.1	70	43.0	78	30	19	43	12		
10	329	05.5		56.9	277	38.0	69	50.7	77	20	15	37	19	03	
11	344	05.6	+4	57.9	292	03.9	69	+25	58.2	75	10 N	18	11	18	32
12	359	05.8	+4	58.9	306	29.8	69	+26	05.5	73	0	18	07	18	28
13	14	06.0	+4	59.8	320	55.6	68	12.7	70	72	10 S	03		24	49
14	29	06.2	+5	00.8	335	21.5	69	19.7	70	20	18	00	22	47	
15	44	06.4		01.8	349	47.3	68	26.5	68	30	17	56	20	47	
16	59	06.6		02.7	4	13.1	68	33.2	67	35	53	19	48		
17	74	06.8	+5	03.7	18	38.9	68	+26	39.7	65	40	17	51	18	18
18	89	06.9	+5	04.6	33	04.6	67	+26	46.0	63	45	17	48	18	17
19	104	07.1		05.6	47	30.4	68	52.2	62	50	44	17	54		
20	119	07.3		06.6	61	56.1	67	+26	58.2	60	52	43	17	56	
21	134	07.5		07.5	76	21.8	67	+27	04.0	58	54	41	16	57	
22	149	07.7		08.5	90	47.5	67	09.7	57	56	39	16	18	59	
23	164	07.9		09.4	105	13.2	67	15.2	55	58	37	16	19	02	
24	179	08.0	+5	10.4	119	38.9	67	+27	20.5	53	60 S	17	35	18	16

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 11 ^h 17 ^m 3		Mag: -4.4 PMG: 9 ^h 10 ^m		Mag: +1.2 PMG: 16 ^h 48 ^m		Mag: -2.4 PMG: 2 ^h 21 ^m		Mag: +0.1 PMG: 19 ^h 44 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	190	12.0	222	30.2	-12	00.5	107	47.9	+24	57.7
1	205	14.5	237	30.1	-11	59.9	122	48.8		57.8
2	220	16.9	252	30.0		59.3	137	49.7		57.8
3	235	19.4	267	29.9		58.6	152	50.6		57.9
4	250	21.9	282	29.8		58.0	167	51.5		57.9
5	265	24.3	297	29.7	-11	57.3	182	52.4	+24	58.0
6	280	26.8	312	29.6	-11	56.7	197	53.3	+24	58.1
7	295	29.3	327	29.5		56.1	212	54.2		58.1
8	310	31.7	342	29.4		55.4	227	55.1		58.2
9	325	34.2	357	29.2		54.8	242	56.0		58.3
10	340	36.7	12	29.1		54.1	257	56.9		58.3
11	355	39.1	27	29.0	-11	53.5	272	57.8	+24	58.4
12	10	41.6	42	28.9	-11	52.9	287	58.7	+24	58.5
13	25	44.1	57	28.8		52.2	302	59.6		58.5
14	40	46.5	72	28.7		51.6	318	00.5		58.6
15	55	49.0	87	28.6		50.9	333	01.4		58.6
16	70	51.4	102	28.5		50.3	348	02.3		58.7
17	85	53.9	117	28.4	-11	49.6	3	03.2	+24	58.8
18	100	56.4	132	28.3	-11	49.0	18	04.1	+24	58.8
19	115	58.8	147	28.2		48.3	33	05.0		58.9
20	131	01.3	162	28.1		47.7	48	05.9		58.9
21	146	03.8	177	28.0		47.0	63	06.8		59.0
22	161	06.2	192	27.9		46.4	78	07.7		59.1
23	176	08.7	207	27.7		45.7	93	08.6		59.1
24	191	11.2	222	27.6	-11	45.1	108	09.5	+24	59.2
Dif	—		-1	+6		+9	+1	+27		+1

0	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100	105	110	115	120	125	130	135	140	145	150	155	160	165	170	175	180	185	190	195	200	205	210	215	220	225	230	235	240											
5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100	105	110	115	120	125	130	135	140	145	150	155	160	165	170	175	180	185	190	195	200	205	210	215	220	225	230	235	240	245	250	255	260	265	270	275	280	285	290	295	300
10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100	105	110	115	120	125	130	135	140	145	150	155	160	165	170	175	180	185	190	195	200	205	210	215	220	225	230	235	240	245	250	255	260	265	270	275	280	285	290	295	300	
15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100	105	110	115	120	125	130	135	140	145	150	155	160	165	170	175	180	185	190	195	200	205	210	215	220	225	230	235	240	245	250	255	260	265	270	275	280	285	290	295	300		
20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100	105	110	115	120	125	130	135	140	145	150	155	160	165	170	175	180	185	190	195	200	205	210	215	220	225	230	235	240	245	250	255	260	265	270	275	280	285	290	295	300			
25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100	105	110	115	120	125	130	135	140	145	150	155	160	165	170	175	180	185	190	195	200	205	210	215	220	225	230	235	240	245	250	255	260	265	270	275	280	285	290	295	300				
30	35	40	45	50	55	60	65	70	75	80	85	90	95	100	105	110	115	120	125	130	135	140	145	150	155	160	165	170	175	180	185	190	195	200	205	210	215	220	225	230	235	240	245	250	255	260	265	270	275	280	285	290	295	300					
35	40	45	50	55	60	65	70	75	80	85	90	95	100	105	110	115	120	125	130	135	140	145	150	155	160	165	170	175	180	185	190	195	200	205	210	215	220	225	230	235	240	245	250	255	260	265	270	275	280	285	290	295	300						
40	45	50	55	60	65	70	75	80	85	90	95	100	105	110	115	120	125	130	135	140	145	150	155	160	165	170	175	180	185	190	195	200	205	210	215	220	225	230	235	240	245	250	255	260	265	270	275	280	285	290	295	300							
45	50	55	60	65	70	75	80	85	90	95	100	105	110	115	120	125	130	135	140	145	150	155	160	165	170	175	180	185	190	195	200	205	210	215	220	225	230	235	240	245	250	255	260	265	270	275	280	285	290	295	300								
50	55	60	65	70	75	80	85	90	95	100	105	110	115	120	125	130	135	140	145	150	155	160	165	170	175	180	185	190	195	200	205	210	215	220	225	230	235	240	245	250	255	260	265	270	275	280	285	290	295	300									
55	60	65	70	75	80	85	90	95	100	105	110	115	120	125	130	135	140	145	150	155	160	165	170	175	180	185	190	195	200	205	210	215	220	225	230	235	240	245	250	255	260	265	270	275	280	285	290	295	300										
60	65	70	75	80	85	90	95	100	105	110	115	120	125	130	135	140	145	150	155	160	165	170	175	180	185	190	195	200	205	210	215	220	225	230	235	240	245	250	255	260	265	270	275	280	285	290	295	300											
65	70	75	80	85	90	95	100	105	110	115	120	125	130	135	140	145	150	155	160	165	170	175	180	185	190	195	200	205	210	215	220	225	230	235	240	245	250	255	260	265	270	275	280	285	290	295	300												
70	75	80	85	90	95	100	105	110	115	120	125	130	135	140	145	150	155	160	165	170	175	180	185	190	195	200	205	210	215	220	225	230	235	240	245	250	255	260	265	270	275	280	285	290	2														

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16 ^h 0 PMG: 12 ^h 03 ^m 3			Edad: 4 ^d 6 PHE { SD: 15 ^h 6 PMG: 16 ^h 39 ^m 4 ^h : 57/2 12 ^h : 56/9 20 ^h : 56/6 R°: 57 ^m														
	hG ☉	Dec		hG ☾	Dif		Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	°	'	°	'	°	'	h	m	h	m	h	m	h	m	m
0	179	08.0	+5 10.4	119	38.9	+27 20.5	52	60 N		3 43	4 37	5 20	5 54	34	2 23	84		
1	194	08.2		134	04.6	25.7	52	58		3 53	43	23	6 27	42	1 49	77		
2	209	08.4		148	30.3	30.7	50	56		4 01	48	26	6 52	46	25	72		
3	224	08.6		162	56.0	35.5	48	54		08	52	29	7 12	48	1 05	70		
4	239	08.8		177	21.6	40.2	47	52		15	4 56	31	29	49	0 48	69		
5	254	09.0	+5 15.2	191	47.3	+27 44.7	45	50		4 20	5 00	5 33	7 43	51	0 34	68		
6	269	09.1	+5 16.1	206	13.0	+27 49.0	43	45		4 32	5 08	5 37	8 13	52	0 05	65		
7	284	09.3		220	38.7	53.2	42	40		42	14	41	36	53	** ** *	**		
8	299	09.5		235	04.4	+27 57.2	40	35		49	19	44	8 55	54	** ** *	**		
9	314	09.7		249	30.1	+28 01.0	38	30		4 55	23	47	9 12	54	** ** *	**		
10	329	09.9		263	55.8	04.6	36	20		5 04	30	52	9 39	56	23 41	55		
11	344	10.1	+5 20.9	278	21.5	+28 08.1	35	10 N		5 11	5 35	5 56	10 03	56	23 16	55		
12	359	10.2	+5 21.9	292	47.2	+28 11.4	33	0		5 15	5 39	6 00	10 26	56	22 53	56		
13	14	10.4		307	12.9	14.6	32	10 S		18	43	04	10 48	57	30	56		
14	29	10.6		321	38.7	17.6	30	20		20	45	08	11 13	57	22 05	57		
15	44	10.8		336	04.4	20.4	28	30		20	48	12	41	58	21 37	56		
16	59	11.0		350	30.2	23.0	26	35		19	49	14	11 58	58	20	56		
17	74	11.1	+5 26.7	4	56.0	+28 25.5	25	40		5 18	5 50	6 17	12 17	59	21 00	56		
18	89	11.3	+5 27.6	19	21.8	+28 27.8	23	45		5 16	5 50	6 20	12 41	59	20 36	56		
19	104	11.5		33	47.7	30.0	22	50		14	51	23	13 12	60	20 05	56		
20	119	11.7		48	13.6	32.0	20	52		12	51	25	27	60	19 49	57		
21	134	11.9		62	39.5	33.8	18	54		11	52	27	13 45	61	31	56		
22	149	12.1		77	05.4	35.4	16	56		09	52	29	14 07	61	19 09	56		
23	164	12.2		91	31.3	36.9	15	58		06	52	31	14 35	62	18 41	55		
24	179	12.4	+5 33.4	105	57.3	+28 38.2	13	60 S		5 04	5 52	6 33	15 16	64	18 00	54		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG 11 ^h 13 ^m 4		Mag: -4.4 PMG: 9 ^h 10 ^m			Mag: +1.2 PMG: 16 ^h 46 ^m			Mag: -2.4 PMG: 2 ^h 17 ^m			Mag: +0.1 PMG: 19 ^h 40 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°
0	191	11.2	222	27.6	-11 45.1	108	09.5	+24 59.2	325	41.9	-15 48.0	64	17.0	+19 53.2				
1	206	13.6	237	27.5	44.4	123	10.4	59.2	340	44.6	48.0	79	19.5	53.2				
2	221	16.1	252	27.4	43.8	138	11.3	59.3	355	47.3	47.9	94	21.9	53.2				
3	236	18.5	267	27.3	43.1	153	12.2	59.4	10	50.0	47.8	109	24.4	53.2				
4	251	21.0	282	27.2	42.5	168	13.1	59.4	25	52.7	47.8	124	26.9	53.2				
5	266	23.5	297	27.1	-11 41.8	183	14.0	+24 59.5	40	55.3	-15 47.7	139	29.4	+19 53.2				
6	281	25.9	312	27.0	-11 41.2	198	14.9	+24 59.5	55	58.0	-15 47.6	154	31.9	+19 53.2				
7	296	28.4	327	26.9	40.5	213	15.8	59.6	71	00.7	47.6	169	34.3	53.2				
8	311	30.9	342	26.8	39.8	228	16.7	59.6	86	03.4	47.5	184	36.8	53.2				
9	326	33.3	357	26.7	39.2	243	17.6	59.7	101	06.0	47.5	199	39.3	53.2				
10	341	35.8	12	26.5	38.5	258	18.5	59.8	116	08.7	47.4	214	41.7	53.2				
11	356	38.3	27	26.4	-11 37.9	273	19.4	+24 59.8	131	11.4	-15 47.3	229	44.2	+19 53.2				
12	11	40.7	42	26.3	-11 37.2	288	20.3	+24 59.9	146	14.1	-15 47.3	244	46.7	+19 53.2				
13	26	43.2	57	26.2	36.5	303	21.2	+24 59.9	161	16.8	47.2	259	49.2	53.2				
14	41	45.7	72	26.1	35.9	318	22.1	+25 00.0	176	19.4	47.1	274	51.6	53.2				
15	56	48.1	87	26.0	35.2	333	23.0	+25 00.0	191	22.1	47.1	289	54.1	53.2				
16	71	50.6	102	25.9	34.6	348	23.9	+25 00.1	206	24.8	47.0	304	56.6	53.2				
17	86	53.0	117	25.8	-11 33.9	3	24.8	+25 00.1	221	27.5	-15 46.9	319	59.1	+19 53.3				
18	101	55.5	132	25.6	-11 33.2	18	25.7	+25 00.2	236	30.2	-15 46.9	335	01.5	+19 53.3				
19	116	58.0	147	25.5	32.6	33	26.6	00.3	251	32.8	46.8	350	04.0	53.3				
20	132	00.4	162	25.4	31.9	48	27.5	00.3	266	35.5	46.7	5	06.5	53.3				
21	147	02.9	177	25.3	31.2	63	28.4	00.4	281	38.2	46.7	20	09.0	53.3				
22	162	05.4	192	25.2	30.6	78	29.3	00.4	296	40.9	46.6	35	11.4	53.3				
23	177	07.8	207	25.1	29.9	93	30.2	00.5	311	43.6	46.5	50	13.9	53.3				
24	192	10.3	222	25.0	-11 29.2	108	31.1	+25 00.5	326	46.2	-15 46.5	65	16.4	+19 53.3				
Dif	—		-1		+7	+9		+1	+27		+1	+25		0				

UT	SOL			 LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16'0 PMG: 12 ^h 03 ^m 0			Edad: 5 ^d 6 PHE { 4 ^h : 56'3 12 ^h : 56'0 20 ^h : 55'8 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	179	12.4	+5 33.4	105	57.3	+28 38.2	12	60 N	18 51	19 34	20 29	6 28 73	3 47 42	
1	194	12.6		120	23.3	70 39.4	10	58	47	28	19	7 09 68	3 06 47	
2	209	12.8	35.3	134	49.4	71 40.4	8	56	44	22	10	7 38 65	2 37 49	
3	224	13.0	36.2	149	15.5	71 41.2	6	54	41	18	20 02	8 00 64	2 15 51	
4	239	13.2	37.2	163	41.6	71 41.8	6	52	39	13	19 55	18 63	1 57 51	
5	254	13.3	+5 38.1	178	07.7	71 +28 42.4	6	50	18 36	19 09	19 49	8 34 61	1 42 52	
6	269	13.5	+5 39.1	192	33.9	72 +28 42.7	3	45	18 31	19 01	19 37	9 05 60	1 10 54	
7	284	13.7	40.0	207	00.2	73 42.9	2	40	27	18 55	27	29 59	0 46 54	
8	299	13.9	41.0	221	26.5	73 42.9	0	35	24	49	19	9 49 58	26 55	
9	314	14.1	42.0	235	52.8	73 42.7	2	30	20	45	13	10 06 57	0 09 55	
10	329	14.2	42.9	250	19.2	74 42.4	3	20	15	37	19 03	35 56	** ** *	**
11	344	14.4	+5 43.9	264	45.6	74 +28 42.0	4	10 N	18 10	18 32	18 56	10 59 56	** ** *	**
12	359	14.6	+5 44.8	279	12.1	75 +28 41.4	6	0	18 06	18 27	18 51	11 22 55	23 49 53	
13	14	14.8	45.8	293	38.6	75 40.6	8	10 S	18 02	23	48	11 45 54	26 55	
14	29	15.0	46.7	308	05.2	76 39.6	10	20	17 58	20	46	12 10 52	23 02 56	
15	44	15.1	47.7	322	31.8	76 38.6	10	30	53	17	45	39 51	22 33 59	
16	59	15.3	48.6	336	58.5	77 37.3	13	35	51	16	45	12 56 50	22 16 60	
17	74	15.5	+5 49.6	351	25.2	77 +28 35.9	14	40	17 48	18 15	18 46	13 16 48	21 56 62	
18	89	15.7	+5 50.5	5	52.0	78 +28 34.4	15	45	17 44	18 14	18 47	13 40 47	21 32 64	
19	104	15.9	51.5	20	18.9	79 32.6	18	50	40	12	50	14 12 44	21 01 67	
20	119	16.1	52.4	34	45.8	79 30.8	18	52	38	12	51	27 43	20 46 68	
21	134	16.2	53.4	49	12.8	80 28.8	20	54	36	12	52	14 46 40	27 71	
22	149	16.4	54.3	63	39.8	80 26.6	22	56	34	11	54	15 08 38	20 05 74	
23	164	16.6	55.3	78	06.9	81 24.3	23	58	32	11	56	15 37 33	19 36 79	
24	179	16.8	+5 56.2	92	34.1	82 +28 21.8	25	60 S	17 29	18 10	18 59	16 20 22	18 54 89	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 11 ^h 09 ^m 5		Mag: -4.4 PMG: 9 ^h 10 ^m		Mag: +1.2 PMG: 16 ^h 45 ^m		Mag: -2.4 PMG: 2 ^h 13 ^m		Mag: +0.1 PMG: 19 ^h 36 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	192	10.3	222 25.0	-11 29.2	108 31.1	+25 00.5	326 46.2	-15 46.5	65 16.4	+19 53.3
1	207	12.8	237 24.9	28.6	123 32.0	00.6	341 48.9	46.4	80 18.8	53.3
2	222	15.2	252 24.7	27.9	138 32.9	00.6	356 51.6	46.4	95 21.3	53.3
3	237	17.7	267 24.6	27.2	153 33.8	00.7	11 54.3	46.3	110 23.8	53.3
4	252	20.2	282 24.5	26.5	168 34.7	00.7	26 57.0	46.2	125 26.2	53.3
5	267	22.6	297 24.4	-11 25.9	183 35.6	+25 00.8	41 59.7	-15 46.2	140 28.7	+19 53.3
6	282	25.1	312 24.3	-11 25.2	198 36.5	+25 00.8	57 02.3	-15 46.1	155 31.2	+19 53.3
7	297	27.5	327 24.2	24.5	213 37.4	00.9	72 05.0	46.0	170 33.7	53.3
8	312	30.0	342 24.1	23.9	228 38.2	00.9	87 07.7	46.0	185 36.1	53.3
9	327	32.5	357 23.9	23.2	243 39.1	01.0	102 10.4	45.9	200 38.6	53.3
10	342	34.9	12 23.8	22.5	258 40.0	01.0	117 13.1	45.8	215 41.1	53.3
11	357	37.4	27 23.7	-11 21.8	273 40.9	+25 01.1	132 15.8	-15 45.8	230 43.5	+19 53.3
12	12	39.9	42 23.6	-11 21.1	288 41.8	+25 01.1	147 18.5	-15 45.7	245 46.0	+19 53.3
13	27	42.3	57 23.5	20.5	303 42.7	01.2	162 21.1	45.6	260 48.5	53.3
14	42	44.8	72 23.4	19.8	318 43.6	01.2	177 23.8	45.6	275 50.9	53.3
15	57	47.3	87 23.2	19.1	333 44.5	01.3	192 26.5	45.5	290 53.4	53.3
16	72	49.7	102 23.1	18.4	348 45.4	01.3	207 29.2	45.4	305 55.9	53.3
17	87	52.2	117 23.0	-11 17.8	3 46.3	+25 01.4	222 31.9	-15 45.4	320 58.3	+19 53.3
18	102	54.7	132 22.9	-11 17.1	18 47.2	+25 01.4	237 34.6	-15 45.3	336 00.8	+19 53.3
19	117	57.1	147 22.8	16.4	33 48.1	01.5	252 37.3	45.2	351 03.3	53.3
20	132	59.6	162 22.7	15.7	48 49.0	01.5	267 39.9	45.2	6 05.8	53.3
21	148	02.0	177 22.5	15.0	63 49.9	01.6	282 42.6	45.1	21 08.2	53.3
22	163	04.5	192 22.4	14.3	78 50.8	01.6	297 45.3	45.0	36 10.7	53.3
23	178	07.0	207 22.3	13.7	93 51.7	01.7	312 48.0	45.0	51 13.2	53.3
24	193	09.4	222 22.2	-11 13.0	108 52.6	+25 01.7	327 50.7	-15 44.9	66 15.6	+19 53.3
Dif	—		-1	+7	+9	0	+27	+1	+25	0

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16 ^h 0 PMG: 12 ^h 02 ^m 7			Edad: 6 ^d 6 PHE { SD: 15 ^h 2 PMG: 18 ^h 29 ^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	179	16.8	+5 56.2	92	34.1	+28 21.8	26	60 N	3 35	4 30	5 14	7 41	95	4 29 13
1	194	17.0	57.2	107	01.3	82	19.2	58	46	37	18	8 17	84	3 53 24
2	209	17.1	58.1	121	28.6	83	16.5	56	3 55	42	21	8 43	78	26 30
3	224	17.3	+5 59.1	135	56.0	84	13.6	54	4 03	47	24	9 04	74	3 06 30
4	239	17.5	+6 00.0	150	23.5	85	10.5	52	10	52	26	21	71	2 48 36
5	254	17.7	+6 01.0	164	51.0	85	+28 07.3	50	4 16	4 56	5 29	9 35	70	2 34 37
6	269	17.9	+6 01.9	179	18.5	85	+28 04.0	45	4 28	5 04	5 34	10 05	65	2 04 41
7	284	18.0	02.9	193	46.2	87	+28 00.5	40	38	11	38	28	63	1 40 44
8	299	18.2	03.8	208	13.9	87	+27 56.9	35	46	16	42	10 47	61	21 45
9	314	18.4	04.8	222	41.7	88	53.1	30	4 52	21	45	11 03	59	1 04 47
10	329	18.6	05.7	237	09.6	89	49.2	20	5 02	28	50	31	56	0 36 49
11	344	18.8	+6 06.7	251	37.6	90	+27 45.1	10 N	5 09	5 34	5 55	11 55	53	0 11 52
12	359	18.9	+6 07.6	266	05.6	90	+27 40.9	0	5 15	5 39	5 59	12 17	51	** ** *
13	14	19.1	08.6	280	33.7	91	36.6	10 S	18	43	6 04	12 39	49	** ** *
14	29	19.3	09.5	295	01.9	92	32.2	20	20	46	08	13 02	47	23 58 55
15	44	19.5	10.5	309	30.1	92	27.6	30	21	49	13	30	43	32 58
16	59	19.7	11.4	323	58.5	94	22.8	35	21	50	16	13 46	41	23 16 61
17	74	19.8	+6 12.4	338	26.9	94	+27 18.0	40	5 20	5 52	6 19	14 04	39	22 58 63
18	89	20.0	+6 13.3	352	55.4	95	+27 13.0	45	5 19	5 53	6 22	14 27	36	22 36 67
19	104	20.2	14.3	7	24.0	96	07.8	50	17	54	27	14 56	31	22 08 71
20	119	20.4	15.2	21	52.7	97	+27 02.6	52	16	55	28	15 10	29	21 54 74
21	134	20.5	16.2	36	21.4	97	+26 57.2	54	14	55	31	26	26	38 77
22	149	20.7	17.1	50	50.2	98	51.7	56	13	56	33	15 46	22	21 19 81
23	164	20.9	18.1	65	19.1	99	46.0	58	11	56	35	16 10	16	20 55 88
24	179	21.1	+6 19.0	79	48.1	100	+26 40.3	60 S	5 08	5 57	6 38	16 42	6	20 23 98

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 11 ^h 05 ^m 5		Mag: -4.4 PMG: 9 ^h 11 ^m		Mag: +1.2 PMG: 16 ^h 43 ^m		Mag: -2.4 PMG: 2 ^h 08 ^m		Mag: +0.1 PMG: 19 ^h 32 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	193	09.4	222	22.2	-11	13.0	327	50.7	-15	44.9	66	15.6	+19	53.3				
1	208	11.9	237	22.1		12.3	342	53.4		44.8	81	18.1		53.3				
2	223	14.4	252	21.9		11.6	357	56.1		44.8	96	20.6		53.3				
3	238	16.8	267	21.8		10.9	12	58.8		44.7	111	23.0		53.3				
4	253	19.3	282	21.7		10.2	28	01.4		44.6	126	25.5		53.3				
5	268	21.8	297	21.6	-11	09.5	43	04.1	-15	44.6	141	27.9	+19	53.3				
6	283	24.2	312	21.5	-11	08.8	58	06.8	-15	44.5	156	30.4	+19	53.3				
7	298	26.7	327	21.3		08.1	73	09.5		44.4	171	32.9		53.3				
8	313	29.2	342	21.2		07.5	88	12.2		44.4	186	35.3		53.3				
9	328	31.6	357	21.1		06.8	103	14.9		44.3	201	37.8		53.3				
10	343	34.1	12	21.0		06.1	118	17.6		44.2	216	40.3		53.3				
11	358	36.5	27	20.9	-11	05.4	133	20.3	-15	44.2	231	42.7	+19	53.3				
12	13	39.0	42	20.7	-11	04.7	148	23.0	-15	44.1	246	45.2	+19	53.3				
13	28	41.5	57	20.6		04.0	163	25.7		44.0	261	47.7		53.3				
14	43	43.9	72	20.5		03.3	178	28.3		44.0	276	50.1		53.3				
15	58	46.4	87	20.4		02.6	193	31.0		43.9	291	52.6		53.3				
16	73	48.9	102	20.3		01.9	208	33.7		43.8	306	55.1		53.3				
17	88	51.3	117	20.1	-11	01.2	223	36.4	-15	43.8	321	57.5	+19	53.3				
18	103	53.8	132	20.0	-11	00.5	238	39.1	-15	43.7	337	00.0	+19	53.3				
19	118	56.3	147	19.9	-10	59.8	253	41.8		43.6	352	02.4		53.3				
20	133	58.7	162	19.8		59.1	268	44.5		43.6	7	04.9		53.3				
21	149	01.2	177	19.7		58.4	283	47.2		43.5	22	07.4		53.3				
22	164	03.6	192	19.5		57.7	298	49.9		43.4	37	09.8		53.3				
23	179	06.1	207	19.4		57.0	313	52.6		43.4	52	12.3		53.3				
24	194	08.6	222	19.3	-10	56.3	328	55.3	-15	43.3	67	14.8	+19	53.3				
Dif	—		-1		+7		+9		0		+27		+1		+25		0	

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna					
	SD: 16'0 PMG: 12 ^h 02 ^m 5			Edad: 7 ^d 6 SD: 15'0 PMG: 19 ^h 20 ^m	PHE { 4 ^h : 54'9 12 ^h : 54'8 20 ^h : 54'6 R°: 46 ^m													
	hG ☉	Dec				hG ☾			Dif	Dec	Dif	Civil	Náutico	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m			
0	179	21.1	+6	19.0	79	48.1	+26 40.3	60 N	18 56	19 40	20 36	9 16 95	4 42 5					
1	194	21.3		20.0	94	17.2 ¹⁰¹	34.4 ⁵⁹	58	52	33	25	9 41 88	4 17 12					
2	209	21.4		20.9	108	46.4 ¹⁰²	28.4 ⁶⁰	56	48	27	15	10 01 83	3 56 17					
3	224	21.6		21.9	123	15.6 ¹⁰²	22.2 ⁶²	54	45	22	20 07	18 78	39 21					
4	239	21.8		22.8	137	45.0 ¹⁰⁴	15.9 ⁶³	52	42	17	19 59	32 75	24 24					
5	254	22.0	+6	23.7	152	14.4 ¹⁰⁴	+26 09.5 ⁶⁴	50	18 39	19 13	19 53	10 45 72	3 11 27					
6	269	22.2	+6	24.7	166	43.9 ¹⁰⁵	+26 03.0 ⁶⁵	45	18 34	19 04	19 40	11 10 68	2 45 31					
7	284	22.3		25.6	181	13.5 ¹⁰⁶	+25 56.4 ⁶⁶	40	29	18 57	29	31 63	24 35					
8	299	22.5		26.6	195	43.2 ¹⁰⁷	49.7 ⁶⁷	35	25	51	21	11 48 60	2 06 38					
9	314	22.7		27.5	210	13.0 ¹⁰⁸	42.8 ⁶⁹	30	22	52	46	14	12 02 58	1 51 40				
10	329	22.9		28.5	224	42.8 ¹⁰⁸	35.8 ⁷⁰	20	16	38	19 04	27 54	25 44					
11	344	23.0	+6	29.4	239	12.8 ¹¹⁰	+25 28.7 ⁷¹	10 N	18 10	18 32	18 56	12 48 51	1 03 46					
12	359	23.2	+6	30.4	253	42.8 ¹¹⁰	+25 21.5 ⁷²	0	18 06	18 27	18 51	13 08 47	0 42 49					
13	14	23.4		31.3	268	12.9 ¹¹¹	14.2 ⁷³	10 S	18 01	22	47	28 44	0 21 52					
14	29	23.6		32.2	282	43.1 ¹¹²	+25 06.8 ⁷⁴	20	17 56	18	44	13 49 40	** ** *					
15	44	23.8		33.2	297	13.4 ¹¹³	+24 59.2 ⁷⁶	30	51	15	43	14 13 37	** ** *					
16	59	23.9		34.1	311	43.8 ¹¹⁴	51.6 ⁷⁶	35	48	13	43	27 34	** ** *					
17	74	24.1	+6	35.1	326	14.3 ¹¹⁵	+24 43.8 ⁷⁸	40	17 45	18 12	18 43	14 43 32	** ** *					
18	89	24.3	+6	36.0	340	44.8 ¹¹⁵	+24 35.9 ⁷⁹	45	17 41	18 10	18 44	15 03 28	23 43 67					
19	104	24.5		37.0	355	15.4 ¹¹⁶	27.9 ⁸⁰	50	36	08	46	27 23	19 73					
20	119	24.6		37.9	9	46.2 ¹¹⁸	19.8 ⁸¹	52	34	08	47	39 20	23 08 75					
21	134	24.8		38.8	24	17.0 ¹¹⁸	11.7 ⁸¹	54	32	07	48	15 52 17	22 55 79					
22	149	25.0		39.8	38	47.9 ¹¹⁹	+24 03.4 ⁸³	56	29	06	49	16 08 13	40 83					
23	164	25.2		40.7	53	18.9 ¹²⁰	+23 55.0 ⁸⁴	58	26	05	51	26 8	23 87					
24	179	25.4	+6	41.7	67	49.9 ¹²⁰	+23 46.5 ⁸⁵	60 S	17 23	18 05	18 53	16 48 2	22 01 94					
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 11 ^h 01 ^m 6		Mag: -4.4 PMG: 9 ^h 11 ^m			Mag: +1.3 PMG: 16 ^h 42 ^m			Mag: -2.4 PMG: 2 ^h 04 ^m			Mag: +0.1 PMG: 19 ^h 28 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃		Dec		hG ♄		Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	194	08.6	222	19.3	-10	56.3	109	14.0	+25	02.8	328	55.3	-15	43.3	67	14.8	+19	53.3
1	209	11.0	237	19.2		55.6	124	14.9		02.8	343	58.0		43.2	82	17.2		53.3
2	224	13.5	252	19.0		54.9	139	15.8		02.9	359	00.7		43.1	97	19.7		53.3
3	239	16.0	267	18.9		54.2	154	16.7		02.9	14	03.4		43.1	112	22.1		53.3
4	254	18.4	282	18.8		53.5	169	17.6		02.9	29	06.0		43.0	127	24.6		53.3
5	269	20.9	297	18.7	-10	52.8	184	18.4	+25	03.0	44	08.7	-15	42.9	142	27.1	+19	53.3
6	284	23.4	312	18.6	-10	52.1	199	19.3	+25	03.0	59	11.4	-15	42.9	157	29.5	+19	53.3
7	299	25.8	327	18.4		51.4	214	20.2		03.0	74	14.1		42.8	172	32.0		53.3
8	314	28.3	342	18.3		50.7	229	21.1		03.1	89	16.8		42.7	187	34.4		53.3
9	329	30.8	357	18.2		50.0	244	22.0		03.1	104	19.5		42.7	202	36.9		53.3
10	344	33.2	12	18.1		49.3	259	22.9		03.2	119	22.2		42.6	217	39.4		53.3
11	359	35.7	27	17.9	-10	48.5	274	23.8	+25	03.2	134	24.9	-15	42.5	232	41.8	+19	53.3
12	14	38.1	42	17.8	-10	47.8	289	24.7	+25	03.2	149	27.6	-15	42.5	247	44.3	+19	53.3
13	29	40.6	57	17.7		47.1	304	25.6		03.3	164	30.3		42.4	262	46.7		53.3
14	44	43.1	72	17.6		46.4	319	26.5		03.3	179	33.0		42.3	277	49.2		53.3
15	59	45.5	87	17.4		45.7	334	27.4		03.3	194	35.7		42.3	292	51.7		53.3
16	74	48.0	102	17.3		45.0	349	28.2		03.4	209	38.4		42.2	307	54.1		53.3
17	89	50.5	117	17.2	-10	44.3	4	29.1	+25	03.4	224	41.1	-15	42.1	322	56.6	+19	53.3
18	104	52.9	132	17.1	-10	43.6	19	30.0	+25	03.5	239	43.8	-15	42.0	337	59.0	+19	53.3
19	119	55.4	147	16.9		42.8	34	30.9		03.5	254	46.5		42.0	353	01.5		53.3
20	134	57.9	162	16.8		42.1	49	31.8		03.5	269	49.2		41.9	8	04.0		53.3
21	150	00.3	177	16.7		41.4	64	32.7		03.6	284	51.9		41.8	23	06.4		53.3
22	165	02.8	192	16.6		40.7	79	33.6		03.6	299	54.6		41.8	38	08.9		53.3
23	180	05.3	207	16.4		40.0	94	34.5		03.6	314	57.3		41.7	53	11.3		53.3
24	195	07.7	222	16.3	-10	39.3	109	35.4	+25	03.7	330	00.0	-15	41.6	68	13.8	+19	53.3
Dif	—		-1		+7		+9		0		+27		+1		+25		0	

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'0 PMG: 12 ^h 02 ^m 2			Edad: 8 ^d 6 SD: 14'9 PMG: 20 ^h 06 ^m	PHE { 4 ^h : 54'5 12 ^h : 54'4 20 ^h : 54'3 R°: 44 ^m										
	hG ☉	Dec	Dif			Náutico		Civil	Hora		R°	Hora	R°		
h	°	'	°	°	'	°	'	h	m	h	m	h	m	h	m
0	179	25.4	+6 41.7	67	49.9	+23 46.5	86	60 N	3 28	4 24	5 08	10 51	92	4 47	1
1	194	25.5		82	21.1 ¹²²	37.9	87	58	39	31	12	11 09	86	29	6
2	209	25.7		96	52.3 ¹²²	29.2	87	56	49	37	16	24	81	13	11
3	224	25.9		111	23.7 ¹²⁴	20.4	88	54	3 57	42	19	36	78	4 00	14
4	239	26.1		125	55.1 ¹²⁴	11.5	89	52	4 04	47	22	47	75	3 48	18
5	254	26.2	+6 46.4	140	26.6 ¹²⁵	+23 02.5	90	50	4 11	4 51	5 24	11 57	72	3 38	20
6	269	26.4	+6 47.3	154	58.1 ¹²⁵	+22 53.4	91	45	4 24	5 00	5 30	12 18	66	3 16	25
7	284	26.6		169	29.8 ¹²⁷	44.2	92	40	35	07	35	34	63	2 59	28
8	299	26.8		184	01.6 ¹²⁸	34.9	93	35	43	13	39	12 48	60	44	31
9	314	26.9		198	33.4 ¹²⁸	25.6	93	30	4 50	18	43	13 00	57	31	34
10	329	27.1		213	05.3 ¹²⁹	16.1	95	20	5 01	27	49	21	52	2 09	38
11	344	27.3	+6 52.0	227	37.3 ¹³⁰	+22 06.5	96	10 N	5 08	5 33	5 54	13 39	48	1 49	43
12	359	27.5	+6 53.0	242	09.4 ¹³¹	+21 56.9	96	0	5 14	5 38	5 59	13 55	45	1 31	46
13	14	27.6		256	41.5 ¹³¹	47.2	97	10 S	18	43	6 04	14 12	40	1 13	49
14	29	27.8		271	13.8 ¹³³	37.3	99	20	21	46	09	29	37	0 53	53
15	44	28.0		285	46.1 ¹³³	27.4	99	30	22	50	14	14 50	32	30	58
16	59	28.2		300	18.5 ¹³⁴	17.4	100	35	23	52	17	15 01	30	17	60
17	74	28.3	+6 57.7	314	51.0 ¹³⁵	+21 07.4	100	40	5 22	5 54	6 21	15 15	26	0 01	64
18	89	28.5	+6 58.6	329	23.5 ¹³⁵	+20 57.2	102	45	5 21	5 55	6 25	15 31	22	** ** *	**
19	104	28.7	+6 59.5	343	56.2 ¹³⁷	47.0	102	50	20	57	30	50	17	** ** *	**
20	119	28.9	+7 00.5	358	28.9 ¹³⁷	36.6	104	52	19	58	32	15 59	15	** ** *	**
21	134	29.0		13	01.7 ¹³⁸	26.2	104	54	18	5 59	34	16 09	12	** ** *	**
22	149	29.2		27	34.5 ¹³⁸	15.7	105	56	17	6 00	37	21	8	** ** *	**
23	164	29.4		42	07.5 ¹⁴⁰	+20 05.2	105	58	15	00	40	34	5	23 50	85
24	179	29.6	+7 04.2	56	40.5 ¹⁴⁰	+19 54.5	107	60 S	5 13	6 01	6 43	16 50	**	23 35	90
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 10 ^h 57 ^m 7		Mag: -4.4 PMG: 9 ^h 11 ^m			Mag: +1.3 PMG: 16 ^h 41 ^m			Mag: -2.4 PMG: 2 ^h 00 ^m			Mag: +0.2 PMG: 19 ^h 24 ^m			
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'			
0	195	07.7	222	16.3	-10 39.3	109	35.4	+25 03.7	330	00.0	-15 41.6	68	13.8	+19 53.3	
1	210	10.2	237	16.2		124	36.2	03.7	345	02.7	41.6	83	16.2	53.3	
2	225	12.6	252	16.0		139	37.1	03.7	0	05.4	41.5	98	18.7	53.3	
3	240	15.1	267	15.9		154	38.0	03.8	15	08.1	41.4	113	21.2	53.3	
4	255	17.6	282	15.8		169	38.9	03.8	30	10.8	41.4	128	23.6	53.3	
5	270	20.0	297	15.7	-10 35.7	184	39.8	+25 03.8	45	13.5	-15 41.3	143	26.1	+19 53.3	
6	285	22.5	312	15.5	-10 34.9	199	40.7	+25 03.9	60	16.2	-15 41.2	158	28.5	+19 53.3	
7	300	25.0	327	15.4		214	41.6	03.9	75	18.9	41.1	173	31.0	53.3	
8	315	27.4	342	15.3		229	42.5	03.9	90	21.6	41.1	188	33.4	53.3	
9	330	29.9	357	15.2		244	43.3	04.0	105	24.3	41.0	203	35.9	53.3	
10	345	32.4	12	15.0		259	44.2	04.0	120	27.0	40.9	218	38.3	53.3	
11	0	34.8	27	14.9	-10 31.3	274	45.1	+25 04.0	135	29.7	-15 40.9	233	40.8	+19 53.3	
12	15	37.3	42	14.8	-10 30.6	289	46.0	+25 04.1	150	32.4	-15 40.8	248	43.3	+19 53.3	
13	30	39.7	57	14.6		304	46.9	04.1	165	35.1	40.7	263	45.7	53.3	
14	45	42.2	72	14.5		319	47.8	04.1	180	37.8	40.6	278	48.2	53.3	
15	60	44.7	87	14.4		334	48.7	04.2	195	40.5	40.6	293	50.6	53.3	
16	75	47.1	102	14.3		349	49.6	04.2	210	43.2	40.5	308	53.1	53.3	
17	90	49.6	117	14.1	-10 26.9	4	50.4	+25 04.2	225	45.9	-15 40.4	323	55.5	+19 53.3	
18	105	52.1	132	14.0	-10 26.2	19	51.3	+25 04.2	240	48.6	-15 40.4	338	58.0	+19 53.3	
19	120	54.5	147	13.9		34	52.2	04.3	255	51.3	40.3	354	00.4	53.3	
20	135	57.0	162	13.7		49	53.1	04.3	270	54.0	40.2	9	02.9	53.3	
21	150	59.5	177	13.6		64	54.0	04.3	285	56.7	40.2	24	05.3	53.3	
22	166	01.9	192	13.5		79	54.9	04.4	300	59.4	40.1	39	07.8	53.3	
23	181	04.4	207	13.4		94	55.8	04.4	316	02.1	40.0	54	10.2	53.3	
24	196	06.9	222	13.2	-10 21.8	109	56.6	+25 04.4	331	04.8	-15 39.9	69	12.7	+19 53.3	
Dif	—		-1		+7	+9		0	+27		+1	+25		0	

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16'0 PMG: 12 ^h 01 ^m 9			Edad: 9 ^d 6 PHE { SD: 14'8 PMG: 20 ^h 50 ^m 4 ^h : 54'2 12 ^h : 54'1 20 ^h : 54'1 R°: 41 ^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	29.6	+7 04.2	56	40.5	+19 54.5	60 N	19 00	19 45	20 42	12 23 87	4 48 **		
1	194	29.7		71	13.6 ¹⁴¹	43.8 ¹⁰⁷	58	18 56	38	30	35 82	35 4		
2	209	29.9		85	46.8 ¹⁴²	33.0 ¹⁰⁸	56	52	31	20	45 79	24 7		
3	224	30.1		100	20.0 ¹⁴²	22.1 ¹⁰⁹	54	49	26	11	12 54 75	14 11		
4	239	30.3		114	53.3 ¹⁴³	11.2 ¹⁰⁹	52	45	21	20 03	13 02 73	4 06 12		
5	254	30.4	+7 08.9	129	26.7 ¹⁴⁴	+19 00.1 ¹¹¹	50	18 43	19 16	19 57	13 09 70	3 58 15		
6	269	30.6	+7 09.8	144	00.1 ¹⁴⁴	+18 49.1 ¹¹⁰	45	18 36	19 06	19 43	13 24 66	3 41 20		
7	284	30.8		158	33.7 ¹⁴⁶	37.9 ¹¹²	40	31	18 59	32	37 61	27 24		
8	299	31.0		173	07.2 ¹⁴⁵	26.6 ¹¹³	35	27	52	23	48 57	15 28		
9	314	31.1		187	40.9 ¹⁴⁷	15.3 ¹¹³	30	23	47	16	13 57 55	3 05 30		
10	329	31.3		202	14.6 ¹⁴⁷	+18 03.9 ¹¹⁴	20	16	38	19 05	14 13 50	2 47 35		
11	344	31.5	+7 14.5	216	48.4 ¹⁴⁸	+17 52.5 ¹¹⁴	10 N	18 10	18 32	18 56	14 27 45	2 32 39		
12	359	31.7	+7 15.4	231	22.3 ¹⁴⁹	+17 41.0 ¹¹⁵	0	18 05	18 26	18 50	14 40 41	2 17 43		
13	14	31.8		245	56.2 ¹⁴⁹	29.4 ¹¹⁶	10 S	18 00	21	46	14 52 38	2 02 47		
14	29	32.0		260	30.2 ¹⁵⁰	17.7 ¹¹⁷	20	17 55	17	42	15 06 33	1 46 51		
15	44	32.2		275	04.3 ¹⁵¹	+17 06.0 ¹¹⁷	30	49	13	40	22 28	28 56		
16	59	32.3		289	38.4 ¹⁵¹	+16 54.2 ¹¹⁸	35	45	11	40	31 25	17 59		
17	74	32.5	+7 20.1	304	12.6 ¹⁵²	+16 42.4 ¹¹⁸	40	17 41	18 09	18 40	15 41 22	1 05 62		
18	89	32.7	+7 21.0	318	46.8 ¹⁵²	+16 30.5 ¹¹⁹	45	17 37	18 06	18 40	15 53 18	0 50 66		
19	104	32.9		333	21.1 ¹⁵³	18.5 ¹²⁰	50	32	04	41	16 07 14	32 71		
20	119	33.0		347	55.5 ¹⁵⁴	+16 06.5 ¹²⁰	52	29	03	42	14 11	23 74		
21	134	33.2		2	29.9 ¹⁵⁴	+15 54.4 ¹²¹	54	27	02	43	21 9	14 76		
22	149	33.4		17	04.4 ¹⁵⁵	42.3 ¹²¹	56	24	01	44	29 6	0 03 80		
23	164	33.6		31	38.9 ¹⁵⁵	30.0 ¹²³	58	21	18 00	45	39 2	** ** *	** ** *	
24	179	33.7	+7 26.6	46	13.5 ¹⁵⁶	+15 17.8 ¹²²	60 S	17 17	17 59	18 47	16 49 **	** ** *	** ** *	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 10 ^h 53 ^m 8		Mag: -4.4 PMG: 9 ^h 11 ^m		Mag: +1.3 PMG: 16 ^h 39 ^m		Mag: -2.4 PMG: 1 ^h 55 ^m		Mag: +0.2 PMG: 19 ^h 20 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	°	°	'	°	'	°	'
0	196	06.9	222	13.2	-10	21.8	109	56.6	+25	04.4
1	211	09.3	237	13.1		21.1	124	57.5		04.4
2	226	11.8	252	13.0		20.4	139	58.4		04.5
3	241	14.2	267	12.8		19.6	154	59.3		04.5
4	256	16.7	282	12.7		18.9	170	00.2		04.5
5	271	19.2	297	12.6	-10	18.1	185	01.1	+25	04.6
6	286	21.6	312	12.4	-10	17.4	200	02.0	+25	04.6
7	301	24.1	327	12.3		16.7	215	02.8		04.6
8	316	26.6	342	12.2		15.9	230	03.7		04.6
9	331	29.0	357	12.1		15.2	245	04.6		04.7
10	346	31.5	12	11.9		14.4	260	05.5		04.7
11	1	34.0	27	11.8	-10	13.7	275	06.4	+25	04.7
12	16	36.4	42	11.7	-10	13.0	290	07.3	+25	04.7
13	31	38.9	57	11.5		12.2	305	08.2		04.8
14	46	41.4	72	11.4		11.5	320	09.0		04.8
15	61	43.8	87	11.3		10.7	335	09.9		04.8
16	76	46.3	102	11.1		10.0	350	10.8		04.8
17	91	48.7	117	11.0	-10	09.2	5	11.7	+25	04.9
18	106	51.2	132	10.9	-10	08.5	20	12.6	+25	04.9
19	121	53.7	147	10.7		07.8	35	13.5		04.9
20	136	56.1	162	10.6		07.0	50	14.3		04.9
21	151	58.6	177	10.5		06.3	65	15.2		04.9
22	167	01.1	192	10.3		05.5	80	16.1		05.0
23	182	03.5	207	10.2		04.8	95	17.0		05.0
24	197	06.0	222	10.1	-10	04.0	110	17.9	+25	05.0
Dif	—		-1	+7		+9	0	+27	+1	

UT	SOL			LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna			Puesta de Luna		
	SD: 16 ^h 0			Edad: 10 ^d 6	PHE	$\left\{ \begin{array}{l} 4^h: 54'1'' \\ 12^h: 54'1'' \\ 20^h: 54'1'' \end{array} \right.$											
	PMG: 12 ^h 01 ^m 6																
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m	
0	179	33.7	+7 26.6	46	13.5	+15 17.8		60 N	3	20	4	17	5	02	13	50	
1	194	33.9		60	48.1 ¹⁵⁶	+15 05.5 ¹²³		58	32	25		06		13	57	80	
2	209	34.1		75	22.8 ¹⁵⁷	+14 53.1 ¹²⁴		56	43	31		10		14	04	76	
3	224	34.2		89	57.6 ¹⁵⁸	40.6 ¹²⁵		54	51	37		14		09	74	25	
4	239	34.4		104	32.4 ¹⁵⁸	28.2 ¹²⁴		52	3	59		42		15	71	18	
5	254	34.6	+7 31.3	119	07.3 ¹⁵⁹	+14 15.6 ¹²⁶		50	4	06		4	47	5	20	14	
6	269	34.8	+7 32.2	133	42.2 ¹⁵⁹	+14 03.0 ¹²⁶		45	4	20		4	56	5	27	14	
7	284	34.9		148	17.1 ¹⁵⁹	+13 50.4 ¹²⁶		40	31	5	04		32		38	60	
8	299	35.1		162	52.1 ¹⁶⁰	37.7 ¹²⁷		35	40	11		36		45	57	43	
9	314	35.3		177	27.2 ¹⁶¹	24.9 ¹²⁸		30	47	16		40		14	52	53	
10	329	35.4		192	02.3 ¹⁶¹	+13 12.1 ¹²⁸		20	4	59		25		47	15	03	
11	344	35.6	+7 36.9	206	37.5 ¹⁶²	+12 59.3 ¹²⁸		10 N	5	07		5	32	5	53	15	
12	359	35.8	+7 37.8	221	12.6 ¹⁶¹	+12 46.4 ¹²⁹		0	5	13		5	37	5	58	15	
13	14	36.0		235	47.9 ¹⁶³	33.4 ¹³⁰		10 S	18	42		6	04		30	36	
14	29	36.1		250	23.2 ¹⁶³	20.4 ¹³⁰		20	21	47		09		39	32	37	
15	44	36.3		264	58.5 ¹⁶³	+12 07.4 ¹³⁰		30	23	51		15		50	26	24	
16	59	36.5		279	33.9 ¹⁶⁴	+11 54.3 ¹³¹		35	24	53		19		15	56	23	
17	74	36.6	+7 42.4	294	09.3 ¹⁶⁴	+11 41.2 ¹³¹		40	5	24		5	56	6	23	16	
18	89	36.8	+7 43.4	308	44.7 ¹⁶⁴	+11 28.0 ¹³²		45	5	24		5	58	6	27	16	
19	104	37.0		323	20.2 ¹⁶⁵	14.8 ¹³²		50	23	6	00		33		21	11	
20	119	37.2		337	55.7 ¹⁶⁵	+11 01.6 ¹³²		52	22	01		35		25	10	37	
21	134	37.3		352	31.3 ¹⁶⁶	+10 48.3 ¹³³		54	21	02		38		30	7	30	
22	149	37.5		7	06.9 ¹⁶⁶	34.9 ¹³⁴		56	20	03		41		35	5	23	
23	164	37.7		21	42.5 ¹⁶⁶	21.6 ¹³³		58	19	05		44		41	2	15	
24	179	37.8	+7 48.9	36	18.2 ¹⁶⁷	+10 08.1 ¹³⁵		60 S	5	18		6	06	6	48	16	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 10 ^h 49 ^m 8		Mag: -4.4 PMG: 9 ^h 11 ^m		Mag: +1.3 PMG: 16 ^h 38 ^m		Mag: -2.5 PMG: 1 ^h 51 ^m		Mag: +0.2 PMG: 19 ^h 16 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	197	06.0	222	10.1	110	17.9	332	09.8	70	11.5
1	212	08.5	237	09.9	125	18.8	347	12.5	85	13.9
2	227	10.9	252	09.8	140	19.6	2	15.2	100	16.4
3	242	13.4	267	09.7	155	20.5	17	17.9	115	18.8
4	257	15.8	282	09.5	170	21.4	32	20.6	130	21.3
5	272	18.3	297	09.4	185	22.3	47	23.4	145	23.7
6	287	20.8	312	09.3	200	23.2	62	26.1	160	26.2
7	302	23.2	327	09.1	215	24.1	77	28.8	175	28.6
8	317	25.7	342	09.0	230	24.9	92	31.5	190	31.1
9	332	28.2	357	08.9	245	25.8	107	34.2	205	33.5
10	347	30.6	12	08.7	260	26.7	122	36.9	220	36.0
11	2	33.1	27	08.6	275	27.6	137	39.6	235	38.4
12	17	35.6	42	08.5	290	28.5	152	42.3	250	40.9
13	32	38.0	57	08.3	305	29.4	167	45.0	265	43.3
14	47	40.5	72	08.2	320	30.2	182	47.8	280	45.7
15	62	43.0	87	08.1	335	31.1	197	50.5	295	48.2
16	77	45.4	102	07.9	350	32.0	212	53.2	310	50.6
17	92	47.9	117	07.8	5	32.9	227	55.9	325	53.1
18	107	50.3	132	07.7	20	33.8	242	58.6	340	55.5
19	122	52.8	147	07.5	35	34.7	258	01.3	355	58.0
20	137	55.3	162	07.4	50	35.5	273	04.0	11	00.4
21	152	57.7	177	07.2	65	36.4	288	06.8	26	02.9
22	168	00.2	192	07.1	80	37.3	303	09.5	41	05.3
23	183	02.7	207	07.0	95	38.2	318	12.2	56	07.7
24	198	05.1	222	06.8	110	39.1	333	14.9	71	10.2
Dif	—		-1	+8	+9	0	+27		+1	+24

0

UT	SOL		LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16:0 PMG: 12 ^h 01 ^m 3		Edad: 11 ^d 6 PHE { SD: 14:7 PMG: 22 ^h 10 ^m 4 ^h : 54:1 12 ^h : 54:1 20 ^h : 54:2 R°: 39 ^m											
	hG ☉	Dec	hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	
0	179	37.8	+7	48.9	36	18.2	+10	08.1	60 N	19 05	19 50	20 49	15 13 83	4 46 **
1	194	38.0		49.9	50	53.9 ¹⁶⁷	+9	54.7 ¹³⁴	58	19 01		43 36	17 79	41 1
2	209	38.2		50.8	65	29.6 ¹⁶⁷		41.2 ¹³⁵	56	18 56		36 25	20 76	37 4
3	224	38.3		51.7	80	05.4 ¹⁶⁸		27.7 ¹³⁵	54	52		30 16	23 74	33 6
4	239	38.5		52.6	94	41.1 ¹⁶⁷		14.1 ¹³⁶	52	49		24 08	26 71	29 9
5	254	38.7	+7	53.6	109	17.0 ¹⁶⁹	+9	00.5 ¹³⁶	50	18 46	19 19	20 00	15 29 68	4 26 11
6	269	38.8	+7	54.5	123	52.8 ¹⁶⁸	+8	46.9 ¹³⁶	45	18 39	19 09	19 46	15 34 64	4 18 16
7	284	39.0		55.4	138	28.7 ¹⁶⁹		33.2 ¹³⁷	40	33	19 01	34 38	60	12 20
8	299	39.2		56.3	153	04.6 ¹⁶⁹		19.5 ¹³⁷	35	28	18 54	25 42	56	07 23
9	314	39.4		57.3	167	40.5 ¹⁶⁹	+8	05.7 ¹³⁸	30	24		48 17	45 54	4 02 26
10	329	39.5		58.2	182	16.4 ¹⁶⁹	+7	52.0 ¹³⁷	20	17	39	19 05	51 48	3 54 31
11	344	39.7	+7	59.1	196	52.4 ¹⁷⁰	+7	38.2 ¹³⁸	10 N	18 10	18 32	18 56	15 56 44	3 47 35
12	359	39.9	+8	00.0	211	28.4 ¹⁷⁰	+7	24.4 ¹³⁸	0	18 05	18 26	18 50	16 01 39	3 40 40
13	14	40.0	+8	00.9	226	04.4 ¹⁷⁰	+7	10.5 ¹³⁹	10 S	17 59	20	45 06	35	34 43
14	29	40.2		01.9	240	40.4 ¹⁷⁰	+6	56.6 ¹³⁹	20	53	15	41 11	30	26 48
15	44	40.4		02.8	255	16.5 ¹⁷¹		42.7 ¹³⁹	30	46	10	38 16	26	18 53
16	59	40.5		03.7	269	52.5 ¹⁷⁰		28.7 ¹⁴⁰	35	43		08 37	19 23	13 56
17	74	40.7	+8	04.6	284	28.6 ¹⁷¹	+6	14.8 ¹³⁹	40	17 38	18 06	18 37	16 23 19	3 07 60
18	89	40.9	+8	05.6	299	04.7 ¹⁷¹	+6	00.8 ¹⁴⁰	45	17 33	18 03	18 37	16 27 16	3 01 64
19	104	41.0		06.5	313	40.8 ¹⁷¹	+5	46.8 ¹⁴⁰	50	28	18 00	37 32	11	2 53 69
20	119	41.2		07.4	328	17.0 ¹⁷²		32.7 ¹⁴¹	52	25	17 59	38 35	9	49 71
21	134	41.4		08.3	342	53.1 ¹⁷¹		18.7 ¹⁴⁰	54	22	58	38 37	7	45 74
22	149	41.5		09.2	357	29.3 ¹⁷²	+5	04.6 ¹⁴¹	56	19	56	39 40	4	41 76
23	164	41.7		10.2	12	05.4 ¹⁷¹	+4	50.4 ¹⁴²	58	15	55	40 43	1	36 79
24	179	41.9	+8	11.1	26	41.6 ¹⁷²	+4	36.3 ¹⁴¹	60 S	17 11	17 53	18 41	16 47 **	2 30 83

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 10 ^h 45 ^m 9		Mag: -4.3 PMG: 9 ^h 12 ^m		Mag: +1.3 PMG: 16 ^h 36 ^m		Mag: -2.5 PMG: 1 ^h 47 ^m		Mag: +0.2 PMG: 19 ^h 12 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	198	05.1	222	06.8	-9	45.8	110	39.1	+25	05.5	333	14.9	-15	36.5	71	10.2	+19	53.1
1	213	07.6	237	06.7		45.1	125	39.9		05.5	348	17.6		36.4	86	12.6		53.1
2	228	10.1	252	06.6		44.3	140	40.8		05.5	3	20.3		36.3	101	15.1		53.1
3	243	12.5	267	06.4		43.5	155	41.7		05.5	18	23.0		36.2	116	17.5		53.1
4	258	15.0	282	06.3		42.8	170	42.6		05.5	33	25.8		36.2	131	20.0		53.1
5	273	17.5	297	06.2	-9	42.0	185	43.5	+25	05.5	48	28.5	-15	36.1	146	22.4	+19	53.1
6	288	19.9	312	06.0	-9	41.2	200	44.3	+25	05.5	63	31.2	-15	36.0	161	24.8	+19	53.1
7	303	22.4	327	05.9		40.5	215	45.2		05.6	78	33.9		35.9	176	27.3		53.1
8	318	24.8	342	05.8		39.7	230	46.1		05.6	93	36.6		35.9	191	29.7		53.1
9	333	27.3	357	05.6		38.9	245	47.0		05.6	108	39.3		35.8	206	32.2		53.1
10	348	29.8	12	05.5		38.1	260	47.9		05.6	123	42.1		35.7	221	34.6		53.1
11	3 32.2	27 05.3	-9	37.4	275	48.7	+25	05.6	138	44.8	-15	35.6	236	37.0	+19	53.1		
12	18 34.7	42 05.2	-9	36.6	290	49.6	+25	05.6	153	47.5	-15	35.6	251	39.5	+19	53.1		
13	33 37.2	57 05.1		35.8	305	50.5		05.6	168	50.2		35.5	266	41.9		53.1		
14	48 39.6	72 04.9		35.1	320	51.4		05.6	183	52.9		35.4	281	44.4		53.1		
15	63 42.1	87 04.8		34.3	335	52.3		05.7	198	55.6		35.3	296	46.8		53.1		
16	78 44.6	102 04.7		33.5	350	53.1		05.7	213	58.4		35.3	311	49.3		53.1		
17	93 47.0	117 04.5	-9	32.7	5 54.0	+25	05.7	229	01.1	-15	35.2	326	51.7	+19	53.0			
18	108 49.5	132 04.4	-9	32.0	20 54.9	+25	05.7	244	03.8	-15	35.1	341	54.1	+19	53.0			
19	123 51.9	147 04.2		31.2	35 55.8		05.7	259	06.5		35.0	356	56.6		53.0			
20	138 54.4	162 04.1		30.4	50 56.7		05.7	274	09.2		35.0	11 59.0			53.0			
21	153 56.9	177 04.0		29.6	65 57.5		05.7	289	12.0		34.9	27 01.4			53.0			
22	168 59.3	192 03.8		28.8	80 58.4		05.7	304	14.7		34.8	42 03.9			53.0			
23	184 01.8	207 03.7		28.1	95 59.3		05.7	319	17.4		34.7	57 06.3			53.0			
24	199 04.3	222 03.5	-9	27.3	111 00.2	+25	05.7	334	20.1	-15	34.7	72 08.8	+19	53.0				
Dif	—	-1	+8		+9	0		+27		+1		+24		0				

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16:0 PMG: 12 ^h 01 ^m 1			Edad: 12 ^d 6 PHE { SD: 14:8 PMG: 22 ^h 49 ^m										
				R ^e : 40 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico	Civil		Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	h	m	h	m	h	m	m
0	179	41.9	+8 11.1	26	41.6	+4 36.3		60 N	3 13	4 11	4 56	16 36	83	4 44 **
1	194	42.0		41	17.8 ¹⁷²		22.2 ¹⁴¹	58	26	19	5 01	36 80		42 2
2	209	42.2		55	54.0 ¹⁷²	+4	08.0 ¹⁴²	56	36	26	05	36 77		41 4
3	224	42.4		70	30.1 ¹⁷¹	+3	53.8 ¹⁴²	54	46	32	09	37 74		39
4	239	42.5		85	06.3 ¹⁷²		39.6 ¹⁴²	52	3 54	37	13	37 71		38 9
5	254	42.7	+8 15.7	99	42.5 ¹⁷²	+3	25.3 ¹⁴³	50	4 01	4 42	5 16	16 37	69	4 37 11
6	269	42.9	+8 16.6	114	18.8 ¹⁷³	+3	11.1 ¹⁴²	45	4 16	4 53	5 23	16 38	64	4 34 15
7	284	43.0		128	55.0 ¹⁷²	+2	56.8 ¹⁴³	40	28	5 01	29	38 60		32 19
8	299	43.2		143	31.2 ¹⁷²		42.5 ¹⁴³	35	37	08	34	38 57		30 22
9	314	43.4		158	07.4 ¹⁷²		28.2 ¹⁴³	30	45	14	38	39 53		28 25
10	329	43.5		172	43.6 ¹⁷²	+2	13.9 ¹⁴³	20	4 57	23	45	39 49		25 30
11	344	43.7	+8 21.2	187	19.8 ¹⁷²	+1	59.6 ¹⁴³	10 N	5 06	5 31	5 52	16 40	43	4 22 35
12	359	43.9	+8 22.1	201	56.0 ¹⁷²	+1	45.3 ¹⁴³	0	5 13	5 37	5 58	16 40	40	4 20 39
13	14	44.0		216	32.2 ¹⁷²		30.9 ¹⁴⁴	10 S	18	42	6 04	41 35		17 44
14	29	44.2		231	08.4 ¹⁷²		16.6 ¹⁴³	20	22	48	10	41 31		14 48
15	44	44.4		245	44.6 ¹⁷²	+1	02.2 ¹⁴⁴	30	25	52	17	42 25		11 53
16	59	44.5		260	20.8 ¹⁷²	+0	47.8 ¹⁴⁴	35	26	55	20	42 23		09 57
17	74	44.7	+8 26.7	274	56.9 ¹⁷¹	+0	33.4 ¹⁴⁴	40	5 26	5 58	6 25	16 42	20	4 07 60
18	89	44.9	+8 27.6	289	33.1 ¹⁷²	+0	19.0 ¹⁴⁴	45	5 26	6 00	6 30	16 43	15	4 05 63
19	104	45.0		304	09.3 ¹⁷²	+0	04.6 ¹⁴⁴	50	26	03	36	43 11		02 68
20	119	45.2		318	45.4 ¹⁷¹	-0	09.8 ¹⁴⁴	52	25	04	39	44 8		4 00 71
21	134	45.4		333	21.5 ¹⁷¹		24.2 ¹⁴⁴	54	25	06	42	44 6		3 59 73
22	149	45.5		347	57.6 ¹⁷¹		38.6 ¹⁴⁴	56	24	07	45	44 4		57 76
23	164	45.7		2	33.7 ¹⁷¹	-0	53.0 ¹⁴⁴	58	23	09	49	44 2		55 79
24	179	45.8	+8 33.1	17	09.8 ¹⁷¹	-1	07.5 ¹⁴⁵	60 S	5 22	6 10	6 53	16 45	**	3 53 83

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 10 ^h 42 ^m 0		Mag: -4.3 PMG: 9 ^h 12 ^m		Mag: +1.3 PMG: 16 ^h 35 ^m		Mag: -2.5 PMG: 1 ^h 42 ^m		Mag: +0.2 PMG: 19 ^h 08 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	199	04.3	222 03.5	-9 27.3	111 00.2	+25 05.7	334 20.1	-15 34.7	72 08.8	+19 53.0
1	214	06.7	237 03.4		126 01.1	05.8	349 22.8	34.6	87 11.2	53.0
2	229	09.2	252 03.3		141 01.9	05.8	4 25.6	34.5	102 13.6	53.0
3	244	11.7	267 03.1		156 02.8	05.8	19 28.3	34.4	117 16.1	53.0
4	259	14.1	282 03.0		171 03.7	05.8	34 31.0	34.4	132 18.5	53.0
5	274	16.6	297 02.8	-9 23.4	186 04.6	+25 05.8	49 33.7	-15 34.3	147 21.0	+19 53.0
6	289	19.1	312 02.7	-9 22.6	201 05.5	+25 05.8	64 36.4	-15 34.2	162 23.4	+19 53.0
7	304	21.5	327 02.6		216 06.3	05.8	79 39.2	34.1	177 25.8	53.0
8	319	24.0	342 02.4		231 07.2	05.8	94 41.9	34.1	192 28.3	53.0
9	334	26.4	357 02.3		246 08.1	05.8	109 44.6	34.0	207 30.7	53.0
10	349	28.9	12 02.2		261 09.0	05.8	124 47.3	33.9	222 33.1	53.0
11	4	31.4	27 02.0	-9 18.7	276 09.8	+25 05.8	139 50.0	-15 33.8	237 35.6	+19 52.9
12	19	33.8	42 01.9	-9 17.9	291 10.7	+25 05.8	154 52.8	-15 33.8	252 38.0	+19 52.9
13	34	36.3	57 01.7		306 11.6	05.8	169 55.5	33.7	267 40.4	52.9
14	49	38.8	72 01.6		321 12.5	05.8	184 58.2	33.6	282 42.9	52.9
15	64	41.2	87 01.5		336 13.4	05.9	200 00.9	33.5	297 45.3	52.9
16	79	43.7	102 01.3		351 14.2	05.9	215 03.7	33.5	312 47.8	52.9
17	94	46.2	117 01.2	-9 13.9	6 15.1	+25 05.9	230 06.4	-15 33.4	327 50.2	+19 52.9
18	109	48.6	132 01.0	-9 13.1	21 16.0	+25 05.9	245 09.1	-15 33.3	342 52.6	+19 52.9
19	124	51.1	147 00.9		36 16.9	05.9	260 11.8	33.2	357 55.1	52.9
20	139	53.5	162 00.7		51 17.7	05.9	275 14.5	33.2	12 57.5	52.9
21	154	56.0	177 00.6		66 18.6	05.9	290 17.3	33.1	27 59.9	52.9
22	169	58.5	192 00.5		81 19.5	05.9	305 20.0	33.0	43 02.4	52.9
23	185	00.9	207 00.3		96 20.4	05.9	320 22.7	32.9	58 04.8	52.9
24	200	03.4	222 00.2	-9 08.4	111 21.2	+25 05.9	335 25.4	-15 32.8	73 07.2	+19 52.9
Dif	—		-1	+8	+9	0	+27	+1	+24	0

UT	SOL		☉ LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16'0 PMG: 12 ^h 00 ^m 8		Edad: 13 ^d 6 PHE { 4 ^h : 54'5 12 ^h : 54'6 20 ^h : 54'7 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	179	45.8	+8 33.1	17	09.8	-1 07.5	60 N	19 10	19 56	20 56	17 59 86	4 42	**	
1	194	46.0		31	45.9 ¹⁷¹	21.9 ¹⁴⁴	58	05	47	42	56 82	44	1	
2	209	46.2		46	22.0 ¹⁷¹	36.3 ¹⁴⁴	56	19 00	40	30	53 79	45	4	
3	224	46.3		60	58.0 ¹⁷⁰	-1 50.8 ¹⁴⁵	54	18 56	34	20	51 76	46		
4	239	46.5		75	34.0 ¹⁷⁰	-2 05.2 ¹⁴⁴	52	52	28	12	48 74	47	9	
5	254	46.7	+8 37.7	90	10.0 ¹⁷⁰	-2 19.6 ¹⁴⁴	50	18 49	19 23	20 04	17 46 72	4 48	11	
6	269	46.8	+8 38.6	104	46.0 ¹⁷⁰	-2 34.0 ¹⁴⁴	45	18 41	19 12	19 49	17 42 66	4 49	16	
7	284	47.0		119	21.9 ¹⁶⁹	-2 48.5 ¹⁴⁵	40	35	19 03	36	38 62	51	20	
8	299	47.2		133	57.8 ¹⁶⁹	-3 02.9 ¹⁴⁴	35	30	18 56	27	35 59	52	23	
9	314	47.3		148	33.8 ¹⁷⁰	17.3 ¹⁴⁴	30	25	50	18	32 56	53	26	
10	329	47.5		163	09.6 ¹⁶⁸	31.7 ¹⁴⁴	20	17	40	19 06	28 50	55	32	
11	344	47.6	+8 43.2	177	45.5 ¹⁶⁹	-3 46.1 ¹⁴⁴	10 N	18 10	18 32	18 57	17 23 46	4 57	36	
12	359	47.8	+8 44.1	192	21.3 ¹⁶⁸	-4 00.6 ¹⁴⁵	0	18 04	18 25	18 49	17 20 41	4 59	40	
13	14	48.0		206	57.1 ¹⁶⁸	14.9 ¹⁴³	10 S	17 58	19	44	16 36	5 01	44	
14	29	48.1		221	32.8 ¹⁶⁷	29.3 ¹⁴⁴	20	51	14	39	12 32	02	49	
15	44	48.3		236	08.6 ¹⁶⁸	43.7 ¹⁴⁴	30	44	08	36	07 27	04	55	
16	59	48.4		250	44.3 ¹⁶⁷	-4 58.1 ¹⁴⁴	35	40	05	35	05 24	06	57	
17	74	48.6	+8 48.6	265	19.9 ¹⁶⁶	-5 12.4 ¹⁴³	40	17 35	18 03	18 34	17 02 20	5 07	61	
18	89	48.8	+8 49.5	279	55.6 ¹⁶⁷	-5 26.8 ¹⁴⁴	45	17 30	17 59	18 33	16 58 17	5 08	66	
19	104	48.9		294	31.2 ¹⁶⁶	41.1 ¹⁴³	50	23	56	33	54 12	10	70	
20	119	49.1		309	06.7 ¹⁶⁵	-5 55.4 ¹⁴³	52	21	55	34	52 10	11	73	
21	134	49.3		323	42.2 ¹⁶⁵	-6 09.8 ¹⁴⁴	54	17	53	34	50 8	12	75	
22	149	49.4		338	17.7 ¹⁶⁵	24.0 ¹⁴²	56	14	51	34	48 5	13	78	
23	164	49.6		352	53.2 ¹⁶⁵	38.3 ¹⁴³	58	10	50	35	46 2	14	81	
24	179	49.7	+8 55.0	7	28.6 ¹⁶⁴	-6 52.6 ¹⁴³	60 S	17 05	17 48	18 36	16 43 **	5 16	84	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 10 ^h 38 ^m 0		Mag: -4.3 PMG: 9 ^h 12 ^m		Mag: +1.3 PMG: 16 ^h 34 ^m		Mag: -2.5 PMG: 1 ^h 38 ^m		Mag: +0.2 PMG: 19 ^h 04 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	200	03.4	222	00.2	-9 08.4	111	21.2	+25 05.9	335	25.4	-15 32.8	73	07.2	+19 52.9
1	215	05.9	237	00.0	07.6	126	22.1	05.9	350	28.2	32.8	88	09.7	52.9
2	230	08.3	251	59.9	06.8	141	23.0	05.9	5	30.9	32.7	103	12.1	52.9
3	245	10.8	266	59.8	06.0	156	23.9	05.9	20	33.6	32.6	118	14.5	52.8
4	260	13.3	281	59.6	05.2	171	24.8	05.9	35	36.3	32.5	133	17.0	52.8
5	275	15.7	296	59.5	-9 04.4	186	25.6	+25 05.9	50	39.1	-15 32.5	148	19.4	+19 52.8
6	290	18.2	311	59.3	-9 03.6	201	26.5	+25 05.9	65	41.8	-15 32.4	163	21.8	+19 52.8
7	305	20.7	326	59.2	02.8	216	27.4	05.9	80	44.5	32.3	178	24.3	52.8
8	320	23.1	341	59.1	02.0	231	28.3	05.9	95	47.2	32.2	193	26.7	52.8
9	335	25.6	356	58.9	01.2	246	29.1	05.9	110	50.0	32.2	208	29.1	52.8
10	350	28.0	11	58.8	-9 00.4	261	30.0	05.9	125	52.7	32.1	223	31.6	52.8
11	5	30.5	26	58.6	-8 59.6	276	30.9	+25 05.9	140	55.4	-15 32.0	238	34.0	+19 52.8
12	20	33.0	41	58.5	-8 58.8	291	31.8	+25 05.9	155	58.2	-15 31.9	253	36.4	+19 52.8
13	35	35.4	56	58.3	58.0	306	32.6	05.9	171	00.9	31.8	268	38.8	52.8
14	50	37.9	71	58.2	57.2	321	33.5	05.9	186	03.6	31.8	283	41.3	52.8
15	65	40.4	86	58.1	56.4	336	34.4	05.9	201	06.3	31.7	298	43.7	52.8
16	80	42.8	101	57.9	55.6	351	35.3	05.9	216	09.1	31.6	313	46.1	52.8
17	95	45.3	116	57.8	-8 54.8	6	36.1	+25 05.9	231	11.8	-15 31.5	328	48.6	+19 52.8
18	110	47.8	131	57.6	-8 54.0	21	37.0	+25 05.9	246	14.5	-15 31.5	343	51.0	+19 52.7
19	125	50.2	146	57.5	53.2	36	37.9	05.9	261	17.2	31.4	358	53.4	52.7
20	140	52.7	161	57.3	52.4	51	38.8	05.9	276	20.0	31.3	13	55.9	52.7
21	155	55.1	176	57.2	51.6	66	39.6	05.9	291	22.7	31.2	28	58.3	52.7
22	170	57.6	191	57.1	50.8	81	40.5	05.9	306	25.4	31.1	44	00.7	52.7
23	186	00.1	206	56.9	50.0	96	41.4	05.9	321	28.2	31.1	59	03.2	52.7
24	201	02.5	221	56.8	-8 49.1	111	42.3	+25 05.9	336	30.9	-15 31.0	74	05.6	+19 52.7
Dif	—		-1	+8		+9	0		+27	+1		+24		

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna				
	SD: 16'0 PMG: 12 ^h 00 ^m 6			Edad: 14 ^d 6 PHE { SD: 14'9 PMG: **h **m R°: **m													
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°		
h	°	'	°	°	'	°	°	h	m	h	m	h	m	m	h	m	m
0	179	49.7	+8 55.0	7	28.6	-6 52.6	60 N	3	05	4	05	4 50	19 25	92	4 41	**	
1	194	49.9		22	03.9 ¹⁶³	-7 06.8 ¹⁴²	58	19	13	4	55	18 87		45	2		
2	209	50.1		36	39.2 ¹⁶³	21.0 ¹⁴²	56	30	20	5	00	12 83		49	5		
3	224	50.2		51	14.5 ¹⁶³	35.2 ¹⁴²	54	40	27	04	07	79		53	8		
4	239	50.4		65	49.7 ¹⁶²	-7 49.4 ¹⁴²	52	49	33	08		19 02	77	56	10		
5	254	50.5	+8 59.5	80	24.9 ¹⁶²	-8 03.6 ¹⁴²	50	3	56	4	38	5 12	18 58	74	4	59	13
6	269	50.7	+9 00.4	95	00.0 ¹⁶¹	-8 17.7 ¹⁴¹	45	4	12	4	49	5 19	18 48	69	5	05	18
7	284	50.9		109	35.1 ¹⁶¹	31.8 ¹⁴¹	40	24	4	58	26	40 65		11	21		
8	299	51.0		124	10.2 ¹⁶¹	-8 45.9 ¹⁴¹	35	34	5	05	31	34 60		15	25		
9	314	51.2		138	45.2 ¹⁶⁰	-9 00.0 ¹⁴¹	30	42	11	36	28	57		19	29		
10	329	51.3		153	20.1 ¹⁵⁹	-9 14.0 ¹⁴⁰	20	4	55	21	44	18 52		27	33		
11	344	51.5	+9 05.0	167	55.0 ¹⁵⁹	-9 28.1 ¹⁴¹	10 N	5	05	5	30	5 51	18 09	48	5	33	38
12	359	51.7	+9 05.9	182	29.8 ¹⁵⁸	-9 42.0 ¹³⁹	0	5	12	5	36	5 57	18 01	43	5	39	42
13	14	51.8		197	04.6 ¹⁵⁸	-9 56.0 ¹⁴⁰	10 S	18	42	6	04	17 52	40	45	46		
14	29	52.0		211	39.3 ¹⁵⁷	-10 09.9 ¹³⁹	20	22	48	10	44	35		51	51		
15	44	52.1		226	14.0 ¹⁵⁷	23.8 ¹³⁹	30	26	54	18	34	30		5	59	56	
16	59	52.3		240	48.6 ¹⁵⁶	37.7 ¹³⁹	35	27	56	22	29	26		6	03	59	
17	74	52.5	+9 10.4	255	23.1 ¹⁵⁵	-10 51.5 ¹³⁸	40	5	28	5	59	6 27	17 22	24	6	08	63
18	89	52.6	+9 11.3	269	57.6 ¹⁵⁵	-11 05.3 ¹³⁸	45	5	29	6	03	6 32	17 15	19	6	14	67
19	104	52.8		284	32.1 ¹⁵⁵	19.0 ¹³⁷	50	29	06	39	06	15		20	73		
20	119	52.9		299	06.4 ¹⁵³	32.8 ¹³⁸	52	29	08	42	17	02	12	24	74		
21	134	53.1		313	40.7 ¹⁵³	-11 46.5 ¹³⁷	54	28	09	45	16	58	9	27	78		
22	149	53.2		328	15.0 ¹⁵³	-12 00.1 ¹³⁶	56	28	11	49	53	6		31	81		
23	164	53.4		342	49.2 ¹⁵²	13.7 ¹³⁶	58	28	13	53	48	3		35	84		
24	179	53.6	+9 16.7	357	23.3 ¹⁵¹	-12 27.3 ¹³⁶	60 S	5	27	6	15	6 57	16 42	**	6	40	88
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO					
	PMG 10 ^h 34 ^m 1		Mag: -4.3 PMG: 9 ^h 12 ^m			Mag: +1.3 PMG: 16 ^h 32 ^m			Mag: -2.5 PMG: 1 ^h 34 ^m			Mag: +0.2 PMG: 19 ^h 01 ^m					
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec				
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°	°	'
0	201	02.5	221	56.8	-8 49.1	111	42.3	+25 05.9	336	30.9	-15 31.0	74	05.6	+19 52.7			
1	216	05.0	236	56.6	48.3	126	43.1	05.9	351	33.6	30.9	89	08.0	52.7			
2	231	07.5	251	56.5	47.5	141	44.0	05.9	6	36.3	30.8	104	10.4	52.7			
3	246	09.9	266	56.3	46.7	156	44.9	05.9	21	39.1	30.8	119	12.9	52.7			
4	261	12.4	281	56.2	45.9	171	45.8	05.8	36	41.8	30.7	134	15.3	52.7			
5	276	14.9	296	56.0	-8 45.1	186	46.6	+25 05.8	51	44.5	-15 30.6	149	17.7	+19 52.7			
6	291	17.3	311	55.9	-8 44.3	201	47.5	+25 05.8	66	47.3	-15 30.5	164	20.1	+19 52.7			
7	306	19.8	326	55.8	43.5	216	48.4	05.8	81	50.0	30.4	179	22.6	52.6			
8	321	22.3	341	55.6	42.7	231	49.3	05.8	96	52.7	30.4	194	25.0	52.6			
9	336	24.7	356	55.5	41.8	246	50.1	05.8	111	55.5	30.3	209	27.4	52.6			
10	351	27.2	11	55.3	41.0	261	51.0	05.8	126	58.2	30.2	224	29.9	52.6			
11	6	29.6	26	55.2	-8 40.2	276	51.9	+25 05.8	142	00.9	-15 30.1	239	32.3	+19 52.6			
12	21	32.1	41	55.0	-8 39.4	291	52.8	+25 05.8	157	03.7	-15 30.1	254	34.7	+19 52.6			
13	36	34.6	56	54.9	38.6	306	53.6	05.8	172	06.4	30.0	269	37.1	52.6			
14	51	37.0	71	54.8	37.8	321	54.5	05.8	187	09.1	29.9	284	39.6	52.6			
15	66	39.5	86	54.6	36.9	336	55.4	05.8	202	11.8	29.8	299	42.0	52.6			
16	81	42.0	101	54.5	36.1	351	56.3	05.8	217	14.6	29.7	314	44.4	52.6			
17	96	44.4	116	54.3	-8 35.3	6	57.1	+25 05.8	232	17.3	-15 29.7	329	46.8	+19 52.6			
18	111	46.9	131	54.2	-8 34.5	21	58.0	+25 05.8	247	20.0	-15 29.6	344	49.3	+19 52.6			
19	126	49.4	146	54.0	33.7	36	58.9	05.7	262	22.8	29.5	359	51.7	52.5			
20	141	51.8	161	53.9	32.8	51	59.8	05.7	277	25.5	29.4	14	54.1	52.5			
21	156	54.3	176	53.7	32.0	67	00.6	05.7	292	28.2	29.3	29	56.5	52.5			
22	171	56.7	191	53.6	31.2	82	01.5	05.7	307	31.0	29.3	44	59.0	52.5			
23	186	59.2	206	53.4	30.4	97	02.4	05.7	322	33.7	29.2	60	01.4	52.5			
24	202	01.7	221	53.3	-8 29.6	112	03.2	+25 05.7	337	36.4	-15 29.1	75	03.8	+19 52.5			
Dif	—		-1 +8			+9 0			+27 +1			+24 0					

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15°9 PMG: 12 ^h 00 ^m 3			Edad: 15 ^d 6 PHE { 4 ^h : 55/2 12 ^h : 55/3 20 ^h : 55/4 Rº: 44 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	Rº	Hora	Rº
h	°	'	°	°	'	°	°	h m	h m	h m	h m m	h m m	h m m		
0	179	53.6	+9 16.7	357	23.3	-12 27.3	60 N	19 15	20 01	21 03	20 57 97	4 39 0			
1	194	53.7		11	57.3 ¹⁵⁰	40.8 ¹³⁵	58	09	19 52	20 48	45 92	47 4	0		
2	209	53.9	18.5	26	31.3 ¹⁵⁰	-12 54.3 ¹³⁵	56	04		45	35 87	4 54 8			
3	224	54.0	19.4	41	05.2 ¹⁴⁹	-13 07.7 ¹³⁴	54	19 00	38	25	26 84	5 01 10			
4	239	54.2	20.3	55	39.1 ¹⁴⁹	21.1 ¹³⁴	52	18 56	32	16	19 79	06 14			
5	254	54.3	+9 21.2	70	12.8 ¹⁴⁷	-13 34.5 ¹³⁴	50	18 52	19 26	20 08	20 12 77	5 12 15			
6	269	54.5	+9 22.1	84	46.5 ¹⁴⁷	-13 47.8 ¹³³	45	18 44	19 15	19 52	19 57 71	5 23 21			
7	284	54.7	23.0	99	20.2 ¹⁴⁷	-14 01.0 ¹³²	40	37	19 05	39	45 67	32 25			
8	299	54.8	23.9	113	53.7 ¹⁴⁵	14.2 ¹³²	35	31	18 58	28	34 64	40 29			
9	314	55.0	24.8	128	27.2 ¹⁴⁵	27.4 ¹³²	30	26	51	20	25 61	5 48 31			
10	329	55.1	25.7	143	00.6 ¹⁴⁴	40.5 ¹³¹	20	18	40	19 07	19 10 55	6 00 36			
11	344	55.3	+9 26.6	157	34.0 ¹⁴⁴	-14 53.5 ¹³⁰	10 N	18 10	18 32	18 57	18 57 51	6 11 41			
12	359	55.4	+9 27.5	172	07.2 ¹⁴²	-15 06.5 ¹³⁰	0	18 04	18 25	18 49	18 44 47	6 21 45			
13	14	55.6	28.4	186	40.4 ¹⁴²	19.5 ¹³⁰	10 S	17 57	18	43	32 43	31 50			
14	29	55.7	29.3	201	13.5 ¹⁴¹	32.3 ¹²⁸	20	50	12	38	19 38	42 54			
15	44	55.9	30.2	215	46.5 ¹⁴⁰	45.2 ¹²⁹	30	42	06	34	18 04 34	6 55 59			
16	59	56.1	31.1	230	19.5 ¹⁴⁰	-15 57.9 ¹²⁷	35	37	03	32	17 55 31	7 02 62			
17	74	56.2	+9 32.0	244	52.3 ¹³⁸	-16 10.7 ¹²⁸	40	17 32	18 00	18 31	17 46 27	7 11 65			
18	89	56.4	+9 32.9	259	25.1 ¹³⁸	-16 23.3 ¹²⁶	45	17 26	17 56	18 30	17 34 24	7 21 70			
19	104	56.5	33.8	273	57.8 ¹³⁷	35.9 ¹²⁶	50	19	52	30	21 18	33 75			
20	119	56.7	34.7	288	30.4 ¹³⁶	-16 48.4 ¹²⁵	52	16	50	29	14 16	38 78			
21	134	56.8	35.6	303	03.0 ¹³⁶	-17 00.9 ¹²⁵	54	13	49	29	17 07 13	45 81			
22	149	57.0	36.5	317	35.4 ¹³⁴	13.3 ¹²⁴	56	09	47	30	16 59 10	52 84			
23	164	57.1	37.4	332	07.8 ¹³⁴	25.6 ¹²³	58	04	44	30	51 5	7 59 89			
24	179	57.3	+9 38.3	346	40.0 ¹³²	-17 37.9 ¹²³	60 S	17 00	17 42	18 30	16 41 0	8 08 94			

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO		
	PMG: 10 ^h 30 ^m 2		Mag: -4.3 PMG: 9 ^h 13 ^m		Mag: +1.3 PMG: 16 ^h 31 ^m		Mag: -2.5 PMG: 1 ^h 29 ^m		Mag: +0.2 PMG: 18 ^h 57 ^m		
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	
0	202	01.7	221	53.3	-8 29.6	112 03.2	+25 05.7	337 36.4	-15 29.1	75 03.8	+19 52.5
1	217	04.1	236	53.2	28.7	127 04.1	05.7	352 39.2	29.0	90 06.2	52.5
2	232	06.6	251	53.0	27.9	142 05.0	05.7	7 41.9	29.0	105 08.7	52.5
3	247	09.1	266	52.9	27.1	157 05.9	05.7	22 44.6	28.9	120 11.1	52.5
4	262	11.5	281	52.7	26.3	172 06.7	05.7	37 47.4	28.8	135 13.5	52.5
5	277	14.0	296	52.6	-8 25.4	187 07.6	+25 05.6	52 50.1	-15 28.7	150 15.9	+19 52.5
6	292	16.5	311	52.4	-8 24.6	202 08.5	+25 05.6	67 52.8	-15 28.6	165 18.4	+19 52.5
7	307	18.9	326	52.3	23.8	217 09.4	05.6	82 55.6	28.6	180 20.8	52.4
8	322	21.4	341	52.1	23.0	232 10.2	05.6	97 58.3	28.5	195 23.2	52.4
9	337	23.9	356	52.0	22.1	247 11.1	05.6	113 01.0	28.4	210 25.6	52.4
10	352	26.3	11	51.8	21.3	262 12.0	05.6	128 03.8	28.3	225 28.1	52.4
11	7	28.8	26	51.7	-8 20.5	277 12.8	+25 05.6	143 06.5	-15 28.2	240 30.5	+19 52.4
12	22	31.2	41	51.5	-8 19.6	292 13.7	+25 05.6	158 09.3	-15 28.2	255 32.9	+19 52.4
13	37	33.7	56	51.4	18.8	307 14.6	05.5	173 12.0	28.1	270 35.3	52.4
14	52	36.2	71	51.3	18.0	322 15.5	05.5	188 14.7	28.0	285 37.7	52.4
15	67	38.6	86	51.1	17.2	337 16.3	05.5	203 17.5	27.9	300 40.2	52.4
16	82	41.1	101	51.0	16.3	352 17.2	05.5	218 20.2	27.8	315 42.6	52.4
17	97	43.6	116	50.8	-8 15.5	7 18.1	+25 05.5	233 22.9	-15 27.8	330 45.0	+19 52.3
18	112	46.0	131	50.7	-8 14.7	22 18.9	+25 05.5	248 25.7	-15 27.7	345 47.4	+19 52.3
19	127	48.5	146	50.5	13.8	37 19.8	05.4	263 28.4	27.6	0 49.8	52.3
20	142	51.0	161	50.4	13.0	52 20.7	05.4	278 31.1	27.5	15 52.3	52.3
21	157	53.4	176	50.2	12.2	67 21.6	05.4	293 33.9	27.4	30 54.7	52.3
22	172	55.9	191	50.1	11.3	82 22.4	05.4	308 36.6	27.4	45 57.1	52.3
23	187	58.4	206	49.9	10.5	97 23.3	05.4	323 39.4	27.3	60 59.5	52.3
24	203	00.8	221	49.8	-8 09.6	112 24.2	+25 05.4	338 42.1	-15 27.2	76 01.9	+19 52.3
Dif	—		-1	+8		+9 0		+27 +1		+24 0	

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna			Puesta de Luna		
	SD: 15'9 PMG: 12 ^h 00 ^m 1			Edad: 16 ^d 6 PHE { SD: 15'1 PMG: 0 ^h 55 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico		Civil	Hora		Rº	Hora	Rº			
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	m	
0	179	57.3	+9	38.3	346	40.0	-17	37.9	60 N	2 57	3 58	4 44	22 34	104	4 39	0		
1	194	57.4		39.2	1	12.2 ¹³²	-17	50.0 ¹²¹	58	3 12	4 07	50	17 95		4 51	6		
2	209	57.6		40.1	15	44.3 ¹³¹	-18	02.2 ¹²²	56	24	15	4 55	22 02	89	5 02	11		
3	224	57.8		41.0	30	16.3 ¹³⁰		14.2 ¹²⁰	54	34	22	5 00	21 50	84	11	15		
4	239	57.9		41.9	44	48.3 ¹³⁰		26.2 ¹²⁰	52	44	28	04	38 81		20	18		
5	254	58.1	+9	42.8	59	20.1 ¹²⁸	-18	38.1 ¹¹⁹	50	3 52	4 34	5 08	21 29	78	5 27	21		
6	269	58.2	+9	43.7	73	51.8 ¹²⁷	-18	49.9 ¹¹⁸	45	4 08	4 45	5 16	21 08	73	5 44	26		
7	284	58.4		44.6	88	23.5 ¹²⁷	-19	01.6 ¹¹⁷	40	21	4 55	23	20 52	68	5 57	31		
8	299	58.5		45.4	102	55.0 ¹²⁵		13.3 ¹¹⁷	35	31	5 02	28	38 65		6 09	33		
9	314	58.7		46.3	117	26.5 ¹²⁵		24.9 ¹¹⁶	30	40	09	33	26 62		19	36		
10	329	58.8		47.2	131	57.9 ¹²⁴		36.4 ¹¹⁵	20	4 53	20	42	20 05	58	36	42		
11	344	59.0	+9	48.1	146	29.2 ¹²³	-19	47.8 ¹¹⁴	10 N	5 04	5 28	5 50	19 48	54	6 52	45		
12	359	59.1	+9	49.0	161	00.3 ¹²¹	-19	59.2 ¹¹⁴	0	5 11	5 36	5 57	19 31	51	7 06	49		
13	14	59.3		49.9	175	31.4 ¹²¹	-20	10.4 ¹¹²	10 S	18	42	6 04	19 15	47	21	52		
14	29	59.4		50.8	190	02.4 ¹²⁰		21.6 ¹¹²	20	23	49	11	18 57	44	36	57		
15	44	59.6		51.7	204	33.3 ¹¹⁹		32.7 ¹¹¹	30	27	55	19	38 39		7 54	61		
16	59	59.7		52.6	219	04.1 ¹¹⁸		43.7 ¹¹⁰	35	28	5 58	24	26 37		8 04	65		
17	74	59.9	+9	53.5	233	34.8 ¹¹⁷	-20	54.6 ¹⁰⁹	40	5 30	6 01	6 29	18 13	34	8 16	68		
18	90	00.0	+9	54.4	248	05.4 ¹¹⁶	-21	05.4 ¹⁰⁸	45	5 31	6 05	6 35	17 58	29	8 31	72		
19	105	00.2		55.3	262	36.0 ¹¹⁶		16.1 ¹⁰⁷	50	32	09	42	39 24		48	78		
20	120	00.3		56.2	277	06.4 ¹¹⁴		26.8 ¹⁰⁷	52	32	11	45	30 22		8 56	81		
21	135	00.5		57.0	291	36.7 ¹¹³		37.3 ¹⁰⁵	54	32	13	49	20 19		9 06	84		
22	150	00.6		57.9	306	06.9 ¹¹²		47.7 ¹⁰⁴	56	32	15	53	17 09	14	16	88		
23	165	00.8		58.8	320	37.0 ¹¹¹	-21	58.1 ¹⁰⁴	58	32	17	6 57	16 56	10	28	93		
24	180	00.9	+9	59.7	335	07.0 ¹¹⁰	-22	08.3 ¹⁰²	60 S	5 31	6 20	7 02	16 41	3	9 42	100		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 10 ^h 26 ^m 2		Mag: -4.3 PMG: 9 ^h 13 ^m		Mag: +1.3 PMG: 16 ^h 29 ^m		Mag: -2.5 PMG: 1 ^h 25 ^m		Mag: +0.2 PMG: 18 ^h 53 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	203	00.8	221	49.8	112	24.2	338	42.1	76	01.9
1	218	03.3	236	49.6	127	25.0	353	44.8	91	04.4
2	233	05.7	251	49.5	142	25.9	8	47.6	106	06.8
3	248	08.2	266	49.3	157	26.8	23	50.3	121	09.2
4	263	10.7	281	49.2	172	27.7	38	53.0	136	11.6
5	278	13.1	296	49.0	187	28.5	53	55.8	151	14.0
6	293	15.6	311	48.9	202	29.4	68	58.5	166	16.5
7	308	18.1	326	48.7	217	30.3	84	01.3	181	18.9
8	323	20.5	341	48.6	232	31.1	99	04.0	196	21.3
9	338	23.0	356	48.4	247	32.0	114	06.7	211	23.7
10	353	25.5	11	48.3	262	32.9	129	09.5	226	26.1
11	8	27.9	26	48.1	277	33.8	144	12.2	241	28.6
12	23	30.4	41	48.0	292	34.6	159	15.0	256	31.0
13	38	32.8	56	47.9	307	35.5	174	17.7	271	33.4
14	53	35.3	71	47.7	322	36.4	189	20.4	286	35.8
15	68	37.8	86	47.6	337	37.2	204	23.2	301	38.2
16	83	40.2	101	47.4	352	38.1	219	25.9	316	40.6
17	98	42.7	116	47.3	7	39.0	234	28.7	331	43.1
18	113	45.2	131	47.1	22	39.8	249	31.4	346	45.5
19	128	47.6	146	47.0	37	40.7	264	34.1	1	47.9
20	143	50.1	161	46.8	52	41.6	279	36.9	16	50.3
21	158	52.6	176	46.7	67	42.5	294	39.6	31	52.7
22	173	55.0	191	46.5	82	43.3	309	42.4	46	55.1
23	188	57.5	206	46.4	97	44.2	324	45.1	61	57.6
24	204	00.0	221	46.2	112	45.1	339	47.8	77	00.0
Dif	—		-1	+8	+9	0	+27	+1	+24	0

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15°9			Edad: 17 ^d 6	PHE {	4 ^h : 56'0 12 ^h : 56'2 20 ^h : 56'4								
	PMG: 11 ^h 59 ^m 8													
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m
0	180	00.9	+9 59.7	335	07.0	-22 08.3	101	60 N	19 20	20 07	21 10	** ** *	4 39	4
1	195	01.1	+10 00.6	349	37.0	18.4	101	58	14	19 57	20 54	23 52	90	4 57 13
2	210	01.2	01.5	4	06.8	28.5	101	56	08	49	41	31 84		5 13 18
3	225	01.4	02.4	18	36.5	38.4	99	54	19 04	42	30	23 14	80	26 23
4	240	01.5	03.3	33	06.1	48.2	98	52	18 59	35	20	22 59	77	38 26
5	255	01.7	+10 04.2	47	35.6	-22 58.0	98	50	18 55	19 29	20 12	22 47	74	5 48 29
6	270	01.8	+10 05.0	62	05.1	-23 07.6	96	45	18 46	19 17	19 55	22 21	70	6 10 34
7	285	02.0	05.9	76	34.4	17.1	95	40	39	19 07	41	22 00	67	28 37
8	300	02.1	06.8	91	03.6	26.5	94	35	33	18 59	30	21 43	65	42 41
9	315	02.3	07.7	105	32.7	35.8	93	30	28	52	21	28 63		6 55 43
10	330	02.4	08.6	120	01.7	44.9	91	20	18	41	19 07	21 03	60	7 18 47
11	345	02.6	+10 09.5	134	30.6	-23 54.0	91	10 N	18 11	18 32	18 57	20 42	58	7 37 50
12	0	02.7	+10 10.4	148	59.5	-24 02.9	89	0	18 03	18 24	18 49	20 22	55	7 55 53
13	15	02.9	11.2	163	28.2	11.7	88	10 S	17 56	17	42	20 02	53	8 13 56
14	30	03.0	12.1	177	56.8	20.4	87	20	48	11	36	19 41	51	33 59
15	45	03.2	13.0	192	25.3	29.0	86	30	40	04	32	17 47		8 55 63
16	60	03.3	13.9	206	53.7	37.5	85	35	35	18 00	30	19 03	45	9 09 65
17	75	03.5	+10 14.8	221	22.1	-24 45.8	83	40	17 29	17 57	18 28	18 47	42	9 24 68
18	90	03.6	+10 15.7	235	50.3	-24 54.0	82	45	17 23	17 53	18 27	18 27	40	9 43 71
19	105	03.8	16.5	250	18.4	-25 02.1	81	50	15	48	26	18 03	35	10 06 76
20	120	03.9	17.4	264	46.4	10.1	80	52	12	46	25	17 52	32	17 79
21	135	04.1	18.3	279	14.4	17.9	78	54	08	44	25	39 29		30 82
22	150	04.2	19.2	293	42.2	25.6	77	56	17 04	42	25	23 25		10 44 87
23	165	04.4	20.1	308	09.9	33.2	76	58	16 59	39	25	17 06	19	11 01 93
24	180	04.5	+10 21.0	322	37.6	-25 40.7	75	60 S	16 54	17 37	18 25	16 44	9	11 22 103

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 10 ^h 22 ^m 3		Mag: -4.3 PMG: 9 ^h 13 ^m		Mag: +1.4 PMG: 16 ^h 28 ^m		Mag: -2.5 PMG: 1 ^h 21 ^m		Mag: +0.2 PMG: 18 ^h 49 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	204	00.0	221	46.2	-7 49.4	112	45.1	+25 04.9	339	47.8	-15 25.3	77	00.0	+19 52.0
1	219	02.4	236	46.1	48.6	127	45.9	04.9	354	50.6	25.2	92	02.4	52.0
2	234	04.9	251	45.9	47.7	142	46.8	04.8	9	53.3	25.1	107	04.8	52.0
3	249	07.3	266	45.8	46.9	157	47.7	04.8	24	56.1	25.0	122	07.2	52.0
4	264	09.8	281	45.6	46.0	172	48.5	04.8	39	58.8	24.9	137	09.6	52.0
5	279	12.3	296	45.5	-7 45.2	187	49.4	+25 04.8	55	01.6	-15 24.9	152	12.0	+19 52.0
6	294	14.7	311	45.3	-7 44.3	202	50.3	+25 04.7	70	04.3	-15 24.8	167	14.5	+19 52.0
7	309	17.2	326	45.2	43.4	217	51.1	04.7	85	07.0	24.7	182	16.9	52.0
8	324	19.7	341	45.0	42.6	232	52.0	04.7	100	09.8	24.6	197	19.3	51.9
9	339	22.1	356	44.9	41.7	247	52.9	04.7	115	12.5	24.5	212	21.7	51.9
10	354	24.6	11	44.7	40.9	262	53.7	04.6	130	15.3	24.4	227	24.1	51.9
11	9	27.1	26	44.6	-7 40.0	277	54.6	+25 04.6	145	18.0	-15 24.4	242	26.5	+19 51.9
12	24	29.5	41	44.4	-7 39.2	292	55.5	+25 04.6	160	20.8	-15 24.3	257	28.9	+19 51.9
13	39	32.0	56	44.3	38.3	307	56.4	04.6	175	23.5	24.2	272	31.3	51.9
14	54	34.5	71	44.1	37.5	322	57.2	04.5	190	26.2	24.1	287	33.8	51.9
15	69	36.9	86	44.0	36.6	337	58.1	04.5	205	29.0	24.0	302	36.2	51.9
16	84	39.4	101	43.8	35.7	352	59.0	04.5	220	31.7	24.0	317	38.6	51.9
17	99	41.8	116	43.7	-7 34.9	7	59.8	+25 04.4	235	34.5	-15 23.9	332	41.0	+19 51.8
18	114	44.3	131	43.5	-7 34.0	23	00.7	+25 04.4	250	37.2	-15 23.8	347	43.4	+19 51.8
19	129	46.8	146	43.4	33.2	38	01.6	04.4	265	40.0	23.7	2	45.8	51.8
20	144	49.2	161	43.2	32.3	53	02.4	04.4	280	42.7	23.6	17	48.2	51.8
21	159	51.7	176	43.1	31.4	68	03.3	04.3	295	45.5	23.5	32	50.6	51.8
22	174	54.2	191	42.9	30.6	83	04.2	04.3	310	48.2	23.5	47	53.1	51.8
23	189	56.6	206	42.8	29.7	98	05.0	04.3	325	50.9	23.4	62	55.5	51.8
24	204	59.1	221	42.6	-7 28.9	113	05.9	+25 04.2	340	53.7	-15 23.3	77	57.9	+19 51.8
Dif	—		-2	+9		+9	0		+27		+1	+24		0

UT	SOL				LUNA							Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna			Puesta de Luna		
	SD: 15'9 PMG: 11 ^h 59 ^m 6				Edad: 18 ^d 6 PHE { 4 ^h : 56'5 SD: 15'4 12 ^h : 56'7 PMG: 2 ^h 35 ^m R°: 56 ^m 20 ^h : 56'9																
	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	+10	21.0	322	37.6			-25	40.7	73	60 N	2 49	3 51	4 38		0 18	102	4 43	15	
1	195	04.6		21.8	337	05.1	85			48.0	71	58	3 04	4 01	44		** ** *		5 10	27	
2	210	04.8		22.7	351	32.6	85		-25	55.1	71	56	17	09	50		** ** *		31	33	
3	225	04.9		23.6	5	59.9	83		-26	02.2	69	54	29	17	4 55		** ** *		5 49	36	
4	240	05.1		24.5	20	27.2	83			09.1	67	52	38	23	5 00		** ** *		6 04	39	
5	255	05.2	+10	25.4	34	54.4	82		-26	15.8	67	50	3 47	4 29	5 04		** ** *		6 17	41	
6	270	05.4	+10	26.3	49	21.4	80		-26	22.5	67	45	4 04	4 42	5 12		23 31	63	6 44	45	
7	285	05.5		27.1	63	48.4	80			28.9	64	40	18	4 51	20		23 07	63	7 05	48	
8	300	05.7		28.0	78	15.3	79			35.3	64	35	29	5 00	26		22 48	62	23	49	
9	315	05.8		28.9	92	42.1	78			41.5	62	30	38	07	31		31 61		7 38	51	
10	330	06.0		29.8	107	08.8	77			47.5	60	20	4 52	18	41		22 03	61	8 05	53	
11	345	06.1	+10	30.6	121	35.5	77		-26	53.4	59	10 N	5 02	5 27	5 49		21 40	59	8 27	55	
12	0	06.2	+10	31.5	136	02.0	75		-26	59.2	58	0	5 11	5 35	5 56		21 17	59	8 48	57	
13	15	06.4		32.4	150	28.5	75		-27	04.8	56	10 S	18	42	6 04		20 55	58	9 09	59	
14	30	06.5		33.3	164	54.8	73			10.3	55	20	23	49	11		32 56		32	60	
15	45	06.7		34.2	179	21.1	73			15.6	53	30	28	56	20		20 04	55	9 58	63	
16	60	06.8		35.0	193	47.3	72			20.7	51	35	30	5 59	25		19 48	54	10 14	64	
17	75	07.0	+10	35.9	208	13.5	72		-27	25.7	50	40	5 32	6 03	6 31		19 29	53	10 32	66	
18	90	07.1	+10	36.8	222	39.5	70		-27	30.6	49	45	5 33	6 07	6 37		19 07	51	10 54	68	
19	105	07.2		37.7	237	05.5	70			35.3	47	50	35	12	45		18 38	49	11 22	70	
20	120	07.4		38.5	251	31.4	69			39.8	45	52	35	14	49		24 48		36	72	
21	135	07.5		39.4	265	57.2	68			44.2	44	54	35	16	53		18 08	46	11 52	74	
22	150	07.7		40.3	280	22.9	67			48.4	42	56	36	19	6 57		17 48	44	12 11	77	
23	165	07.8		41.2	294	48.6	67			52.5	41	58	36	21	7 02		17 25	39	12 34	82	
24	180	08.0	+10	42.0	309	14.2	66		-27	56.4	39	60 S	5 36	6 24	7 07		16 53	30	13 05	91	
UT	ARIES				VENUS				MARTE				JÚPITER				SATURNO				
	PMG 10 ^h 18 ^m 4				Mag: -4.3 PMG: 9 ^h 13 ^m				Mag: +1.4 PMG: 16 ^h 27 ^m				Mag: -2.5 PMG: 1 ^h 16 ^m				Mag: +0.2 PMG: 18 ^h 45 ^m				
	hG ♈		Dec		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	204	59.1			221	42.6	-7	28.9	113	05.9	+25	04.2	340	53.7	-15	23.3	77	57.9	+19	51.8	
1	220	01.6			236	42.5		28.0	128	06.8		04.2	355	56.4		23.2	93	00.3		51.7	
2	235	04.0			251	42.3		27.1	143	07.6		04.2	10	59.2		23.1	108	02.7		51.7	
3	250	06.5			266	42.2		26.3	158	08.5		04.2	26	01.9		23.1	123	05.1		51.7	
4	265	09.0			281	42.0		25.4	173	09.4		04.1	41	04.7		23.0	138	07.5		51.7	
5	280	11.4			296	41.8	-7	24.5	188	10.2	+25	04.1	56	07.4	-15	22.9	153	09.9	+19	51.7	
6	295	13.9			311	41.7	-7	23.7	203	11.1	+25	04.1	71	10.2	-15	22.8	168	12.3	+19	51.7	
7	310	16.3			326	41.5		22.8	218	12.0		04.0	86	12.9		22.7	183	14.7		51.7	
8	325	18.8			341	41.4		21.9	233	12.8		04.0	101	15.7		22.6	198	17.2		51.7	
9	340	21.3			356	41.2		21.1	248	13.7		04.0	116	18.4		22.6	213	19.6		51.6	
10	355	23.7			11	41.1		20.2	263	14.6		03.9	131	21.2		22.5	228	22.0		51.6	
11	10	26.2			26	40.9	-7	19.3	278	15.4	+25	03.9	146	23.9	-15	22.4	243	24.4	+19	51.6	
12	25	28.7			41	40.8	-7	18.5	293	16.3	+25	03.9	161	26.7	-15	22.3	258	26.8	+19	51.6	
13	40	31.1			56	40.6		17.6	308	17.2		03.8	176	29.4		22.2	273	29.2		51.6	
14	55	33.6			71	40.5		16.7	323	18.0		03.8	191	32.1		22.1	288	31.6		51.6	
15	70	36.1			86	40.3		15.9	338	18.9		03.8	206	34.9		22.1	303	34.0		51.6	
16	85	38.5			101	40.2		15.0	353	19.8		03.7	221	37.6		22.0	318	36.4		51.6	
17	100	41.0			116	40.0	-7	14.1	8	20.6	+25	03.7	236	40.4	-15	21.9	333	38.8	+19	51.5	
18	115	43.4			131	39.9	-7	13.3	23	21.5	+25	03.7	251	43.1	-15	21.8	348	41.2	+19	51.5	
19	130	45.9			146	39.7		12.4	38	22.4		03.6	266	45.9		21.7	3	43.6		51.5	
20	145	48.4			161	39.6		11.5	53	23.2		03.6	281	48.6		21.6	18	46.0		51.5	
21	160	50.8			176	39.4		10.6	68	24.1		03.6	296	51.4		21.6	33	48.5		51.5	
22	175	53.3			191	39.3		09.8	83	25.0		03.5	311	54.1		21.5	48	50.9		51.5	
23	190	55.8			206	39.1		08.9	98	25.8		03.5	326	56.9		21.4	63	53.3		51.5	
24	205	58.2			221	39.0	-7	08.0	113	26.7	+25	03.5	341	59.6	-15	21.3	78	55.7	+19	51.5	
Dif	—				-2 +9				+9 0				+27 +1				+24 0				

UT	SOL			☾ LUNA					Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna							
	SD: 15°9 PMG: 11 ^h 59 ^m 4			Edad: 19 ^d 6 PHE { 4 ^h : 57 ^m 1 12 ^h : 57 ^m 3 20 ^h : 57 ^m 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					
0	180	08.0	+10	42.0	309	14.2	-27	56.4	60 N	19	25	20	13	21	17	2	00	75	4	58	48		
1	195	08.1		42.9	323	39.7	65	-28	00.2	58	18	20	02	21	01	1	22	69	5	37	53		
2	210	08.2		43.8	338	05.2	65		03.7	56	13	19	54	20	47	0	55	67	6	04	55		
3	225	08.4		44.7	352	30.6	64		07.2	54	07		46		35	34	66		25	56			
4	240	08.5		45.5	6	55.9	63		10.4	52	19	03	39	25	16	65	43	57					
5	255	08.7	+10	46.4	21	21.2	63	-28	13.5	50	18	58	19	33	20	16	0	01	65	6	58	57	
6	270	08.8	+10	47.3	35	46.4	62	-28	16.4	45	18	49	19	20	19	58	**	**	**	7	29	58	
7	285	08.9		48.2	50	11.5	61		19.2	40	41		10	44		**	**	**	7	53	58		
8	300	09.1		49.0	64	36.6	61		21.8	35	35	19	01	32		23	50	55	8	12	59		
9	315	09.2		49.9	79	01.6	60		24.2	30	29	18	54	23		32	57		29	59			
10	330	09.4		50.8	93	26.6	60		26.4	20	19		42	19	08	23	04	57	8	58	59		
11	345	09.5	+10	51.7	107	51.5	59	-28	28.5	10 N	18	11	18	32	18	57	22	39	58	9	22	59	
12	0	09.6	+10	52.5	122	16.4	59	-28	30.4	19	18	03	18	24	18	48	22	16	59	9	45	59	
13	15	09.8		53.4	136	41.2	58		32.2	10 S	17	55		16	41	21	53	60	10	08	59		
14	30	09.9		54.3	151	06.0	58		33.7	20	47		09	35	21	28	61	10	32	59			
15	45	10.1		55.1	165	30.7	57		35.1	30	38	18	02	30		20	59	62	11	01	59		
16	60	10.2		56.0	179	55.4	57		36.3	35	32	17	58	28		42	63		18	59			
17	75	10.3	+10	56.9	194	20.1	57	-28	37.4	40	17	26	17	54	18	25	20	22	64	11	38	58	
18	90	10.5	+10	57.7	208	44.7	56	-28	38.3	45	17	20	17	49	18	24	19	58	64	12	02	58	
19	105	10.6		58.6	223	09.2	55		39.0	7	50	11		44	22		27	66		32	58		
20	120	10.8	+10	59.5	237	33.8	56		39.5	5	52	08		42	21		19	12	66	12	48	57	
21	135	10.9	+11	00.4	251	58.3	55		39.8	3	54	17	04		40	21		18	54	67	13	06	56
22	150	11.0		01.2	266	22.7	54		40.0	2	56	16	59		37	20		32	68		28	55	
23	165	11.2		02.1	280	47.2	55		40.0	0	58		54		34	20		18	04	70	13	56	54
24	180	11.3	+11	03.0	295	11.6	54	-28	39.8	2	60 S	16	48	17	31	18	19	17	23	74	14	36	51

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 10 ^h 14 ^m 4		Mag: -4.3 PMG: 9 ^h 13 ^m		Mag: +1.4 PMG: 16 ^h 25 ^m		Mag: -2.5 PMG: 1 ^h 12 ^m		Mag: +0.2 PMG: 18 ^h 41 ^m									
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	205	58.2	221	39.0	-7	08.0	113	26.7	+25	03.5	341	59.6	-15	21.3	78	55.7	+19	51.5
1	221	00.7	236	38.8		07.1	128	27.6		03.4	357	02.4		21.2	93	58.1		51.4
2	236	03.2	251	38.7		06.3	143	28.4		03.4	12	05.1		21.1	109	00.5		51.4
3	251	05.6	266	38.5		05.4	158	29.3		03.3	27	07.9		21.1	124	02.9		51.4
4	266	08.1	281	38.3		04.5	173	30.2		03.3	42	10.6		21.0	139	05.3		51.4
5	281	10.6	296	38.2	-7	03.6	188	31.0	+25	03.3	57	13.4	-15	20.9	154	07.7	+19	51.4
6	296	13.0	311	38.0	-7	02.7	203	31.9	+25	03.2	72	16.1	-15	20.8	169	10.1	+19	51.4
7	311	15.5	326	37.9		01.9	218	32.8		03.2	87	18.9		20.7	184	12.5		51.4
8	326	17.9	341	37.7		01.0	233	33.6		03.2	102	21.6		20.6	199	14.9		51.4
9	341	20.4	356	37.6	-7	00.1	248	34.5		03.1	117	24.4		20.6	214	17.3		51.3
10	356	22.9	11	37.4	-6	59.2	263	35.4		03.1	132	27.1		20.5	229	19.7		51.3
11	11	25.3	26	37.3	-6	58.4	278	36.2	+25	03.0	147	29.9	-15	20.4	244	22.1	+19	51.3
12	26	27.8	41	37.1	-6	57.5	293	37.1	+25	03.0	162	32.6	-15	20.3	259	24.5	+19	51.3
13	41	30.3	56	37.0		56.6	308	38.0		03.0	177	35.4		20.2	274	26.9		51.3
14	56	32.7	71	36.8		55.7	323	38.8		02.9	192	38.1		20.1	289	29.3		51.3
15	71	35.2	86	36.7		54.8	338	39.7		02.9	207	40.9		20.1	304	31.7		51.3
16	86	37.7	101	36.5		53.9	353	40.6		02.8	222	43.6		20.0	319	34.1		51.2
17	101	40.1	116	36.3	-6	53.1	8	41.4	+25	02.8	237	46.4	-15	19.9	334	36.5	+19	51.2
18	116	42.6	131	36.2	-6	52.2	23	42.3	+25	02.8	252	49.1	-15	19.8	349	39.0	+19	51.2
19	131	45.1	146	36.0		51.3	38	43.2		02.7	267	51.9		19.7	4	41.4		51.2
20	146	47.5	161	35.9		50.4	53	44.0		02.7	282	54.6		19.6	19	43.8		51.2
21	161	50.0	176	35.7		49.5	68	44.9		02.6	297	57.4		19.6	34	46.2		51.2
22	176	52.4	191	35.6		48.6	83	45.8		02.6	313	00.2		19.5	49	48.6		51.2
23	191	54.9	206	35.4		47.7	98	46.6		02.5	328	02.9		19.4	64	51.0		51.1
24	206	57.4	221	35.3	-6	46.9	113	47.5	+25	02.5	343	05.7	-15	19.3	79	53.4	+19	51.1
Dif	—		-2 +9		+9		+9		0		+28		+1		+24			

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 15'9 PMG: 11 ^h 59 ^m 1			Edad: 20 ^d 6 SD: 15'7 PMG: 4 ^h 30 ^m	PHE { 4 ^h : 57'6 12 ^h : 57'8 20 ^h : 58'0 R°: 59 ^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	11.3	+11	03.0	295	11.6	-28	39.8	60 N	2 40	3 45	4 32	3 15	28	5 46	96		
1	195	11.5		03.8	309	36.0	54	39.4	4	58	2 57	3 55	39	2 31	40	6 30	85	
2	210	11.6		04.7	324	00.3	53	38.9	5	56	3 11	4 04	45	2 02	44	6 59	80	
3	225	11.7		05.6	338	24.7	54	38.2	7	54	23	12	50	1 40	47	7 21	77	
4	240	11.9		06.4	352	49.0	53	37.3	9	52	33	19	4 55	21	49	40	74	
5	255	12.0	+11	07.3	7	13.3	53	-28	36.2	11	50	3 42	4 25	5 00	1 06	50	7 55	73
6	270	12.1	+11	08.2	21	37.6	53	-28	34.9	13	45	4 00	4 38	5 09	0 34	53	8 27	70
7	285	12.3		09.0	36	01.9	53	33.5	14	40	14	48	17	0 10	54	8 51	68	
8	300	12.4		09.9	50	26.1	52	31.9	16	35	26	4 57	23	**	**	**	9 11	66
9	315	12.5		10.8	64	50.4	53	30.1	18	30	35	5 04	29	**	**	**	28	65
10	330	12.7		11.6	79	14.6	52	28.1	20	20	4 50	17	39	**	**	**	9 57	63
11	345	12.8	+11	12.5	93	38.9	53	-28	26.0	21	10 N	5 01	5 26	5 48	23 37	56	10 21	61
12	0	13.0	+11	13.3	108	03.1	52	-28	23.6	24	0	5 10	5 35	5 56	23 15	59	10 44	59
13	15	13.1		14.2	122	27.4	53	21.1	25	10 S	18	42	6 04	22 53	61	11 07	57	
14	30	13.2		15.1	136	51.6	52	18.4	27	20	24	50	12	29	64	11 31	56	
15	45	13.4		15.9	151	15.9	53	15.6	28	30	29	5 57	21	22 01	67	12 00	53	
16	60	13.5		16.8	165	40.1	52	12.5	31	35	31	6 01	27	21 45	69	17	51	
17	75	13.6	+11	17.7	180	04.4	53	-28	09.3	32	40	5 34	6 05	6 33	21 26	71	12 36	50
18	90	13.8	+11	18.5	194	28.7	53	-28	05.9	34	45	5 36	6 10	6 40	21 02	75	13 00	47
19	105	13.9		19.4	208	53.0	53	-28	02.3	36	50	37	15	48	20 33	78	30	43
20	120	14.0		20.2	223	17.2	52	-27	58.5	38	52	38	17	52	18 81	13 45	41	
21	135	14.2		21.1	237	41.6	54	54.6	39	54	39	20	6 56	20 01	84	14 02	39	
22	150	14.3		22.0	252	05.9	53	50.4	42	56	39	22	7 01	19 40	88	23	35	
23	165	14.4		22.8	266	30.2	53	46.1	43	58	40	25	06	19 14	94	14 50	28	
24	180	14.6	+11	23.7	280	54.6	54	-27	41.6	45	60 S	5 40	6 29	7 12	18 37	106	15 27	17

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 10 ^h 10 ^m 5		Mag: -4.3 PMG: 9 ^h 14 ^m		Mag: +1.4 PMG: 16 ^h 24 ^m		Mag: -2.5 PMG: 1 ^h 07 ^m		Mag: +0.2 PMG: 18 ^h 37 ^m									
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	206	57.4	221	35.3	-6	46.9	113	47.5	+25	02.5	343	05.7	-15	19.3	79	53.4	+19	51.1
1	221	59.8	236	35.1		46.0	128	48.3		02.5	358	08.4		19.2	94	55.8		51.1
2	237	02.3	251	35.0		45.1	143	49.2		02.4	13	11.2		19.1	109	58.2		51.1
3	252	04.8	266	34.8		44.2	158	50.1		02.4	28	13.9		19.0	125	00.6		51.1
4	267	07.2	281	34.7		43.3	173	50.9		02.3	43	16.7		19.0	140	03.0		51.1
5	282	09.7	296	34.5	-6	42.4	188	51.8	+25	02.3	58	19.4	-15	18.9	155	05.4	+19	51.1
6	297	12.2	311	34.3	-6	41.5	203	52.7	+25	02.2	73	22.2	-15	18.8	170	07.8	+19	51.0
7	312	14.6	326	34.2		40.6	218	53.5		02.2	88	24.9		18.7	185	10.2		51.0
8	327	17.1	341	34.0		39.7	233	54.4		02.1	103	27.7		18.6	200	12.6		51.0
9	342	19.6	356	33.9		38.9	248	55.3		02.1	118	30.4		18.5	215	15.0		51.0
10	357	22.0	11	33.7		38.0	263	56.1		02.1	133	33.2		18.5	230	17.4		51.0
11	12	24.5	26	33.6	-6	37.1	278	57.0	+25	02.0	148	35.9	-15	18.4	245	19.8	+19	51.0
12	27	26.9	41	33.4	-6	36.2	293	57.9	+25	02.0	163	38.7	-15	18.3	260	22.2	+19	51.0
13	42	29.4	56	33.3		35.3	308	58.7		01.9	178	41.5		18.2	275	24.6		50.9
14	57	31.9	71	33.1		34.4	323	59.6		01.9	193	44.2		18.1	290	27.0		50.9
15	72	34.3	86	32.9		33.5	339	00.4		01.8	208	47.0		18.0	305	29.4		50.9
16	87	36.8	101	32.8		32.6	354	01.3		01.8	223	49.7		17.9	320	31.8		50.9
17	102	39.3	116	32.6	-6	31.7	9	02.2	+25	01.7	238	52.5	-15	17.9	335	34.2	+19	50.9
18	117	41.7	131	32.5	-6	30.8	24	03.0	+25	01.7	253	55.2	-15	17.8	350	36.6	+19	50.9
19	132	44.2	146	32.3		29.9	39	03.9		01.6	268	58.0		17.7	5	39.0		50.9
20	147	46.7	161	32.2		29.0	54	04.8		01.6	284	00.7		17.6	20	41.4		50.8
21	162	49.1	176	32.0		28.1	69	05.6		01.5	299	03.5		17.5	35	43.7		50.8
22	177	51.6	191	31.9		27.2	84	06.5		01.5	314	06.3		17.4	50	46.1		50.8
23	192	54.1	206	31.7		26.3	99	07.4		01.4	329	09.0		17.3	65	48.5		50.8
24	207	56.5	221	31.5	-6	25.4	114	08.2	+25	01.4	344	11.8	-15	17.3	80	50.9	+19	50.8
Dif	—		-2		+9		+9		0		+28		+1		+24			

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna				
	SD: 15/9 PMG: 11 ^h 58 ^m 9			Edad: 21 ^d 6 PHE { 4 ^h : 58/2 12 ^h : 58/4 20 ^h : 58/6 R°: 58 ^m PMG: 5 ^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	180	14.6	+11	23.7	280	54.6	-27	41.6	60 N	19 30	20 18	21 25	3 43	9	7 22 113			
1	195	14.7		24.5	295	19.0	54	37.0	58	23	20 08	21 07	3 11	19	7 55 101			
2	210	14.8		25.4	309	43.4	54	32.2	56	17	19 58	20 52	2 46	26	8 19 94			
3	225	15.0		26.3	324	07.9	55	27.1	54	11	50	40	27	30	38 90			
4	240	15.1		27.1	338	32.4	55	22.0	52	06	43	29	2 10	34	8 54 86			
5	255	15.2	+11	28.0	352	56.9	55	-27	50	19 01	19 36	20 20	1 56	36	9 08 84			
6	270	15.4	+11	28.8	7	21.4	55	-27	45	18 51	19 23	20 01	1 27	41	9 37 77			
7	285	15.5		29.7	21	46.0	56	-27	40	43	12	19 46	1 04	45	9 59 74			
8	300	15.6		30.6	36	10.6	56	-26	35	36	19 03	34	0 45	48	10 17 71			
9	315	15.8		31.4	50	35.2	56	53.4	30	30	18 55	24	29	49	10 33 68			
10	330	15.9		32.3	64	59.9	57	47.2	20	20	42	19 09	0 01	53	11 00 64			
11	345	16.0	+11	33.1	79	24.6	57	-26	10 N	18 11	18 32	18 57	** ** *		11 22 61			
12	0	16.2	+11	34.0	93	49.4	58	-26	0	18 02	18 23	18 48	** ** *		11 43 58			
13	15	16.3		34.8	108	14.2	58	27.4	10 S	17 54	15	40	23 54	60	12 04 55			
14	30	16.4		35.7	122	39.1	59	20.5	20	45	08	34	33	64	27 51			
15	45	16.5		36.6	137	04.0	59	13.4	30	35	18 00	28	23 08	70	12 53 46			
16	60	16.7		37.4	151	28.9	59	-26	35	30	17 56	25	22 54	72	13 08 44			
17	75	16.8	+11	38.3	165	53.9	60	-25	40	17 24	17 51	18 23	22 37	76	13 26 40			
18	90	16.9	+11	39.1	180	18.9	60	-25	45	17 16	17 46	18 20	22 17	80	13 47 36			
19	105	17.1		40.0	194	44.0	61	43.4	50	07	41	18	21 51	87	14 13 31			
20	120	17.2		40.8	209	09.2	62	35.5	52	17 03	38	17	39	89	26 28			
21	135	17.3		41.7	223	34.4	62	27.4	54	16 59	35	17	25	93	41 24			
22	150	17.5		42.5	237	59.6	62	19.2	56	54	33	16	21 08	98	14 58 20			
23	165	17.6		43.4	252	24.9	63	10.8	58	49	29	15	20 48	104	15 18 14			
24	180	17.7	+11	44.2	266	50.3	64	-25	60 S	16 43	17 26	18 14	20 23	113	15 44 5			
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 10 ^h 06 ^m 6		Mag: -4.3 PMG: 9 ^h 14 ^m			Mag: +1.4 PMG: 16 ^h 23 ^m			Mag: -2.5 PMG: 1 ^h 03 ^m			Mag: +0.2 PMG: 18 ^h 34 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	207	56.5	221	31.5	-6	25.4	114	08.2	+25	01.4	344	11.8	-15	17.3	80	50.9	+19	50.8
1	222	59.0	236	31.4		24.5	129	09.1		01.3	359	14.5		17.2	95	53.3		50.8
2	238	01.4	251	31.2		23.6	144	09.9		01.3	14	17.3		17.1	110	55.7		50.7
3	253	03.9	266	31.1		22.7	159	10.8		01.2	29	20.0		17.0	125	58.1		50.7
4	268	06.4	281	30.9		21.8	174	11.7		01.2	44	22.8		16.9	141	00.5		50.7
5	283	08.8	296	30.8	-6	20.9	189	12.5	+25	01.1	59	25.5	-15	16.8	156	02.9	+19	50.7
6	298	11.3	311	30.6	-6	20.0	204	13.4	+25	01.1	74	28.3	-15	16.8	171	05.3	+19	50.7
7	313	13.8	326	30.5		19.1	219	14.3		01.0	89	31.1		16.7	186	07.7		50.7
8	328	16.2	341	30.3		18.2	234	15.1		01.0	104	33.8		16.6	201	10.1		50.7
9	343	18.7	356	30.1		17.3	249	16.0		00.9	119	36.6		16.5	216	12.5		50.6
10	358	21.2	11	30.0		16.4	264	16.9		00.9	134	39.3		16.4	231	14.9		50.6
11	13	23.6	26	29.8	-6	15.5	279	17.7	+25	00.8	149	42.1	-15	16.3	246	17.3	+19	50.6
12	28	26.1	41	29.7	-6	14.6	294	18.6	+25	00.8	164	44.8	-15	16.2	261	19.7	+19	50.6
13	43	28.5	56	29.5		13.7	309	19.4		00.7	179	47.6		16.2	276	22.1		50.6
14	58	31.0	71	29.4		12.8	324	20.3		00.7	194	50.4		16.1	291	24.5		50.6
15	73	33.5	86	29.2		11.9	339	21.2		00.6	209	53.1		16.0	306	26.9		50.5
16	88	35.9	101	29.0		11.0	354	22.0		00.6	224	55.9		15.9	321	29.3		50.5
17	103	38.4	116	28.9	-6	10.1	9	22.9	+25	00.5	239	58.6	-15	15.8	336	31.7	+19	50.5
18	118	40.9	131	28.7	-6	09.2	24	23.8	+25	00.5	255	01.4	-15	15.7	351	34.1	+19	50.5
19	133	43.3	146	28.6		08.3	39	24.6		00.4	270	04.2		15.6	6	36.4		50.5
20	148	45.8	161	28.4		07.4	54	25.5		00.3	285	06.9		15.6	21	38.8		50.5
21	163	48.3	176	28.3		06.4	69	26.3		00.3	300	09.7		15.5	36	41.2		50.4
22	178	50.7	191	28.1		05.5	84	27.2		00.2	315	12.4		15.4	51	43.6		50.4
23	193	53.2	206	27.9		04.6	99	28.1		00.2	330	15.2		15.3	66	46.0		50.4
24	208	55.7	221	27.8	-6	03.7	114	28.9	+25	00.1	345	17.9	-15	15.2	81	48.4	+19	50.4
Dif	—		-2		+9		+9		-1		+28		+1		+24		0	

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15 ^h 9 PMG: 11 ^h 58 ^m 7			Edad: 22 ^d 6 SD: 16 ^h 0 PMG: 6 ^h 27 ^m	PHE { 4 ^h : 58 ^h 8 12 ^h : 59 ^h 0 20 ^h : 59 ^h 1 R°: 56 ^m										
	hG ☉	Dec	Dif			Náutico		Civil	Hora		R°	Hora	R°		
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	180	17.7	+11	44.2	266	50.3	-25 02.2	60 N	2 32	3 38	4 27	3 52	2	9 15	113
1	195	17.8		45.1	281	15.7 64	-24 53.5 87	58	2 50	49	34	30	10	36	105
2	210	18.0		45.9	295	41.2 65		56	3 05	3 59	40	3 12	16	9 53	100
3	225	18.1		46.8	310	06.8 66		54	17	4 07	46	2 57	20	10 08	94
4	240	18.2		47.6	324	32.4 66		52	28	14	51	44	23	20	91
5	255	18.4	+11	48.5	338	58.0 66	-24 17.0 94	50	3 37	4 21	4 56	2 32	27	10 32	87
6	270	18.5	+11	49.3	353	23.7 67	-24 07.5 95	45	3 56	4 34	5 06	2 08	33	10 54	82
7	285	18.6		50.2	7	49.5 68	-23 57.8 97	40	4 11	45	14	1 49	37	11 13	76
8	300	18.7		51.0	22	15.4 69		35	23	4 55	21	33	40	28	73
9	315	18.9		51.9	36	41.3 69		30	33	5 02	27	1 18	44	11 41	69
10	330	19.0		52.7	51	07.3 70		20	4 48	15	38	0 54	49	12 04	63
11	345	19.1	+11	53.6	65	33.3 70	-23 17.6 103	10 N	5 00	5 25	5 47	0 33	53	12 23	59
12	0	19.2	+11	54.4	79	59.4 71	-23 07.2 104	0	5 10	5 34	5 55	0 14	56	12 41	55
13	15	19.4		55.3	94	25.6 72	-22 56.7 105	10 S	18	42	6 04	**	**	12 59	50
14	30	19.5		56.1	108	51.9 73		20	24	50	13	**	**	13 18	45
15	45	19.6		57.0	123	18.2 73		30	30	5 58	23	**	**	39	41
16	60	19.7		57.8	137	44.5 73		35	33	6 02	28	**	**	13 52	37
17	75	19.9	+11	58.7	152	11.0 75	-22 12.9 112	40	5 35	6 07	6 35	23	53	14 06	34
18	90	20.0	+11	59.5	166	37.5 75	-22 01.7 112	45	5 38	6 12	6 42	23	37	14 23	29
19	105	20.1	+12	00.4	181	04.1 76	-21 50.2 115	50	40	18	51	18	87	44	23
20	120	20.2		01.2	195	30.7 76		52	41	20	6 55	23	08	14 54	20
21	135	20.4		02.1	209	57.4 77		54	42	23	7 00	22	58	15 05	17
22	150	20.5		02.9	224	24.2 78		56	43	26	05	46	99	18	12
23	165	20.6		03.7	238	51.1 79	-21 03.2 120	58	44	29	10	32	104	32	8
24	180	20.7	+12	04.6	253	18.0 79	-20 51.1 121	60 S	5 44	6 33	7 17	22	16	15 49	2

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 10 ^h 02 ^m 6		Mag: -4.2 PMG: 9 ^h 14 ^m		Mag: +1.4 PMG: 16 ^h 21 ^m		Mag: -2.5 PMG: 0 ^h 59 ^m		Mag: +0.2 PMG: 18 ^h 30 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	208	55.7	221	27.8	114	28.9	345	17.9	81	48.4
1	223	58.1	236	27.6	129	29.8	0	20.7	96	50.8
2	239	00.6	251	27.5	144	30.6	15	23.5	111	53.2
3	254	03.0	266	27.3	159	31.5	30	26.2	126	55.6
4	269	05.5	281	27.2	174	32.4	45	29.0	141	58.0
5	284	08.0	296	27.0	189	33.2	60	31.7	157	00.4
6	299	10.4	311	26.8	204	34.1	75	34.5	172	02.8
7	314	12.9	326	26.7	219	35.0	90	37.3	187	05.2
8	329	15.4	341	26.5	234	35.8	105	40.0	202	07.5
9	344	17.8	356	26.4	249	36.7	120	42.8	217	09.9
10	359	20.3	11	26.2	264	37.5	135	45.5	232	12.3
11	14	22.8	26	26.1	279	38.4	150	48.3	247	14.7
12	29	25.2	41	25.9	294	39.3	165	51.1	262	17.1
13	44	27.7	56	25.7	309	40.1	180	53.8	277	19.5
14	59	30.2	71	25.6	324	41.0	195	56.6	292	21.9
15	74	32.6	86	25.4	339	41.8	210	59.4	307	24.3
16	89	35.1	101	25.3	354	42.7	226	02.1	322	26.7
17	104	37.5	116	25.1	9	43.6	241	04.9	337	29.1
18	119	40.0	131	25.0	24	44.4	256	07.6	352	31.4
19	134	42.5	146	24.8	39	45.3	271	10.4	7	33.8
20	149	44.9	161	24.6	54	46.2	286	13.2	22	36.2
21	164	47.4	176	24.5	69	47.0	301	15.9	37	38.6
22	179	49.9	191	24.3	84	47.9	316	18.7	52	41.0
23	194	52.3	206	24.2	99	48.7	331	21.4	67	43.4
24	209	54.8	221	24.0	114	49.6	346	24.2	82	45.8
Dif	—		-2	+9	+9	-1	+28	+1	+24	0

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna				
	SD: 15'9 PMG: 11 ^h 58 ^m 5			Edad: 23 ^d 6 PHE { 4 ^h : 59'3 12 ^h : 59'5 20 ^h : 59'6 SD: 16'1 PMG: 7 ^h 23 ^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	h m m			
0	180	20.7	+12	04.6	253	18.0	-20	51.1	60 N	19 35	20 24	21 33	3 54 0	11 08 109				
1	195	20.9		05.4	267	45.0	80	38.9	58	27	13	21 14	40 5	21 103				
2	210	21.0		06.3	282	12.1	81	26.5	56	21	20 03	20 58	28 9	33 98				
3	225	21.1		07.1	296	39.2	81	14.0	54	15	19 54	45	17 14	42 95				
4	240	21.2		08.0	311	06.4	82	-20 01.4	52	09	46	34	3 07 17	51 91				
5	255	21.4	+12	08.8	325	33.7	83	-19 48.7	50	19 04	19 40	20 24	2 59 20	11 59 88				
6	270	21.5	+12	09.6	340	01.0	83	-19 35.8	45	18 54	19 25	20 04	2 41 25	12 16 81				
7	285	21.6		10.5	354	28.4	84	22.8	40	45	14	19 48	26 30	29 76				
8	300	21.7		11.3	8	55.9	85	-19 09.7	35	38	19 04	36	13 34	41 72				
9	315	21.8		12.2	23	23.4	85	-18 56.5	30	31	18 56	26	2 02 38	12 50 69				
10	330	22.0		13.0	37	51.0	86	43.2	20	20	43	19 10	1 43 43	13 07 63				
11	345	22.1	+12	13.9	52	18.7	87	-18 29.7	10 N	18 11	18 32	18 57	1 26 48	13 22 57				
12	0	22.2	+12	14.7	66	46.4	87	-18 16.1	0	18 02	18 23	18 48	1 10 53	13 36 52				
13	15	22.3		15.5	81	14.2	88	-18 02.4	10 S	17 53	15	39	0 54 58	13 49 47				
14	30	22.5		16.4	95	42.1	89	-17 48.6	20	44	18 06	32	37 63	14 03 42				
15	45	22.6		17.2	110	10.0	89	34.7	30	33	17 58	26	18 68	20 36				
16	60	22.7		18.0	124	38.0	90	20.7	35	27	53	23	0 06 72	29 33				
17	75	22.8	+12	18.9	139	06.1	91	-17 06.6	40	17 21	17 48	18 20	** ** *	14 40 28				
18	90	22.9	+12	19.7	153	34.2	91	-16 52.3	45	17 13	17 43	18 17	** ** *	14 52 24				
19	105	23.1		20.6	168	02.4	92	38.0	50	17 04	37	15	** ** *	15 07 18				
20	120	23.2		21.4	182	30.6	92	23.5	52	16 59	34	14	** ** *	14 15				
21	135	23.3		22.2	196	59.0	94	-16 09.0	54	55	31	13	** ** *	22 12				
22	150	23.4		23.1	211	27.3	93	-15 54.3	56	49	28	11	** ** *	30 9				
23	165	23.5		23.9	225	55.8	95	39.6	58	44	25	10	** ** *	40 4				
24	180	23.7	+12	24.7	240	24.2	94	-15 24.7	60 S	16 37	17 21	18 09	** ** *	15 51 0				
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 9 ^h 58 ^m 7		Mag: -4.2 PMG: 9 ^h 14 ^m		Mag: +1.4 PMG: 16 ^h 20 ^m		Mag: -2.5 PMG: 0 ^h 54 ^m		Mag: +0.2 PMG: 18 ^h 26 ^m									
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec	hG ♆	Dec	hG ♇	Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	209	54.8	221	24.0	-5	41.7	114	49.6	+24	58.7	346	24.2	-15	13.1	82	45.8	+19	50.0
1	224	57.3	236	23.8		40.8	129	50.5		58.6	1	27.0		13.0	97	48.2		50.0
2	239	59.7	251	23.7		39.9	144	51.3		58.6	16	29.7		13.0	112	50.5		50.0
3	255	02.2	266	23.5		39.0	159	52.2		58.5	31	32.5		12.9	127	52.9		49.9
4	270	04.7	281	23.4		38.1	174	53.0		58.5	46	35.3		12.8	142	55.3		49.9
5	285	07.1	296	23.2	-5	37.1	189	53.9	+24	58.4	61	38.0	-15	12.7	157	57.7	+19	49.9
6	300	09.6	311	23.0	-5	36.2	204	54.8	+24	58.3	76	40.8	-15	12.6	173	00.1	+19	49.9
7	315	12.0	326	22.9		35.3	219	55.6		58.3	91	43.5		12.5	188	02.5		49.9
8	330	14.5	341	22.7		34.4	234	56.5		58.2	106	46.3		12.4	203	04.9		49.9
9	345	17.0	356	22.6		33.4	249	57.3		58.1	121	49.1		12.3	218	07.3		49.8
10	0	19.4	11	22.4		32.5	264	58.2		58.1	136	51.8		12.3	233	09.6		49.8
11	15	21.9	26	22.3	-5	31.6	279	59.1	+24	58.0	151	54.6	-15	12.2	248	12.0	+19	49.8
12	30	24.4	41	22.1	-5	30.7	294	59.9	+24	57.9	166	57.4	-15	12.1	263	14.4	+19	49.8
13	45	26.8	56	21.9		29.7	310	00.8		57.9	182	00.1		12.0	278	16.8		49.8
14	60	29.3	71	21.8		28.8	325	01.6		57.8	197	02.9		11.9	293	19.2		49.8
15	75	31.8	86	21.6		27.9	340	02.5		57.7	212	05.7		11.8	308	21.6		49.7
16	90	34.2	101	21.5		27.0	355	03.4		57.7	227	08.4		11.7	323	24.0		49.7
17	105	36.7	116	21.3	-5	26.0	10	04.2	+24	57.6	242	11.2	-15	11.6	338	26.3	+19	49.7
18	120	39.1	131	21.1	-5	25.1	25	05.1	+24	57.5	257	13.9	-15	11.6	353	28.7	+19	49.7
19	135	41.6	146	21.0		24.2	40	05.9		57.5	272	16.7		11.5	8	31.1		49.7
20	150	44.1	161	20.8		23.2	55	06.8		57.4	287	19.5		11.4	23	33.5		49.6
21	165	46.5	176	20.7		22.3	70	07.7		57.3	302	22.2		11.3	38	35.9		49.6
22	180	49.0	191	20.5		21.4	85	08.5		57.3	317	25.0		11.2	53	38.3		49.6
23	195	51.5	206	20.3		20.5	100	09.4		57.2	332	27.8		11.1	68	40.6		49.6
24	210	53.9	221	20.2	-5	19.5	115	10.2	+24	57.1	347	30.5	-15	11.0	83	43.0	+19	49.6
Dif	—		-2		+9		+9		-1		+28		+1		+24		0	

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15°9 PMG: 11 ^h 58 ^m 3			Edad: 24 ^d 6 PHE { 4 ^h : 59°8 12 ^h : 59°9 20 ^h : 60°0 PMG: 8 ^h 16 ^m R°: 50 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	m
0	180	23.7	+12 24.7	240	24.2	-15 24.7	60 N	2 23	3 32	4 21	3 54	**	12 57	105	
1	195	23.8	25.6	254	52.8	-15 09.8	58	42	43	29	45	4	13 04	101	
2	210	23.9	26.4	269	21.4	-14 54.8	56	2 58	3 53	35	37	8	11	96	
3	225	24.0	27.2	283	50.1	39.6	54	3 11	4 02	41	31	10	17	93	
4	240	24.1	28.1	298	18.8	24.4	52	23	10	47	24	14	22	90	
5	255	24.2	+12 28.9	312	47.6	-14 09.1	50	3 32	4 16	4 52	3 19	16	13 27	87	
6	270	24.4	+12 29.8	327	16.4	-13 53.7	45	3 52	4 31	5 02	3 06	22	13 37	81	
7	285	24.5	30.6	341	45.3	38.2	40	4 08	42	11	2 56	27	45	76	
8	300	24.6	31.4	356	14.2	22.7	35	20	4 52	18	47	31	53	71	
9	315	24.7	32.3	10	43.2	-13 07.0	30	31	5 00	25	40	34	13 59	67	
10	330	24.8	33.1	25	12.3	-12 51.3	20	47	14	36	26	41	14 10	61	
11	345	25.0	+12 33.9	39	41.4	-12 35.5	10 N	4 59	5 24	5 46	2 14	46	14 19	55	
12	0	25.1	+12 34.7	54	10.5	-12 19.6	0	5 09	5 34	5 55	2 03	51	14 28	50	
13	15	25.2	35.6	68	39.7	-12 03.7	10 S	18	42	6 04	1 52	56	36	45	
14	30	25.3	36.4	83	08.9	-11 47.6	20	25	51	13	40	62	45	40	
15	45	25.4	37.2	97	38.2	31.5	30	31	5 59	24	26	68	14 56	33	
16	60	25.5	38.1	112	07.6	-11 15.3	35	34	6 04	30	18	72	15 02	29	
17	75	25.6	+12 38.9	126	36.9	-10 59.1	40	5 37	6 09	6 37	1 09	76	15 08	26	
18	90	25.8	+12 39.7	141	06.4	-10 42.8	45	5 40	6 14	6 45	0 58	81	15 16	21	
19	105	25.9	40.6	155	35.8	26.4	50	43	21	54	45	88	25	15	
20	120	26.0	41.4	170	05.3	-10 09.9	52	44	24	6 59	39	90	29	13	
21	135	26.1	42.2	184	34.9	-9 53.4	54	45	27	7 03	32	94	34	9	
22	150	26.2	43.0	199	04.4	36.8	56	46	30	09	25	97	39	6	
23	165	26.3	43.9	213	34.1	20.2	58	48	34	15	16	102	44	4	
24	180	26.5	+12 44.7	228	03.7	-9 03.5	60 S	5 49	6 38	7 21	0 06	107	15 51	**	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG 9 ^h 54 ^m 8		Mag: -4.2 PMG: 9 ^h 15 ^m			Mag: +1.4 PMG: 16 ^h 18 ^m			Mag: -2.5 PMG: 0 ^h 50 ^m			Mag: +0.2 PMG: 18 ^h 22 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°
0	210	53.9	221 20.2	-5 19.5	115 10.2	+24 57.1	347 30.5	-15 11.0	83 43.0	+19 49.6					
1	225	56.4	236 20.0	18.6	130 11.1	57.1	2 33.3	10.9	98 45.4	49.6					
2	240	58.9	251 19.9	17.7	145 12.0	57.0	17 36.1	10.9	113 47.8	49.5					
3	256	01.3	266 19.7	16.7	160 12.8	56.9	32 38.8	10.8	128 50.2	49.5					
4	271	03.8	281 19.5	15.8	175 13.7	56.8	47 41.6	10.7	143 52.6	49.5					
5	286	06.3	296 19.4	-5 14.9	190 14.5	+24 56.8	62 44.4	-15 10.6	158 54.9	+19 49.5					
6	301	08.7	311 19.2	-5 13.9	205 15.4	+24 56.7	77 47.1	-15 10.5	173 57.3	+19 49.5					
7	316	11.2	326 19.1	13.0	220 16.3	56.6	92 49.9	10.4	188 59.7	49.4					
8	331	13.6	341 18.9	12.1	235 17.1	56.6	107 52.7	10.3	204 02.1	49.4					
9	346	16.1	356 18.7	11.1	250 18.0	56.5	122 55.4	10.2	219 04.5	49.4					
10	1	18.6	11 18.6	10.2	265 18.8	56.4	137 58.2	10.2	234 06.8	49.4					
11	16	21.0	26 18.4	-5 09.3	280 19.7	+24 56.3	153 01.0	-15 10.1	249 09.2	+19 49.4					
12	31	23.5	41 18.3	-5 08.3	295 20.5	+24 56.3	168 03.7	-15 10.0	264 11.6	+19 49.3					
13	46	26.0	56 18.1	07.4	310 21.4	56.2	183 06.5	09.9	279 14.0	49.3					
14	61	28.4	71 17.9	06.4	325 22.3	56.1	198 09.2	09.8	294 16.4	49.3					
15	76	30.9	86 17.8	05.5	340 23.1	56.1	213 12.0	09.7	309 18.8	49.3					
16	91	33.4	101 17.6	04.6	355 24.0	56.0	228 14.8	09.6	324 21.1	49.3					
17	106	35.8	116 17.5	-5 03.6	10 24.8	+24 55.9	243 17.5	-15 09.5	339 23.5	+19 49.3					
18	121	38.3	131 17.3	-5 02.7	25 25.7	+24 55.8	258 20.3	-15 09.5	354 25.9	+19 49.2					
19	136	40.8	146 17.1	01.8	40 26.6	55.8	273 23.1	09.4	9 28.3	49.2					
20	151	43.2	161 17.0	-5 00.8	55 27.4	55.7	288 25.8	09.3	24 30.7	49.2					
21	166	45.7	176 16.8	-4 59.9	70 28.3	55.6	303 28.6	09.2	39 33.0	49.2					
22	181	48.1	191 16.7	58.9	85 29.1	55.5	318 31.4	09.1	54 35.4	49.2					
23	196	50.6	206 16.5	58.0	100 30.0	55.5	333 34.2	09.0	69 37.8	49.1					
24	211	53.1	221 16.3	-4 57.1	115 30.9	+24 55.4	348 36.9	-15 08.9	84 40.2	+19 49.1					
Dif	—		-2	+9	+9	-1	+28	+1	+24	0					

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 15'9 PMG: 11 ^h 58 ^m 1			Edad: 25 ^d 6 PHE { 4 ^h : 60'1 12 ^h : 60'2 20 ^h : 60'2 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	180	26.5	+12 44.7	228	03.7	-9 03.5		60 N	19 40	20 30	21 42	3 53	**	14 42	104
1	195	26.6		242	33.4 ¹⁰⁷	-8 46.8 ¹⁶⁷		58	32	18	21	49	2	45	99
2	210	26.7		257	03.1 ¹⁰⁷	30.0 ¹⁶⁸		56	25	20 07	21 04	45	6	47	96
3	225	26.8		271	32.9 ¹⁰⁸	-8 13.1 ¹⁶⁹		54	18	19 58	20 50	41	9	50	92
4	240	26.9		286	02.7 ¹⁰⁸	-7 56.2 ¹⁶⁹		52	13	50	38	38	12	52	89
5	255	27.0	+12 48.8	300	32.5 ¹⁰⁸	-7 39.2 ¹⁷⁰		50	19 08	19 43	20 28	3 35	14	14 54	86
6	270	27.1	+12 49.7	315	02.3 ¹⁰⁸	-7 22.2 ¹⁷⁰		45	18 56	19 28	20 07	3 28	20	14 58	80
7	285	27.2		329	32.2 ¹⁰⁹	-7 05.2 ¹⁷⁰		40	47	16	19 51	23	25	15 01	75
8	300	27.4		344	02.1 ¹⁰⁹	-6 48.1 ¹⁷¹		35	40	19 06	38	18	29	04	71
9	315	27.5		358	32.0 ¹⁰⁹	31.0 ¹⁷¹		30	33	18 58	27	14	32	06	67
10	330	27.6		13	02.0 ¹¹⁰	-6 13.8 ¹⁷²		20	21	44	19 11	07	39	11	60
11	345	27.7	+12 53.8	27	32.0 ¹¹⁰	-5 56.6 ¹⁷²		10 N	18 11	18 33	18 58	3 00	45	15 14	55
12	0	27.8	+12 54.6	42	02.0 ¹¹⁰	-5 39.3 ¹⁷³		0	18 02	18 23	18 47	2 54	50	15 18	49
13	15	27.9		56	32.0 ¹¹⁰	22.0 ¹⁷³		10 S	17 52	14	39	48	55	21	44
14	30	28.0		71	02.0 ¹¹⁰	-5 04.7 ¹⁷³		20	42	18 05	31	42	60	25	38
15	45	28.1		85	32.1 ¹¹¹	-4 47.3 ¹⁷⁴		30	31	17 56	24	34	67	29	32
16	60	28.2		100	02.2 ¹¹¹	29.9 ¹⁷⁴		35	25	51	21	30	71	31	29
17	75	28.4	+12 58.7	114	32.3 ¹¹¹	-4 12.5 ¹⁷⁴		40	17 18	17 46	18 18	2 25	75	15 34	24
18	90	28.5	+12 59.5	129	02.4 ¹¹¹	-3 55.1 ¹⁷⁴		45	17 10	17 40	18 14	2 19	81	15 37	19
19	105	28.6	+13 00.3	143	32.5 ¹¹¹	37.6 ¹⁷⁵		50	17 00	33	11	13	86	40	14
20	120	28.7		158	02.6 ¹¹¹	20.1 ¹⁷⁵		52	16 55	30	10	09	89	42	11
21	135	28.8		172	32.8 ¹¹²	-3 02.6 ¹⁷⁵		54	50	27	09	06	92	43	9
22	150	28.9		187	02.9 ¹¹¹	-2 45.1 ¹⁷⁵		56	45	24	07	2 02	96	45	6
23	165	29.0		201	33.1 ¹¹²	27.5 ¹⁷⁶		58	38	20	06	1 58	99	48	2
24	180	29.1	+13 04.4	216	03.3 ¹¹²	-2 09.9 ¹⁷⁶		60 S	16 31	17 16	18 04	1 53	104	15 50	**

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO		
	PMG: 9 ^h 50 ^m 8		Mag: -4.2 PMG: 9 ^h 15 ^m		Mag: +1.4 PMG: 16 ^h 17 ^m		Mag: -2.5 PMG: 0 ^h 45 ^m		Mag: +0.2 PMG: 18 ^h 18 ^m		
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	
0	211	53.1	221	16.3	-4 57.1	115 30.9	+24 55.4	348 36.9	-15 08.9	84 40.2	+19 49.1
1	226	55.5	236	16.2	56.1	130 31.7	55.3	3 39.7	08.8	99 42.6	49.1
2	241	58.0	251	16.0	55.2	145 32.6	55.2	18 42.5	08.7	114 44.9	49.1
3	257	00.5	266	15.8	54.2	160 33.4	55.2	33 45.2	08.7	129 47.3	49.1
4	272	02.9	281	15.7	53.3	175 34.3	55.1	48 48.0	08.6	144 49.7	49.0
5	287	05.4	296	15.5	-4 52.3	190 35.1	+24 55.0	63 50.8	-15 08.5	159 52.1	+19 49.0
6	302	07.9	311	15.4	-4 51.4	205 36.0	+24 54.9	78 53.5	-15 08.4	174 54.4	+19 49.0
7	317	10.3	326	15.2	50.5	220 36.9	54.8	93 56.3	08.3	189 56.8	49.0
8	332	12.8	341	15.0	49.5	235 37.7	54.8	108 59.1	08.2	204 59.2	49.0
9	347	15.2	356	14.9	48.6	250 38.6	54.7	124 01.8	08.1	220 01.6	48.9
10	2	17.7	11	14.7	47.6	265 39.4	54.6	139 04.6	08.0	235 04.0	48.9
11	17	20.2	26	14.6	-4 46.7	280 40.3	+24 54.5	154 07.4	-15 07.9	250 06.3	+19 48.9
12	32	22.6	41	14.4	-4 45.7	295 41.2	+24 54.5	169 10.1	-15 07.9	265 08.7	+19 48.9
13	47	25.1	56	14.2	44.8	310 42.0	54.4	184 12.9	07.8	280 11.1	48.9
14	62	27.6	71	14.1	43.8	325 42.9	54.3	199 15.7	07.7	295 13.5	48.8
15	77	30.0	86	13.9	42.9	340 43.7	54.2	214 18.4	07.6	310 15.8	48.8
16	92	32.5	101	13.7	41.9	355 44.6	54.1	229 21.2	07.5	325 18.2	48.8
17	107	35.0	116	13.6	-4 41.0	10 45.4	+24 54.1	244 24.0	-15 07.4	340 20.6	+19 48.8
18	122	37.4	131	13.4	-4 40.0	25 46.3	+24 54.0	259 26.7	-15 07.3	355 23.0	+19 48.8
19	137	39.9	146	13.3	39.1	40 47.2	53.9	274 29.5	07.2	10 25.3	48.7
20	152	42.4	161	13.1	38.1	55 48.0	53.8	289 32.3	07.1	25 27.7	48.7
21	167	44.8	176	12.9	37.2	70 48.9	53.7	304 35.1	07.1	40 30.1	48.7
22	182	47.3	191	12.8	36.2	85 49.7	53.7	319 37.8	07.0	55 32.5	48.7
23	197	49.7	206	12.6	35.3	100 50.6	53.6	334 40.6	06.9	70 34.8	48.7
24	212	52.2	221	12.4	-4 34.3	115 51.4	+24 53.5	349 43.4	-15 06.8	85 37.2	+19 48.6
Dif	—		-2	+9		+9	-1	+28	+1	+24	0

UT	SOL				● LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15°9 PMG: 11 ^h 58 ^m 0				Edad: 26 ^d 6 PHE { SD: 16°4 PMG: 9 ^h 56 ^m 4 ^h : 60°/3 12 ^h : 60°/3 20 ^h : 60°/3 R°: 49 ^m													
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	m		
0	180	29.1	+13	04.4	216	03.3	-2	09.9	60 N	2	14	3	25	4	15	3 52 **		
1	195	29.2		05.3	230	33.5 ¹¹²	-1	52.4 ¹⁷⁵	58	35	37	23	51	3	24	100		
2	210	29.3		06.1	245	03.6 ¹¹¹		34.8 ¹⁷⁶	56	2	51	48	31	51	6	23	96	
3	225	29.5		06.9	259	33.8 ¹¹²	-1	17.2 ¹⁷⁶	54	3	05	3	57	37	50	9	22	93
4	240	29.6		07.7	274	04.0 ¹¹²	-0	59.5 ¹⁷⁷	52	17	4	05	43	50	12	21	89	
5	255	29.7	+13	08.5	288	34.2 ¹¹²	-0	41.9 ¹⁷⁶	50	3	28	4	12	4	48	3	49	15
6	270	29.8	+13	09.3	303	04.4 ¹¹²	-0	24.3 ¹⁷⁶	45	3	49	4	27	4	59	3	48	20
7	285	29.9		10.2	317	34.6 ¹¹²	-0	06.6 ¹⁷⁷	40	4	05	40	5	08	48	24	16	76
8	300	30.0		11.0	332	04.7 ¹¹¹	+0	11.0 ¹⁷⁶	35	18	50	16	47	29	15	71		
9	315	30.1		11.8	346	34.9 ¹¹²		28.6 ¹⁷⁶	30	28	4	58	23	46	33	13	68	
10	330	30.2		12.6	1	05.1 ¹¹²	+0	46.3 ¹⁷⁷	20	45	5	12	35	46	38	11	61	
11	345	30.3	+13	13.4	15	35.3 ¹¹²	+1	03.9 ¹⁷⁶	10 N	4	58	5	23	5	45	3	45	44
12	0	30.4	+13	14.2	30	05.4 ¹¹¹	+1	21.5 ¹⁷⁶	0	5	09	5	33	5	55	3	44	49
13	15	30.5		15.1	44	35.6 ¹¹²		39.2 ¹⁷⁷	10 S	18	42	6	04	43	55	05	45	
14	30	30.6		15.9	59	05.7 ¹¹¹	+1	56.8 ¹⁷⁶	20	25	5	51	14	42	61	03	39	
15	45	30.7		16.7	73	35.8 ¹¹¹	+2	14.4 ¹⁷⁶	30	32	6	01	25	41	68	01	33	
16	60	30.8		17.5	88	05.9 ¹¹¹		32.0 ¹⁷⁶	35	36	05	31	41	71	16	00	29	
17	75	30.9	+13	18.3	102	36.0 ¹¹¹	+2	49.6 ¹⁷⁶	40	5	39	6	11	6	39	3	40	76
18	90	31.0	+13	19.1	117	06.1 ¹¹¹	+3	07.1 ¹⁷⁵	45	5	42	6	17	6	47	3	40	80
19	105	31.2		19.9	131	36.2 ¹¹¹		24.7 ¹⁷⁶	50	46	24	6	57	39	86	54	15	
20	120	31.3		20.7	146	06.2 ¹¹⁰		42.2 ¹⁷⁵	52	47	27	7	02	38	90	53	13	
21	135	31.4		21.5	160	36.3 ¹¹¹	+3	59.7 ¹⁷⁵	54	48	30	07	38	92	52	10		
22	150	31.5		22.4	175	06.3 ¹¹⁰	+4	17.2 ¹⁷⁵	56	50	34	13	38	95	51	7		
23	165	31.6		23.2	189	36.2 ¹⁰⁹		34.7 ¹⁷⁵	58	51	38	19	37	100	50	3		
24	180	31.7	+13	24.0	204	06.2 ¹¹⁰	+4	52.1 ¹⁷⁴	60 S	5	53	6	42	7	26	3	37	104
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG 9 ^h 46 ^m 9		Mag: -4.2 PMG: 9 ^h 15 ^m				Mag: +1.4 PMG: 16 ^h 16 ^m				Mag: -2.5 PMG: 0 ^h 41 ^m				Mag: +0.2 PMG: 18 ^h 15 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	212	52.2	221	12.4	-4	34.3	115	51.4	+24	53.5	349	43.4	-15	06.8	85	37.2	+19	48.6
1	227	54.7	236	12.3		33.4	130	52.3		53.4	4	46.1		06.7	100	39.6		48.6
2	242	57.1	251	12.1		32.4	145	53.2		53.3	19	48.9		06.6	115	42.0		48.6
3	257	59.6	266	12.0		31.5	160	54.0		53.2	34	51.7		06.5	130	44.3		48.6
4	273	02.1	281	11.8		30.5	175	54.9		53.2	49	54.4		06.4	145	46.7		48.6
5	288	04.5	296	11.6	-4	29.6	190	55.7	+24	53.1	64	57.2	-15	06.3	160	49.1	+19	48.5
6	303	07.0	311	11.5	-4	28.6	205	56.6	+24	53.0	80	00.0	-15	06.3	175	51.5	+19	48.5
7	318	09.5	326	11.3		27.7	220	57.4		52.9	95	02.8		06.2	190	53.8		48.5
8	333	11.9	341	11.1		26.7	235	58.3		52.8	110	05.5		06.1	205	56.2		48.5
9	348	14.4	356	11.0		25.8	250	59.2		52.7	125	08.3		06.0	220	58.6		48.5
10	3	16.8	11	10.8		24.8	266	00.0		52.6	140	11.1		05.9	236	00.9		48.4
11	18	19.3	26	10.7	-4	23.9	281	00.9	+24	52.6	155	13.8	-15	05.8	251	03.3	+19	48.4
12	33	21.8	41	10.5	-4	22.9	296	01.7	+24	52.5	170	16.6	-15	05.7	266	05.7	+19	48.4
13	48	24.2	56	10.3		22.0	311	02.6		52.4	185	19.4		05.6	281	08.1		48.4
14	63	26.7	71	10.2		21.0	326	03.4		52.3	200	22.1		05.5	296	10.4		48.3
15	78	29.2	86	10.0		20.0	341	04.3		52.2	215	24.9		05.5	311	12.8		48.3
16	93	31.6	101	09.8		19.1	356	05.2		52.1	230	27.7		05.4	326	15.2		48.3
17	108	34.1	116	09.7	-4	18.1	11	06.0	+24	52.0	245	30.5	-15	05.3	341	17.5	+19	48.3
18	123	36.6	131	09.5	-4	17.2	26	06.9	+24	52.0	260	33.2	-15	05.2	356	19.9	+19	48.3
19	138	39.0	146	09.4		16.2	41	07.7		51.9	275	36.0		05.1	11	22.3		48.2
20	153	41.5	161	09.2		15.3	56	08.6		51.8	290	38.8		05.0	26	24.7		48.2
21	168	44.0	176	09.0		14.3	71	09.4		51.7	305	41.5		04.9	41	27.0		48.2
22	183	46.4	191	08.9		13.3	86	10.3		51.6	320	44.3		04.8	56	29.4		48.2
23	198	48.9	206	08.7		12.4	101	11.2		51.5	335	47.1		04.7	71	31.8		48.2
24	213	51.3	221	08.5	-4	11.4	116	12.0	+24	51.4	350	49.9	-15	04.6	86	34.1	+19	48.1
Dif	—		-2		+10		+9		-1		+28		+1		+24		0	

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15°9 PMG: 11 ^h 57 ^m 8			Edad: 27 ^d 6 PHE { 4 ^h : 60'2 12 ^h : 60'2 20 ^h : 60'1 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	180	31.7	+13	24.0	204	06.2	+4	52.1	60 N	19 45	20 36	21 51	3 51 **	18 10 108
1	195	31.8		24.8	218	36.1 ¹⁰⁹	+5	09.5 ¹⁷⁴	58	36	23	28	54 3	18 04 103
2	210	31.9		25.6	233	06.1 ¹¹⁰		26.9 ¹⁷⁴	56	29	12	21 10	57 7	17 59 99
3	225	32.0		26.4	247	35.9 ¹⁰⁸	+5	44.2 ¹⁷³	54	22	20 02	20 55	3 59 11	55 94
4	240	32.1		27.2	262	05.8 ¹⁰⁹	+6	01.5 ¹⁷³	52	16	19 54	43	4 02 13	50 91
5	255	32.2	+13	28.0	276	35.6 ¹⁰⁸	+6	18.8 ¹⁷³	50	19 11	19 47	20 32	4 04 16	17 47 88
6	270	32.3	+13	28.8	291	05.4 ¹⁰⁸	+6	36.0 ¹⁷²	45	18 59	19 31	20 10	4 08 22	17 38 82
7	285	32.4		29.6	305	35.2 ¹⁰⁸	+6	53.2 ¹⁷²	40	49	18	19 53	12 27	32 76
8	300	32.5		30.4	320	04.9 ¹⁰⁷	+7	10.4 ¹⁷²	35	41	19 08	40	16 30	26 72
9	315	32.6		31.2	334	34.6 ¹⁰⁷		27.5 ¹⁷¹	30	34	18 59	29	19 34	21 68
10	330	32.7		32.0	349	04.3 ¹⁰⁷	+7	44.5 ¹⁷⁰	20	22	45	19 11	24 40	12 62
11	345	32.8	+13	32.9	3	33.9 ¹⁰⁶	+8	01.6 ¹⁷¹	10 N	18 11	18 33	18 58	4 29 45	17 04 57
12	0	32.9	+13	33.7	18	03.5 ¹⁰⁶	+8	18.5 ¹⁶⁹	0	18 01	18 22	18 47	4 33 51	16 57 52
13	15	33.0		34.5	32	33.1 ¹⁰⁶		35.5 ¹⁷⁰	10 S	17 51	13	38	38 56	50 47
14	30	33.1		35.3	47	02.6 ¹⁰⁵	+8	52.3 ¹⁶⁸	20	41	18 04	30	43 61	42 42
15	45	33.2		36.1	61	32.1 ¹⁰⁵	+9	09.1 ¹⁶⁸	30	30	17 54	22	49 68	34 35
16	60	33.3		36.9	76	01.5 ¹⁰⁴		25.9 ¹⁶⁸	35	23	49	19	52 72	29 32
17	75	33.4	+13	37.7	90	30.9 ¹⁰⁴	+9	42.6 ¹⁶⁷	40	17 15	17 43	18 15	4 56 76	16 23 28
18	90	33.5	+13	38.5	105	00.3 ¹⁰⁴	+9	59.2 ¹⁶⁶	45	17 07	17 37	18 11	5 00 81	16 17 23
19	105	33.6		39.3	119	29.6 ¹⁰³	+10	15.8 ¹⁶⁶	50	16 56	30	08	05 88	09 17
20	120	33.7		40.1	133	58.9 ¹⁰³		32.3 ¹⁶⁵	52	51	27	06	08 90	06 14
21	135	33.8		40.9	148	28.1 ¹⁰²	+10	48.8 ¹⁶⁵	54	46	23	05	10 94	16 02 11
22	150	33.9		41.7	162	57.3 ¹⁰²	+11	05.2 ¹⁶⁴	56	40	19	03	13 98	15 58 7
23	165	34.0		42.5	177	26.4 ¹⁰¹		21.5 ¹⁶³	58	33	15	18 01	17 101	53 4
24	180	34.1	+13	43.3	191	55.5 ¹⁰¹	+11	37.7 ¹⁶²	60 S	16 26	17 10	17 59	5 21 106	15 48 **
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 9 ^h 43 ^m 0		Mag: -4.2 PMG: 9 ^h 16 ^m		Mag: +1.5 PMG: 16 ^h 14 ^m		Mag: -2.5 PMG: 0 ^h 37 ^m		Mag: +0.2 PMG: 18 ^h 11 ^m					
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	213	51.3	221	08.5	-4	11.4	116	12.0	350	49.9				
1	228	53.8	236	08.4		10.5	131	12.9	5	52.6				
2	243	56.3	251	08.2		09.5	146	13.7	20	55.4				
3	258	58.7	266	08.0		08.5	161	14.6	35	58.2				
4	274	01.2	281	07.9		07.6	176	15.4	51	00.9				
5	289	03.7	296	07.7	-4	06.6	191	16.3	66	03.7				
6	304	06.1	311	07.6	-4	05.7	206	17.1	81	06.5				
7	319	08.6	326	07.4		04.7	221	18.0	96	09.3				
8	334	11.1	341	07.2		03.7	236	18.9	111	12.0				
9	349	13.5	356	07.1		02.8	251	19.7	126	14.8				
10	4	16.0	11	06.9		01.8	266	20.6	141	17.6				
11	19	18.4	26	06.7	-4	00.8	281	21.4	156	20.4				
12	34	20.9	41	06.6	-3	59.9	296	22.3	171	23.1				
13	49	23.4	56	06.4		58.9	311	23.1	186	25.9				
14	64	25.8	71	06.2		57.9	326	24.0	201	28.7				
15	79	28.3	86	06.1		57.0	341	24.9	216	31.4				
16	94	30.8	101	05.9		56.0	356	25.7	231	34.2				
17	109	33.2	116	05.7	-3	55.0	11	26.6	246	37.0				
18	124	35.7	131	05.6	-3	54.1	26	27.4	261	39.8				
19	139	38.2	146	05.4		53.1	41	28.3	276	42.5				
20	154	40.6	161	05.3		52.1	56	29.1	291	45.3				
21	169	43.1	176	05.1		51.2	71	30.0	306	48.1				
22	184	45.6	191	04.9		50.2	86	30.8	321	50.9				
23	199	48.0	206	04.8		49.2	101	31.7	336	53.6				
24	214	50.5	221	04.6	-3	48.3	116	32.6	351	56.4				
Dif	—		-2		+10		+9		-1					
							+28		+1					
									+24					
									0					

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15 ^h 9 PMG: 11 ^h 57 ^m 6			Edad: 28 ^d 6 PHE { 4 ^h : 59 ^m 9 12 ^h : 59 ^m 8 20 ^h : 59 ^m 6 R°: 54 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico	Civil	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	h	m	h	m	h	m	m
0	180	34.1	+13	43.3	191	55.5	+11 37.7	60 N	2 04	3 19	4 10	3 50	0	19 58 112
1	195	34.2		44.1	206	24.5	+11 53.9	58	27	32	18	3 57	5	47 105
2	210	34.3		44.9	220	53.5	+12 10.0	56	2 45	43	26	4 04	9	38 99
3	225	34.4		45.7	235	22.4	99 26.1	54	3 00	3 52	33	10 12		29 95
4	240	34.5		46.5	249	51.3	99 42.0	52	12	4 01	39	15 16		21 92
5	255	34.6	+13	47.3	264	20.1	98 +12 57.9	50	3 23	4 08	4 44	4 20	18	19 15 88
6	270	34.7	+13	48.1	278	48.9	98 +13 13.7	45	3 45	4 24	4 56	4 30	25	19 00 82
7	285	34.8		48.9	293	17.6	97 29.4	40	4 02	37	5 06	39 29		18 48 77
8	300	34.9		49.7	307	46.3	97 +13 45.0	35	15	47	14	46 34		38 73
9	315	35.0		50.5	322	14.9	96 +14 00.5	30	26	4 56	21	4 53 37		29 70
10	330	35.1		51.3	336	43.5	96 16.0	20	44	5 11	34	5 04 43		14 64
11	345	35.2	+13	52.1	351	12.0	95 +14 31.3	10 N	4 57	5 23	5 44	5 14 49		18 01 59
12	0	35.3	+13	52.9	5	40.4	94 +14 46.6	0	5 08	5 33	5 54	5 24 53		17 49 54
13	15	35.4		53.7	20	08.8	94 +15 01.8	10 S	18	43	6 04	34 58		37 50
14	30	35.5		54.4	34	37.1	93 16.9	20	26	5 52	15	44 63		24 45
15	45	35.6		55.2	49	05.4	93 31.8	30	33	6 02	26	5 57 69		09 39
16	60	35.6		56.0	63	33.6	92 +15 46.7	35	37	07	33	6 04 72		17 01 36
17	75	35.7	+13	56.8	78	01.7	91 +16 01.5	40	5 41	6 13	6 41	6 12 77		16 51 32
18	90	35.8	+13	57.6	92	29.8	91 +16 16.2	45	5 45	6 19	6 50	6 21 82		16 40 27
19	105	35.9		58.4	106	57.8	90 30.8	50	48	27	7 00	33 88		26 22
20	120	36.0	+13	59.2	121	25.8	90 45.2	52	50	30	05	38 92		20 18
21	135	36.1	+14	00.0	135	53.7	89 +16 59.6	54	52	33	11	44 95		13 15
22	150	36.2	+14	00.8	150	21.5	88 +17 13.9	56	53	37	17	51 99		16 05 11
23	165	36.3		01.6	164	49.3	88 28.0	58	55	42	23	6 58 105		15 57 6
24	180	36.4	+14	02.4	179	17.0	87 +17 42.0	60 S	5 57	6 46	7 31	7 07 110		15 47 1

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 9 ^h 39 ^m 0		Mag: -4.2 PMG: 9 ^h 16 ^m		Mag: +1.5 PMG: 16 ^h 13 ^m		Mag: -2.5 PMG: 0 ^h 32 ^m		Mag: +0.3 PMG: 18 ^h 07 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	214	50.5	221	04.6	116	32.6	351	56.4	87	31.0
1	229	52.9	236	04.4	131	33.4	6	59.2	102	33.3
2	244	55.4	251	04.3	146	34.3	22	02.0	117	35.7
3	259	57.9	266	04.1	161	35.1	37	04.7	132	38.1
4	275	00.3	281	03.9	176	36.0	52	07.5	147	40.4
5	290	02.8	296	03.8	191	36.8	67	10.3	162	42.8
6	305	05.3	311	03.6	206	37.7	82	13.0	177	45.2
7	320	07.7	326	03.4	221	38.5	97	15.8	192	47.5
8	335	10.2	341	03.3	236	39.4	112	18.6	207	49.9
9	350	12.7	356	03.1	251	40.3	127	21.4	222	52.3
10	5	15.1	11	02.9	266	41.1	142	24.1	237	54.6
11	20	17.6	26	02.8	281	42.0	157	26.9	252	57.0
12	35	20.1	41	02.6	296	42.8	172	29.7	267	59.3
13	50	22.5	56	02.4	311	43.7	187	32.5	283	01.7
14	65	25.0	71	02.3	326	44.5	202	35.2	298	04.1
15	80	27.4	86	02.1	341	45.4	217	38.0	313	06.4
16	95	29.9	101	02.0	356	46.2	232	40.8	328	08.8
17	110	32.4	116	01.8	11	47.1	247	43.6	343	11.2
18	125	34.8	131	01.6	26	48.0	262	46.3	358	13.5
19	140	37.3	146	01.5	41	48.8	277	49.1	13	15.9
20	155	39.8	161	01.3	56	49.7	292	51.9	28	18.2
21	170	42.2	176	01.1	71	50.5	307	54.7	43	20.6
22	185	44.7	191	01.0	86	51.4	322	57.4	58	23.0
23	200	47.2	206	00.8	101	52.2	338	00.2	73	25.3
24	215	49.6	221	00.6	116	53.1	353	03.0	88	27.7
Dif	—		-2	+10	+9	-1	+28	+1	+24	0

UT	SOL				● LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna					
	SD: 15'9 PMG: 11 ^h 57 ^m 5				Edad: 29 ^d 6 PHE { 4 ^h : 59'4 12 ^h : 59'2 20 ^h : 59'0 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		
0	180	36.4	+14	02.4	179	17.0	+17	42.0	60 N	19 50	20 42	22 00	3 50	3	21 50	112					
1	195	36.5		03.2	193	44.7 ⁸⁷	+17	56.0 ¹⁴⁰	58	41	28	21 35	4 02	9	32	103					
2	210	36.6		04.0	208	12.3 ⁸⁶	+18	09.8 ¹³⁸	56	33	17	16	13	14	17	96					
3	225	36.7		04.7	222	39.8 ⁸⁵		23.5 ¹³⁷	54	26	20 07	21 00	22	19	21	04	92				
4	240	36.8		05.5	237	07.3 ⁸⁵		37.0 ¹³⁵	52	20	19 58	20 47	31	21	20	53	88				
5	255	36.9	+14	06.3	251	34.7 ⁸⁴	+18	50.5 ¹³⁵	50	19 14	19 50	20 36	4 38	25	20	43	85				
6	270	37.0	+14	07.1	266	02.0 ⁸³	+19	03.8 ¹³³	45	19 02	19 34	20 13	4 55	30	20	22	79				
7	285	37.0		07.9	280	29.3 ⁸³		17.0 ¹³²	40	18 51	21	19 56	5 08	35	20	05	75				
8	300	37.1		08.7	294	56.5 ⁸²		30.1 ¹³¹	35	43	10	42	20	38	19	51	72				
9	315	37.2		09.5	309	23.7 ⁸²		43.1 ¹³⁰	30	35	19 00	30	30	42	39	69					
10	330	37.3		10.3	323	50.8 ⁸¹	+19	55.9 ¹²⁸	20	22	18 45	19 12	5 47	47	18	64					
11	345	37.4	+14	11.0	338	17.8 ⁸⁰	+20	08.6 ¹²⁷	10 N	18 11	18 33	18 58	6 03	51	19	00	60				
12	0	37.5	+14	11.8	352	44.7 ⁷⁹	+20	21.2 ¹²⁶	0	18 01	18 22	18 47	6 17	56	18	43	57				
13	15	37.6		12.6	7	11.6 ⁷⁹		33.6 ¹²⁴	10 S	17 51	12	37	32	59	27	53					
14	30	37.7		13.4	21	38.5 ⁷⁹		45.9 ¹²³	20	40	18 03	29	6 47	65	18	09	49				
15	45	37.8		14.2	36	05.3 ⁷⁸	+20	58.1 ¹²²	30	28	17 52	21	7 06	69	17	48	45				
16	60	37.9		15.0	50	32.0 ⁷⁷	+21	10.1 ¹²⁰	35	21	47	17	16	73	37	42					
17	75	38.0	+14	15.8	64	58.6 ⁷⁶	+21	22.0 ¹¹⁹	40	17 13	17 41	18 13	7 29	76	17	23	39				
18	90	38.0	+14	16.5	79	25.2 ⁷⁶	+21	33.8 ¹¹⁸	45	17 04	17 34	18 09	7 43	81	17	07	34				
19	105	38.1		17.3	93	51.8 ⁷⁶		45.4 ¹¹⁶	50	16 53	26	04	8 01	88	16	48	28				
20	120	38.2		18.1	108	18.2 ⁷⁴	+21	56.9 ¹¹⁵	52	47	23	03	10	90	38	26					
21	135	38.3		18.9	122	44.6 ⁷⁴	+22	08.2 ¹¹³	54	42	19	18 01	19	95	28	22					
22	150	38.4		19.7	137	11.0 ⁷⁴		19.4 ¹¹²	56	36	15	17 59	30	99	16	18					
23	165	38.5		20.4	151	37.3 ⁷³		30.4 ¹¹⁰	58	29	11	57	43	105	16	03	12				
24	180	38.6	+14	21.2	166	03.5 ⁷²	+22	41.3 ¹⁰⁹	60 S	16 21	17 06	17 55	8 57	114	15	48	3				
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO						
	PMG: 9 ^h 35 ^m 1		Mag: -4.2 PMG: 9 ^h 16 ^m				Mag: +1.5 PMG: 16 ^h 12 ^m				Mag: -2.5 PMG: 0 ^h 28 ^m				Mag: +0.3 PMG: 18 ^h 03 ^m						
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec				
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	215	49.6	221	00.6	-3	24.9	116	53.1	+24	46.8	353	03.0	-15	00.3	88	27.7	103	30.1	+19	47.0	
1	230	52.1	236	00.5		24.0	131	53.9		46.7	8	05.8		00.2	103	30.1				47.0	
2	245	54.5	251	00.3		23.0	146	54.8		46.6	23	08.5	-15	00.1	118	32.4				47.0	
3	260	57.0	266	00.1		22.0	161	55.6		46.5	38	11.3	-15	00.0	133	34.8				47.0	
4	275	59.5	281	00.0		21.0	176	56.5		46.4	53	14.1	-15	00.0	148	37.1				47.0	
5	291	01.9	295	59.8	-3	20.0	191	57.4	+24	46.3	68	16.9	-14	59.9	163	39.5	+19			46.9	
6	306	04.4	310	59.6	-3	19.1	206	58.2	+24	46.2	83	19.6	-14	59.8	178	41.9	+19			46.9	
7	321	06.9	325	59.5		18.1	221	59.1		46.1	98	22.4		59.7	193	44.2				46.9	
8	336	09.3	340	59.3		17.1	236	59.9		46.0	113	25.2		59.6	208	46.6				46.9	
9	351	11.8	355	59.1		16.1	252	00.8		45.9	128	28.0		59.5	223	48.9				46.8	
10	6	14.3	10	59.0		15.2	267	01.6		45.8	143	30.7		59.4	238	51.3				46.8	
11	21	16.7	25	58.8	-3	14.2	282	02.5	+24	45.7	158	33.5	-14	59.3	253	53.7	+19			46.8	
12	36	19.2	40	58.6	-3	13.2	297	03.3	+24	45.6	173	36.3	-14	59.2	268	56.0	+19			46.8	
13	51	21.7	55	58.5		12.2	312	04.2		45.5	188	39.1		59.1	283	58.4				46.7	
14	66	24.1	70	58.3		11.2	327	05.0		45.4	203	41.8		59.1	299	00.7				46.7	
15	81	26.6	85	58.1		10.2	342	05.9		45.3	218	44.6		59.0	314	03.1				46.7	
16	96	29.0	100	58.0		09.3	357	06.8		45.2	233	47.4		58.9	329	05.4				46.7	
17	111	31.5	115	57.8	-3	08.3	12	07.6	+24	45.1	248	50.2	-14	58.8	344	07.8	+19			46.6	
18	126	34.0	130	57.6	-3	07.3	27	08.5	+24	44.9	263	53.0	-14	58.7	359	10.2	+19			46.6	
19	141	36.4	145	57.5		06.3	42	09.3		44.8	278	55.7		58.6	14	12.5				46.6	
20	156	38.9	160	57.3		05.3	57	10.2		44.7	293	58.5		58.5	29	14.9				46.6	
21	171	41.4	175	57.1		04.4	72	11.0		44.6	309	01.3		58.4	44	17.2				46.5	
22	186	43.8	190	57.0		03.4	87	11.9		44.5	324	04.1		58.3	59	19.6				46.5	
23	201	46.3	205	56.8		02.4	102	12.7		44.4	339	06.8		58.2	74	22.0				46.5	
24	216	48.8	220	56.6	-3	01.4	117	13.6	+24	44.3	354	09.6	-14	58.1	89	24.3	+19			46.5	
Dif	—		-2		+10		+9		-1		+28		+1		+24		0				

UT	SOL				● LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 15 ^h 9 PMG: 11 ^h 57 ^m 4				Edad: 1 ^d 2 PHE { 4 ^h : 58 [′] 8 12 ^h : 58 [′] 5 20 ^h : 58 [′] 2 R ^o : 58 ^m															
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°				
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m		
0	180	38.6	+14	21.2	166	03.5	+22	41.3	60 N	1 54	3 12	4 04	3 53	7	23 42	100				
1	195	38.7		22.0	180	29.7	72	+22 52.1	58	2 19	26	13	4 11	17	23 15	89				
2	210	38.7		22.8	194	55.8	71	+23 02.7	56	38	37	21	27 23		22 53	84				
3	225	38.8		23.6	209	21.9	71	13.1	54	2 54	47	28	41 27		36 80					
4	240	38.9		24.3	223	47.9	70	23.4	52	3 07	3 56	35	4 52	31	21 77					
5	255	39.0	+14	25.1	238	13.9	70	+23 33.6	50	3 18	4 04	4 40	5 03	33	22 08	75				
6	270	39.1	+14	25.9	252	39.8	69	+23 43.6	45	3 41	4 21	4 53	5 25	39	21 41	72				
7	285	39.2		26.7	267	05.7	69	+23 53.4	40	3 59	34	5 03	43 43		20 69					
8	300	39.3		27.5	281	31.5	68	+24 03.1	35	4 12	45	12	5 58	46	21 03	67				
9	315	39.4		28.2	295	57.2	67	12.6	30	24	4 54	19	6 12	47	20 48	65				
10	330	39.4		29.0	310	22.9	67	22.0	20	42	5 09	32	34 52		22 63					
11	345	39.5	+14	29.8	324	48.6	67	+24 31.2	10 N	4 56	5 22	5 43	6 54	55	20 00	61				
12	0	39.6	+14	30.6	339	14.2	66	+24 40.3	0	5 08	5 33	5 54	7 13	57	19 40	58				
13	15	39.7		31.3	353	39.8	66	49.2	10 S	18	43	6 04	31 61		19 20	56				
14	30	39.8		32.1	8	05.3	65	+24 57.9	20	26	5 53	15	7 52	63	18 58	54				
15	45	39.9		32.9	22	30.8	65	+25 06.5	30	35	6 03	28	8 15	68	33 51					
16	60	40.0		33.7	36	56.2	64	14.9	35	39	09	35	29 70		19 48					
17	75	40.0	+14	34.4	51	21.6	64	+25 23.1	40	5 43	6 15	6 43	8 45	72	18 02	46				
18	90	40.1	+14	35.2	65	47.0	64	+25 31.2	45	5 47	6 21	6 52	9 04	76	17 41	44				
19	105	40.2		36.0	80	12.3	63	39.1	50	51	29	7 03	29 81		16 39					
20	120	40.3		36.8	94	37.6	63	46.8	52	53	33	09	40 84		17 04	36				
21	135	40.4		37.5	109	02.8	62	+25 54.4	54	55	37	14	9 54	87	16 50	33				
22	150	40.5		38.3	123	28.1	63	+26 01.8	56	57	41	21	10 09	92	34 29					
23	165	40.5		39.1	137	53.2	61	09.0	58	5 59	46	28	28 98		16 15	22				
24	180	40.6	+14	39.8	152	18.4	62	+26 16.1	60 S	6 01	6 51	7 36	10 51	110	15 51	11				
UT	ARIES				VENUS				MARTE				JÚPITER				SATURNO			
	PMG 9 ^h 31 ^m 2				Mag: -4.2 PMG: 9 ^h 16 ^m				Mag: +1.5 PMG: 16 ^h 10 ^m				Mag: -2.5 PMG: 0 ^h 23 ^m				Mag: +0.3 PMG: 18 ^h 00 ^m			
	hG ♈		Dec		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	216	48.8	220	56.6	-3	01.4	117	13.6	+24	44.3	354	09.6	-14	58.1	89	24.3	+19	46.5		
1	231	51.2	235	56.5	-3	00.4	132	14.4		44.2	9	12.4		58.1	104	26.7		46.4		
2	246	53.7	250	56.3	-2	59.4	147	15.3		44.1	24	15.2		58.0	119	29.0		46.4		
3	261	56.2	265	56.1		58.4	162	16.2		44.0	39	17.9		57.9	134	31.4		46.4		
4	276	58.6	280	56.0		57.5	177	17.0		43.9	54	20.7		57.8	149	33.7		46.4		
5	292	01.1	295	55.8	-2	56.5	192	17.9	+24	43.8	69	23.5	-14	57.7	164	36.1	+19	46.3		
6	307	03.5	310	55.6	-2	55.5	207	18.7	+24	43.6	84	26.3	-14	57.6	179	38.4	+19	46.3		
7	322	06.0	325	55.5		54.5	222	19.6		43.5	99	29.0		57.5	194	40.8		46.3		
8	337	08.5	340	55.3		53.5	237	20.4		43.4	114	31.8		57.4	209	43.2		46.3		
9	352	10.9	355	55.1		52.5	252	21.3		43.3	129	34.6		57.3	224	45.5		46.2		
10	7	13.4	10	54.9		51.5	267	22.1		43.2	144	37.4		57.2	239	47.9		46.2		
11	22	15.9	25	54.8	-2	50.6	282	23.0	+24	43.1	159	40.2	-14	57.1	254	50.2	+19	46.2		
12	37	18.3	40	54.6	-2	49.6	297	23.8	+24	43.0	174	42.9	-14	57.1	269	52.6	+19	46.2		
13	52	20.8	55	54.4		48.6	312	24.7		42.9	189	45.7		57.0	284	54.9		46.1		
14	67	23.3	70	54.3		47.6	327	25.6		42.7	204	48.5		56.9	299	57.3		46.1		
15	82	25.7	85	54.1		46.6	342	26.4		42.6	219	51.3		56.8	314	59.6		46.1		
16	97	28.2	100	53.9		45.6	357	27.3		42.5	234	54.0		56.7	330	02.0		46.1		
17	112	30.7	115	53.8	-2	44.6	12	28.1	+24	42.4	249	56.8	-14	56.6	345	04.3	+19	46.0		
18	127	33.1	130	53.6	-2	43.6	27	29.0	+24	42.3	264	59.6	-14	56.5	0	06.7	+19	46.0		
19	142	35.6	145	53.4		42.6	42	29.8		42.2	280	02.4		56.4	15	09.1		46.0		
20	157	38.0	160	53.3		41.7	57	30.7		42.1	295	05.1		56.3	30	11.4		46.0		
21	172	40.5	175	53.1		40.7	72	31.5		41.9	310	07.9		56.2	45	13.8		45.9		
22	187	43.0	190	52.9		39.7	87	32.4		41.8	325	10.7		56.1	60	16.1		45.9		
23	202	45.4	205	52.8		38.7	102	33.2		41.7	340	13.5		56.0	75	18.5		45.9		
24	217	47.9	220	52.6	-2	37.7	117	34.1	+24	41.6	355	16.3	-14	56.0	90	20.8	+19	45.9		
Dif	—		-2		+10		+9		-1		+28		+1		+24		0			

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 15'9 PMG: 11 ^h 57 ^m 2			Edad: 2 ^d 2 PHE { 4 ^h : 58'0 12 ^h : 57'7 SD: 15'8 20 ^h : 57'4 PMG: 14 ^h 24 ^m R°: 59 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m	m	h m	m
0	180	40.6	+14	39.8	152	18.4	+26	16.1	60 N	19 55	20 48	22 10	4 00 22	*** ** *	*** ** *
1	195	40.7		40.6	166	43.5		23.0	58	45	34	21 43	28 33	*** ** *	*** ** *
2	210	40.8		41.4	181	08.6		29.7	56	37	21	22	4 50 38	*** ** *	*** ** *
3	225	40.9		42.2	195	33.7		36.3	54	30	11	21 06	5 08 41	23 56 61	23 56 61
4	240	40.9		42.9	209	58.7		42.7	52	23	20 02	20 52	23 44	38 61	38 61
5	255	41.0	+14	43.7	224	23.8	+26	48.9	50	19 17	19 53	20 40	5 36 46	23 23 61	23 23 61
6	270	41.1	+14	44.5	238	48.8	+26	54.9	45	19 04	19 36	20 16	6 04 48	22 53 60	22 53 60
7	285	41.2		45.2	253	13.8	+27	00.8	40	18 53	23	19 58	26 50	29 60	29 60
8	300	41.3		46.0	267	38.7		06.5	35	44	11	44	44 52	22 10 59	22 10 59
9	315	41.4		46.8	282	03.7		12.0	30	37	19 02	32	6 59 54	21 53 59	21 53 59
10	330	41.4		47.5	296	28.6		17.4	20	23	18 46	19 13	7 26 55	25 59	25 59
11	345	41.5	+14	48.3	310	53.5	+27	22.5	10 N	18 11	18 33	18 59	7 49 57	21 01 58	21 01 58
12	0	41.6	+14	49.1	325	18.5	+27	27.5	0	18 01	18 22	18 47	8 10 59	20 38 58	20 38 58
13	15	41.7		49.8	339	43.4		32.4	10 S	17 50	12	37	32 60	20 16 57	20 16 57
14	30	41.8		50.6	354	08.3		37.0	20	39	18 01	28	8 55 61	19 52 57	19 52 57
15	45	41.8		51.4	8	33.2		41.5	30	26	17 51	19	9 23 62	24 56	24 56
16	60	41.9		52.1	22	58.1		45.8	35	19	45	15	39 63	19 07 56	19 07 56
17	75	42.0	+14	52.9	37	23.0	+27	49.9	40	17 10	17 38	18 10	9 57 65	18 48 55	18 48 55
18	90	42.1	+14	53.6	51	47.9	+27	53.9	45	17 01	17 31	18 06	10 20 66	18 25 53	18 25 53
19	105	42.1		54.4	66	12.8	+27	57.7	50	16 49	23	18 01	10 50 68	17 55 52	17 55 52
20	120	42.2		55.2	80	37.7	+28	01.3	52	44	19	17 59	11 04 69	40 51	40 51
21	135	42.3		55.9	95	02.6		04.7	54	38	15	57	21 71	23 50	23 50
22	150	42.4		56.7	109	27.5		08.0	56	31	11	55	11 41 73	17 03 48	17 03 48
23	165	42.5		57.5	123	52.5		11.0	58	24	06	53	12 06 77	16 37 45	16 37 45
24	180	42.5	+14	58.2	138	17.4	+28	13.9	60 S	16 15	17 01	17 50	12 41 86	16 02 36	16 02 36

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 9 ^h 27 ^m 3		Mag: -4.2 PMG: 9 ^h 17 ^m		Mag: +1.5 PMG: 16 ^h 09 ^m		Mag: -2.5 PMG: 0 ^h 19 ^m		Mag: +0.3 PMG: 17 ^h 56 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	217	47.9	220	52.6	-2	37.7	117	34.1	355	16.3
1	232	50.4	235	52.4		36.7	132	34.9	10	19.0
2	247	52.8	250	52.3		35.7	147	35.8	25	21.8
3	262	55.3	265	52.1		34.7	162	36.7	40	24.6
4	277	57.8	280	51.9		33.7	177	37.5	55	27.4
5	293	00.2	295	51.7	-2	32.7	192	38.4	70	30.1
6	308	02.7	310	51.6	-2	31.7	207	39.2	85	32.9
7	323	05.1	325	51.4		30.7	222	40.1	100	35.7
8	338	07.6	340	51.2		29.7	237	40.9	115	38.5
9	353	10.1	355	51.1		28.8	252	41.8	130	41.3
10	8	12.5	10	50.9		27.8	267	42.6	145	44.0
11	23	15.0	25	50.7	-2	26.8	282	43.5	160	46.8
12	38	17.5	40	50.6	-2	25.8	297	44.3	175	49.6
13	53	19.9	55	50.4		24.8	312	45.2	190	52.4
14	68	22.4	70	50.2		23.8	327	46.0	205	55.1
15	83	24.9	85	50.0		22.8	342	46.9	220	57.9
16	98	27.3	100	49.9		21.8	357	47.7	236	00.7
17	113	29.8	115	49.7	-2	20.8	12	48.6	251	03.5
18	128	32.3	130	49.5	-2	19.8	27	49.5	266	06.3
19	143	34.7	145	49.4		18.8	42	50.3	281	09.0
20	158	37.2	160	49.2		17.8	57	51.2	296	11.8
21	173	39.6	175	49.0		16.8	72	52.0	311	14.6
22	188	42.1	190	48.9		15.8	87	52.9	326	17.4
23	203	44.6	205	48.7		14.8	102	53.7	341	20.2
24	218	47.0	220	48.5	-2	13.8	117	54.6	356	22.9
Dif	—		-2		+10		+9		-1	
									+28	
									+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: 3 ^d 2 SD: 15 ^h 6 PMG: 15 ^h 23 ^m											
	hG ☉	Dec	hG ☾	Dif	Dec	Dif	Náutico	Civil		Hora	R°		Hora	R°		
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m
0	180	42.5	+14	58.2	138	17.4	+28	13.9	60 N	1 43	3 06	3 58	4 22	58	1 22	63
1	195	42.6		59.0	152	42.4		16.7	58	2 11	20	4 08	5 01	58	0 44	62
2	210	42.7	+14	59.7	167	07.4		19.2	56	31	32	17	28	58	0 17	61
3	225	42.8	+15	00.5	181	32.4		21.6	54	2 48	43	24	5 49	58	** ** *	
4	240	42.8		01.3	195	57.4		23.8	52	3 02	3 52	31	6 07	58	** ** *	
5	255	42.9	+15	02.0	210	22.5	+28	25.9	50	3 14	4 00	4 37	6 22	58	** ** *	
6	270	43.0	+15	02.8	224	47.5	+28	27.7	45	3 37	4 17	4 50	6 52	59	23 53	47
7	285	43.1		03.5	239	12.6		29.4	40	3 56	31	5 00	7 16	58	29	49
8	300	43.1		04.3	253	37.8		30.9	35	4 10	42	09	36	58	23 09	51
9	315	43.2		05.0	268	02.9		32.3	30	22	4 52	17	7 53	58	22 52	52
10	330	43.3		05.8	282	28.1		33.5	20	41	5 08	31	8 21	58	22 24	53
11	345	43.4	+15	06.6	296	53.3	+28	34.5	10 N	4 55	5 21	5 43	8 46	57	21 59	55
12	0	43.4	+15	07.3	311	18.6	+28	35.3	0	5 07	5 32	5 54	9 09	57	21 36	56
13	15	43.5		08.1	325	43.9		36.0	10 S	18	43	6 04	32	56	21 13	57
14	30	43.6		08.8	340	09.2		36.4	20	27	5 53	16	9 56	56	20 49	58
15	45	43.7		09.6	354	34.6		36.8	30	36	6 04	29	10 25	55	20	59
16	60	43.7		10.3	9	00.1		36.9	35	40	10	36	10 42	55	20 03	60
17	75	43.8	+15	11.1	23	25.5	+28	36.9	40	5 44	6 16	6 45	11 02	54	19 43	61
18	90	43.9	+15	11.8	37	51.1	+28	36.7	45	5 49	6 24	6 55	11 26	54	19 18	63
19	105	44.0		12.6	52	16.6		36.4	50	54	32	7 06	11 58	52	18 47	64
20	120	44.0		13.3	66	42.3		35.9	52	56	36	12	12 13	52	31	66
21	135	44.1		14.1	81	07.9		35.2	54	5 58	40	18	32	50	18 13	67
22	150	44.2		14.8	95	33.7		34.4	56	6 00	45	25	12 54	49	17 51	68
23	165	44.2		15.6	109	59.5		33.4	58	03	49	32	13 23	46	17 22	71
24	180	44.3	+15	16.3	124	25.3	+28	32.2	60 S	6 05	6 55	7 41	14 07	38	16 38	79

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 9 ^h 23 ^m 3		Mag: -4.2 PMG: 9 ^h 17 ^m		Mag: +1.5 PMG: 16 ^h 07 ^m		Mag: -2.5 PMG: 0 ^h 14 ^m		Mag: +0.3 PMG: 17 ^h 52 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	218	47.0	220	48.5	-2	13.8	117	54.6	+24	38.7
1	233	49.5	235	48.3		12.8	132	55.4		38.6
2	248	52.0	250	48.2		11.8	147	56.3		38.5
3	263	54.4	265	48.0		10.8	162	57.1		38.4
4	278	56.9	280	47.8		09.8	177	58.0		38.3
5	293	59.4	295	47.7	-2	08.8	192	58.8	+24	38.1
6	309	01.8	310	47.5	-2	07.8	207	59.7	+24	38.0
7	324	04.3	325	47.3		06.8	223	00.5		37.9
8	339	06.8	340	47.2		05.8	238	01.4		37.8
9	354	09.2	355	47.0		04.8	253	02.3		37.6
10	9	11.7	10	46.8		03.8	268	03.1		37.5
11	24	14.1	25	46.6	-2	02.8	283	04.0	+24	37.4
12	39	16.6	40	46.5	-2	01.8	298	04.8	+24	37.3
13	54	19.1	55	46.3	-2	00.8	313	05.7		37.1
14	69	21.5	70	46.1	-1	59.8	328	06.5		37.0
15	84	24.0	85	46.0		58.8	343	07.4		36.9
16	99	26.5	100	45.8		57.8	358	08.2		36.8
17	114	28.9	115	45.6	-1	56.8	13	09.1	+24	36.6
18	129	31.4	130	45.4	-1	55.8	28	09.9	+24	36.5
19	144	33.9	145	45.3		54.8	43	10.8		36.4
20	159	36.3	160	45.1		53.8	58	11.6		36.2
21	174	38.8	175	44.9		52.8	73	12.5		36.1
22	189	41.3	190	44.7		51.8	88	13.3		36.0
23	204	43.7	205	44.6		50.8	103	14.2		35.9
24	219	46.2	220	44.4	-1	49.8	118	15.1	+24	35.7
Dif	—		-2	+10		+9	-1	+28		+1

0	180	42.5	+14	58.2	138	17.4	+28	13.9	60 N	1 43	3 06	3 58	4 22	58	1 22	63
1	195	42.6		59.0	152	42.4		16.7	58	2 11	20	4 08	5 01	58	0 44	62
2	210	42.7	+14	59.7	167	07.4		19.2	56	31	32	17	28	58	0 17	61
3	225	42.8	+15	00.5	181	32.4		21.6	54	2 48	43	24	5 49	58	** ** *	
4	240	42.8		01.3	195	57.4		23.8	52	3 02	3 52	31	6 07	58	** ** *	
5	255	42.9	+15	02.0	210	22.5	+28	25.9	50	3 14	4 00	4 37	6 22	58	** ** *	
6	270	43.0	+15	02.8	224	47.5	+28	27.7	45	3 37	4 17	4 50	6 52	59	23 53	47
7	285	43.1		03.5	239	12.6		29.4	40	3 56	31	5 00	7 16	58	29	49
8	300	43.1		04.3	253	37.8		30.9	35	4 10	42	09	36	58	23 09	51
9	315	43.2		05.0	268	02.9		32.3	30	22	4 52	17	7 53	58	22 52	52
10	330	43.3		05.8	282	28.1		33.5	20	41	5 08	31	8 21	58	22 24	53
11	345	43.4	+15	06.6	296	53.3	+28	34.5	10 N	4 55	5 21	5 43	8 46	57	21 59	55
12	0	43.4	+15	07.3	311	18.6	+28	35.3	0	5 07	5 32	5 54	9 09	57	21 36	56
13	15	43.5		08.1	325	43.9		36.0	10 S	18	43	6 04	32	56	21 13	57
14	30	43.6		08.8	340	09.2		36.4	20	27	5 53	16	9 56	56	20 49	58
15	45	43.7		09.6	354	34.6		36.8	30	36	6 04	29	10 25	55	20	59
16	60	43.7		10.3	9	00.1		36.9	35	40	10	36	10 42	55	20 03	60
17	75	43.8	+15	11.1	23	25.5	+28	36.9	40	5 44	6 16	6 45	11 02	54	19 43	61
18	90	43.9	+15	11.8	37	51.1	+28	36.7	45	5 49	6 24	6 55	11 26	54	19 18	63
19	105	44.0		12.6	52	16.6		36.4	50	54	32	7 06	11 58	52	18 47	64
20	120	44.0		13.3	66	42.3		35.9	52	56	36	12	12 13	52	31	66
21	135	44.1		14.1	81	07.9		35.2	54	5 58	40	18	32	50	18 13	67
22	150	44.2		14.8	95	33.7		34.4	56	6 00	45	25	12 54	49	17 51	68
23	165	44.2		15.6	109	59.5		33.4	58	03	49	32	13 23	46	17 22	71
24	180	44.3	+15	16.3	124	25.3	+28	32.2	60 S	6 05	6 55	7 41	14 07	38	16 38	79

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: 4 ^d 2 PHE { 4 ^h : 56/3 12 ^h : 56/1 20 ^h : 55/8 R°: 53 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m	h m	h m
0	180	44.3	+15	16.3	124	25.3	+28	32.2	60 N	20 00	20 54	22 21	5 20 90	2 25 23
1	195	44.4		17.1	138	51.2		30.9	58	19 50	39	21 51	5 59 80	1 46 33
2	210	44.5		17.8	153	17.2		29.4	56	41	26	29	6 26 75	1 18 38
3	225	44.5		18.6	167	43.2		27.7	54	33	15	21 11	6 47 73	0 57 41
4	240	44.6		19.3	182	09.3		25.9	52	26	20 05	20 57	7 05 70	39 43
5	255	44.7	+15	20.1	196	35.5	+28	23.9	50	19 20	19 57	20 44	7 20 69	0 24 44
6	270	44.7	+15	20.8	211	01.7	+28	21.8	45	19 07	19 39	20 20	7 51 65	*** **
7	285	44.8		21.6	225	28.0		19.5	40	18 55	25	20 01	8 14 63	*** **
8	300	44.9		22.3	239	54.4		17.1	35	46	13	19 46	34 61	*** **
9	315	45.0		23.1	254	20.8		14.5	30	38	19 03	34	8 51 59	23 44 43
10	330	45.0		23.8	268	47.3		11.7	20	24	18 47	19 14	9 19 57	23 17 47
11	345	45.1	+15	24.6	283	13.9	+28	08.8	10 N	18 12	18 34	18 59	9 43 56	22 54 49
12	0	45.2	+15	25.3	297	40.5	+28	05.8	0	18 00	18 22	18 47	10 06 53	22 32 52
13	15	45.2		26.1	312	07.3	+28	02.6	10 S	17 49	11	36	28 52	22 10 54
14	30	45.3		26.8	326	34.1	+27	59.2	20	38	18 00	27	10 52 50	21 47 57
15	45	45.4		27.5	341	01.0		55.7	30	24	17 49	17	11 20 48	19 60
16	60	45.4		28.3	355	28.0		52.1	35	17	43	13	37 46	21 03 62
17	75	45.5	+15	29.0	9	55.0	+27	48.3	40	17 08	17 36	18 08	11 56 44	20 44 64
18	90	45.6	+15	29.8	24	22.2	+27	44.3	45	16 58	17 29	18 03	12 20 41	20 21 67
19	105	45.6		30.5	38	49.4		40.2	50	46	20	17 58	12 50 37	19 51 72
20	120	45.7		31.3	53	16.7		36.0	52	40	16	56	13 05 35	37 74
21	135	45.8		32.0	67	44.1		31.6	54	34	12	54	22 32	19 20 77
22	150	45.8		32.7	82	11.6		27.1	56	27	07	51	13 43 28	18 59 81
23	165	45.9		33.5	96	39.1		22.4	58	19	17 02	49	14 09 22	18 33 87
24	180	46.0	+15	34.2	111	06.8	+27	17.6	60 S	16 10	16 56	17 46	14 45 12	17 57 98
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 9 ^h 19 ^m 4		Mag: -4.2 PMG: 9 ^h 17 ^m		Mag: +1.5 PMG: 16 ^h 06 ^m		Mag: -2.5 PMG: 0 ^h 10 ^m		Mag: +0.3 PMG: 17 ^h 48 ^m					
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	219	46.2	220	44.4	-1	49.8	118	15.1	357	29.6				
1	234	48.6	235	44.2		48.8	133	15.9	12	32.4				
2	249	51.1	250	44.1		47.7	148	16.8	27	35.2				
3	264	53.6	265	43.9		46.7	163	17.6	42	38.0				
4	279	56.0	280	43.7		45.7	178	18.5	57	40.7				
5	294	58.5	295	43.5	-1	44.7	193	19.3	72	43.5				
6	310	01.0	310	43.4	-1	43.7	208	20.2	87	46.3				
7	325	03.4	325	43.2		42.7	223	21.0	102	49.1				
8	340	05.9	340	43.0		41.7	238	21.9	117	51.9				
9	355	08.4	355	42.9		40.7	253	22.7	132	54.6				
10	10	10.8	10	42.7		39.7	268	23.6	147	57.4				
11	25	13.3	25	42.5	-1	38.7	283	24.4	163	00.2				
12	40	15.8	40	42.3	-1	37.7	298	25.3	178	03.0				
13	55	18.2	55	42.2		36.7	313	26.1	193	05.8				
14	70	20.7	70	42.0		35.7	328	27.0	208	08.5				
15	85	23.1	85	41.8		34.7	343	27.8	223	11.3				
16	100	25.6	100	41.6		33.6	358	28.7	238	14.1				
17	115	28.1	115	41.5	-1	32.6	13	29.6	253	16.9				
18	130	30.5	130	41.3	-1	31.6	28	30.4	268	19.7				
19	145	33.0	145	41.1		30.6	43	31.3	283	22.4				
20	160	35.5	160	40.9		29.6	58	32.1	298	25.2				
21	175	37.9	175	40.8		28.6	73	33.0	313	28.0				
22	190	40.4	190	40.6		27.6	88	33.8	328	30.8				
23	205	42.9	205	40.4		26.6	103	34.7	343	33.6				
24	220	45.3	220	40.3	-1	25.6	118	35.5	358	36.3				
Dif	—		-2		+10		+9		+28					
									+1					
									+23					
									0					

UT	SOL			 LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna				
	SD: 15 ^h 9 PMG: 11 ^h 56 ^m 9			Edad: 5 ^d 2 SD: 15 ^h 2 PMG: 17 ^h 12 ^m	PHE { 4 ^h : 55 ^m 6 12 ^h : 55 ^m 4 20 ^h : 55 ^m 2 R°: 48 ^m												
	hG ☉	Dec		hG ☾		Dif		Dec	Dif		Náutico	Civil	Hora	R°	Hora	R°	
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m	m
0	180	46.0	+15 34.2	111	06.8	+27 17.6		60 N	1 32	2 59	3 53	6 50	97	2 48	8		
1	195	46.0		125	34.5	12.7	49	58	2 02	3 14	4 03	7 19	88	2 19	16		
2	210	46.1		140	02.4	07.6	51	56	24	27	12	7 41	83	1 56	22		
3	225	46.2		154	30.3	02.4	52	54	42	38	20	8 00	78	38	26		
4	240	46.2		168	58.3	+26 57.1	53	52	2 57	48	27	15	75	22	29		
5	255	46.3	+15 37.9	183	26.4	+26 51.6	55	50	3 09	3 56	4 33	8 29	72	1 08	32		
6	270	46.4	+15 38.6	197	54.6	+26 46.0	56	45	3 34	4 14	4 47	8 56	68	0 40	36		
7	285	46.4		212	22.9	40.3	57	40	3 53	28	4 58	9 17	65	18	39		
8	300	46.5		226	51.2	34.4	59	35	4 08	40	5 07	35	62	0 00	41		
9	315	46.6		241	19.7	28.4	60	30	20	4 50	16	9 50	60	**	**	**	
10	330	46.6		255	48.3	22.3	61	20	39	5 07	30	10 16	56	**	**	**	
11	345	46.7	+15 42.3	270	16.9	+26 16.0	63	10 N	4 55	5 20	5 42	10 39	52	23 43	45		
12	0	46.7	+15 43.1	284	45.7	+26 09.6	64	0	5 07	5 32	5 53	10 59	50	23 24	48		
13	15	46.8		299	14.6	+26 03.1	65	10 S	18	43	6 05	11 20	47	23 04	52		
14	30	46.9		313	43.5	+25 56.5	66	20	28	5 54	17	11 42	44	22 44	54		
15	45	46.9		328	12.5	49.8	67	30	37	6 05	30	12 08	40	19	59		
16	60	47.0		342	41.7	42.9	69	35	41	11	38	23	37	22 05	61		
17	75	47.1	+15 46.7	357	10.9	+25 35.9	70	40	5 46	6 18	6 47	12 40	35	21 48	65		
18	90	47.1	+15 47.4	11	40.2	+25 28.8	71	45	5 51	6 26	6 57	13 01	31	21 28	68		
19	105	47.2		26	09.7	21.6	72	50	56	35	7 09	27	26	21 03	73		
20	120	47.2		40	39.2	14.2	74	52	5 59	39	15	40	23	20 51	76		
21	135	47.3		55	08.8	+25 06.8	74	54	6 01	43	21	13 54	21	37	79		
22	150	47.4		69	38.5	+24 59.2	76	56	04	48	28	14 11	17	20	84		
23	165	47.4		84	08.3	51.5	77	58	06	53	36	31	12	20 00	89		
24	180	47.5	+15 51.8	98	38.3	+24 43.7	78	60 S	6 09	6 59	7 45	14 57	3	19 35	97		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 9 ^h 15 ^m 5		Mag: -4.1 PMG: 9 ^h 17 ^m		Mag: +1.5 PMG: 16 ^h 05 ^m		Mag: -2.5 PMG: 0 ^h 06 ^m		Mag: +0.3 PMG: 17 ^h 45 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	220	45.3	220 40.3	-1 25.6	118 35.5	+24 32.6	358 36.3	-14 49.4	93 09.7	+19 43.9
1	235	47.8	235 40.1	24.6	133 36.4	32.4	13 39.1	49.3	108 12.1	43.9
2	250	50.3	250 39.9	23.5	148 37.2	32.3	28 41.9	49.2	123 14.4	43.8
3	265	52.7	265 39.7	22.5	163 38.1	32.2	43 44.7	49.1	138 16.8	43.8
4	280	55.2	280 39.6	21.5	178 38.9	32.0	58 47.5	49.0	153 19.1	43.8
5	295	57.6	295 39.4	-1 20.5	193 39.8	+24 31.9	73 50.2	-14 48.9	168 21.4	+19 43.7
6	311	00.1	310 39.2	-1 19.5	208 40.6	+24 31.7	88 53.0	-14 48.8	183 23.8	+19 43.7
7	326	02.6	325 39.0	18.5	223 41.5	31.6	103 55.8	48.7	198 26.1	43.7
8	341	05.0	340 38.9	17.5	238 42.4	31.5	118 58.6	48.6	213 28.5	43.7
9	356	07.5	355 38.7	16.5	253 43.2	31.3	134 01.4	48.5	228 30.8	43.6
10	11	10.0	10 38.5	15.4	268 44.1	31.2	149 04.1	48.5	243 33.1	43.6
11	26	12.4	25 38.3	-1 14.4	283 44.9	+24 31.1	164 06.9	-14 48.4	258 35.5	+19 43.6
12	41	14.9	40 38.2	-1 13.4	298 45.8	+24 30.9	179 09.7	-14 48.3	273 37.8	+19 43.5
13	56	17.4	55 38.0	12.4	313 46.6	30.8	194 12.5	48.2	288 40.1	43.5
14	71	19.8	70 37.8	11.4	328 47.5	30.6	209 15.3	48.1	303 42.5	43.5
15	86	22.3	85 37.6	10.4	343 48.3	30.5	224 18.0	48.0	318 44.8	43.5
16	101	24.7	100 37.5	09.4	358 49.2	30.4	239 20.8	47.9	333 47.2	43.4
17	116	27.2	115 37.3	-1 08.3	13 50.0	+24 30.2	254 23.6	-14 47.8	348 49.5	+19 43.4
18	131	29.7	130 37.1	-1 07.3	28 50.9	+24 30.1	269 26.4	-14 47.7	3 51.8	+19 43.4
19	146	32.1	145 36.9	06.3	43 51.7	29.9	284 29.2	47.6	18 54.2	43.3
20	161	34.6	160 36.8	05.3	58 52.6	29.8	299 31.9	47.5	33 56.5	43.3
21	176	37.1	175 36.6	04.3	73 53.4	29.7	314 34.7	47.4	48 58.8	43.3
22	191	39.5	190 36.4	03.3	88 54.3	29.5	329 37.5	47.3	64 01.2	43.2
23	206	42.0	205 36.2	02.3	103 55.1	29.4	344 40.3	47.3	79 03.5	43.2
24	221	44.5	220 36.1	-1 01.2	118 56.0	+24 29.2	359 43.1	-14 47.2	94 05.8	+19 43.2
Dif	—		-2	+10	+9	-1	+28	+1	+23	0

UT	SOL		 LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15'9		Edad: 6 ^d 2	PHE { 4 ^h : 55'0 12 ^h : 54'8 20 ^h : 54'7	SD: 15'0				Final del crepúsculo		Salida de Luna		Puesta de Luna	
	PMG: 11 ^h 56 ^m 8				PMG: 18 ^h 00 ^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	180	47.5	+15	51.8	98	38.3	+24 43.7	60 N	20 05	21 00	22 33	8 27 94	2 56 3	
1	195	47.5		52.6	113	08.3 ¹¹⁰	35.8 ⁷⁹	58	19 54	20 44	21 59	8 47 88	35 9	
2	210	47.6		53.3	127	38.4 ¹¹¹	27.8 ⁸⁰	56	45	31	35	9 04 83	18 14	
3	225	47.7		54.0	142	08.6 ¹¹²	19.7 ⁸¹	54	37	19	17	18 79	2 04 17	
4	240	47.7		54.7	156	38.9 ¹¹³	11.5 ⁸²	52	30	09	21 01	30 76	1 51 20	
5	255	47.8	+15	55.5	171	09.3 ¹¹⁴	+24 03.2 ⁸³	50	19 23	20 00	20 48	9 41 73	1 40 22	
6	270	47.8	+15	56.2	185	39.7 ¹¹⁴	+23 54.7 ⁸⁵	45	19 09	19 42	20 23	10 04 68	1 16 28	
7	285	47.9		56.9	200	10.3 ¹¹⁶	46.2 ⁸⁵	40	18 57	27	20 03	22 64	0 57 31	
8	300	48.0		57.6	214	41.0 ¹¹⁷	37.5 ⁸⁷	35	48	15	19 48	37 60	41 35	
9	315	48.0		58.4	229	11.8 ¹¹⁸	28.8 ⁸⁷	30	39	19 05	35	10 50 58	27 37	
10	330	48.1		59.1	243	42.6 ¹¹⁸	20.0 ⁸⁸	20	25	18 48	15	11 12 53	0 04 41	
11	345	48.1	+15	59.8	258	13.6 ¹²⁰	+23 11.0 ⁹⁰	10 N	18 12	18 34	19 00	11 31 50	** ** *	**
12	0	48.2	+16	00.5	272	44.7 ¹²¹	+23 02.0 ⁹¹	0	18 00	18 22	18 47	11 49 46	** ** *	**
13	15	48.3		01.3	287	15.8 ¹²¹	+22 52.9 ⁹¹	10 S	17 49	18 10	36	12 07 42	23 56 48	
14	30	48.3		02.0	301	47.0 ¹²²	43.6 ⁹³	20	36	17 59	26	26 38	38 52	
15	45	48.4		02.7	316	18.4 ¹²⁴	34.3 ⁹³	30	23	47	16	12 48 34	18 57	
16	60	48.4		03.4	330	49.8 ¹²⁴	24.9 ⁹⁴	35	15	41	11	13 00 32	23 06 60	
17	75	48.5	+16	04.1	345	21.3 ¹²⁵	+22 15.4 ⁹⁵	40	17 05	17 34	18 06	13 15 28	22 53 63	
18	90	48.5	+16	04.9	359	52.9 ¹²⁶	+22 05.8 ⁹⁶	45	16 55	17 26	18 01	13 32 24	22 36 68	
19	105	48.6		05.6	14	24.6 ¹²⁷	+21 56.1 ⁹⁷	50	42	17	17 55	13 53 20	16 73	
20	120	48.7		06.3	28	56.4 ¹²⁸	46.3 ⁹⁸	52	36	12	53	14 03 17	22 07 75	
21	135	48.7		07.0	43	28.3 ¹²⁹	36.5 ⁹⁸	54	30	08	50	15 14	21 56 78	
22	150	48.8		07.7	58	00.3 ¹³⁰	26.5 ¹⁰⁰	56	23	17 03	48	28 10	44 82	
23	165	48.8		08.5	72	32.3 ¹³⁰	16.5 ¹⁰⁰	58	14	16 58	45	14 43 6	29 87	
24	180	48.9	+16	09.2	87	04.5 ¹³²	+21 06.3 ¹⁰²	60 S	16 05	16 51	17 42	15 00 1	21 12 92	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 9 ^h 11 ^m 5		Mag: -4.1 PMG: 9 ^h 18 ^m		Mag: +1.5 PMG: 16 ^h 03 ^m		Mag: -2.5 PMG: 0 ^h 01 ^m		Mag: +0.3 PMG: 17 ^h 41 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	221	44.5	220	36.1	-1	01.2	118	56.0	+24	29.2	359	43.1	-14	47.2	94	05.8	+19	43.2
1	236	46.9	235	35.9	-1	00.2	133	56.9		29.1	14	45.8		47.1	109	08.2		43.2
2	251	49.4	250	35.7	-0	59.2	148	57.7		28.9	29	48.6		47.0	124	10.5		43.1
3	266	51.9	265	35.5		58.2	163	58.6		28.8	44	51.4		46.9	139	12.9		43.1
4	281	54.3	280	35.3		57.2	178	59.4		28.7	59	54.2		46.8	154	15.2		43.1
5	296	56.8	295	35.2	-0	56.1	194	00.3	+24	28.5	74	56.9	-14	46.7	169	17.5	+19	43.0
6	311	59.2	310	35.0	-0	55.1	209	01.1	+24	28.4	89	59.7	-14	46.6	184	19.9	+19	43.0
7	327	01.7	325	34.8		54.1	224	02.0		28.2	105	02.5		46.5	199	22.2		43.0
8	342	04.2	340	34.6		53.1	239	02.8		28.1	120	05.3		46.4	214	24.5		42.9
9	357	06.6	355	34.5		52.1	254	03.7		27.9	135	08.1		46.3	229	26.9		42.9
10	12	09.1	10	34.3		51.1	269	04.5		27.8	150	10.8		46.2	244	29.2		42.9
11	27	11.6	25	34.1	-0	50.0	284	05.4	+24	27.7	165	13.6	-14	46.2	259	31.5	+19	42.9
12	42	14.0	40	33.9	-0	49.0	299	06.2	+24	27.5	180	16.4	-14	46.1	274	33.9	+19	42.8
13	57	16.5	55	33.8		48.0	314	07.1		27.4	195	19.2		46.0	289	36.2		42.8
14	72	19.0	70	33.6		47.0	329	07.9		27.2	210	22.0		45.9	304	38.5		42.8
15	87	21.4	85	33.4		46.0	344	08.8		27.1	225	24.7		45.8	319	40.9		42.7
16	102	23.9	100	33.2		44.9	359	09.6		26.9	240	27.5		45.7	334	43.2		42.7
17	117	26.4	115	33.0	-0	43.9	14	10.5	+24	26.8	255	30.3	-14	45.6	349	45.5	+19	42.7
18	132	28.8	130	32.9	-0	42.9	29	11.4	+24	26.6	270	33.1	-14	45.5	4	47.9	+19	42.6
19	147	31.3	145	32.7		41.9	44	12.2		26.5	285	35.9		45.4	19	50.2		42.6
20	162	33.7	160	32.5		40.9	59	13.1		26.3	300	38.6		45.3	34	52.5		42.6
21	177	36.2	175	32.3		39.8	74	13.9		26.2	315	41.4		45.2	49	54.9		42.6
22	192	38.7	190	32.2		38.8	89	14.8		26.0	330	44.2		45.1	64	57.2		42.5
23	207	41.1	205	32.0		37.8	104	15.6		25.9	345	47.0		45.1	79	59.5		42.5
24	222	43.6	220	31.8	-0	36.8	119	16.5	+24	25.7	0	49.8	-14	45.0	95	01.9	+19	42.5
Dif	—		-2 +10		+9 -1		-8972 +1				+23 0							

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15'9 PMG: 11 ^h 56 ^m 7			Edad: 7 ^d 2	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
h	°	'	°	°	'	°	'	h	m	h	m	h	m	h	m
0	180	48.9	+16	09.2	87	04.5	+21	06.3	60 N	1 20	2 52	3 48	10 01	89	2 59 0
1	195	48.9		09.9	101	36.7 ¹³²	+20	56.1 ¹⁰²	58	1 54	3 08	3 58	15 84		44 5
2	210	49.0		10.6	116	09.0 ¹³³		45.9 ¹⁰²	56	2 17	22	4 08	27 80		32 8
3	225	49.0		11.3	130	41.4 ¹³⁴		35.5 ¹⁰⁴	54	36	34	16	37 77		21 1
4	240	49.1		12.0	145	13.9 ¹³⁵		25.0 ¹⁰⁵	52	2 51	44	23	46 74		11 14
5	255	49.1	+16	12.8	159	46.5 ¹³⁶	+20	14.5 ¹⁰⁵	50	3 04	3 53	4 30	10 54	72	2 02 17
6	270	49.2	+16	13.5	174	19.1 ¹³⁶	+20	03.9 ¹⁰⁶	45	3 30	4 11	4 44	11 12	66	1 44 22
7	285	49.3		14.2	188	51.9 ¹³⁸	+19	53.2 ¹⁰⁷	40	3 50	26	4 56	26 62		28 26
8	300	49.3		14.9	203	24.7 ¹³⁸		42.5 ¹⁰⁷	35	4 05	38	5 05	37 59		16 29
9	315	49.4		15.6	217	57.6 ¹³⁹		31.6 ¹⁰⁹	30	18	4 48	14	11 48	55	1 04 32
10	330	49.4		16.3	232	30.6 ¹⁴⁰		20.7 ¹⁰⁹	20	38	5 05	29	12 05	51	0 45 36
11	345	49.5	+16	17.0	247	03.7 ¹⁴¹	+19	09.7 ¹¹⁰	10 N	4 54	5 19	5 41	12 21	46	0 28 40
12	0	49.5	+16	17.7	261	36.8 ¹⁴¹	+18	58.7 ¹¹⁰	0	5 07	5 32	5 53	12 35	43	0 12 44
13	15	49.6		18.5	276	10.0 ¹⁴²		47.5 ¹¹²	10 S	18	43	6 05	12 49	39	** ** *
14	30	49.6		19.2	290	43.3 ¹⁴³		36.3 ¹¹²	20	28	5 54	17	13 04	35	** ** *
15	45	49.7		19.9	305	16.7 ¹⁴⁴		25.1 ¹¹²	30	38	6 06	31	22 29		** ** *
16	60	49.7		20.6	319	50.1 ¹⁴⁴		13.7 ¹¹⁴	35	43	13	39	32 27		** ** *
17	75	49.8	+16	21.3	334	23.7 ¹⁴⁶	+18	02.3 ¹¹⁴	40	5 48	6 20	6 49	13 43	24	23 56 61
18	90	49.8	+16	22.0	348	57.3 ¹⁴⁶	+17	50.9 ¹¹⁴	45	5 53	6 28	6 59	13 56	20	23 44 65
19	105	49.9		22.7	3	30.9 ¹⁴⁶		39.3 ¹¹⁶	50	5 59	38	7 12	14 13	14	29 70
20	120	49.9		23.4	18	04.7 ¹⁴⁸		27.7 ¹¹⁶	52	6 01	42	18	20 13		22 73
21	135	50.0		24.1	32	38.5 ¹⁴⁸		16.0 ¹¹⁷	54	04	47	25	29 9		14 76
22	150	50.0		24.8	47	12.4 ¹⁴⁹	+17	04.3 ¹¹⁷	56	07	52	32	38 7		23 06 78
23	165	50.1		25.5	61	46.3 ¹⁴⁹	+16	52.5 ¹¹⁸	58	10	6 57	41	14 49	3	22 56 82
24	180	50.1	+16	26.2	76	20.4 ¹⁵¹	+16	40.7 ¹¹⁸	60 S	6 13	7 03	7 50	15 01	**	22 44 87

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 9 ^h 07 ^m 6		Mag: -4.1 PMG: 9 ^h 18 ^m		Mag: +1.5 PMG: 16 ^h 02 ^m		Mag: -2.5 PMG: 23 ^h 52 ^m		Mag: +0.3 PMG: 17 ^h 37 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	222	43.6	220	31.8	119	16.5	0	49.8	95	01.9
1	237	46.1	235	31.6	134	17.3	-14	45.0	+19	42.4
2	252	48.5	250	31.4	149	18.2		44.9	110	04.2
3	267	51.0	265	31.3	164	19.0		44.8	125	06.5
4	282	53.5	280	31.1	179	19.9		44.7	140	08.9
5	297	55.9	295	30.9	194	20.7		44.6	155	11.2
6	312	58.4	310	30.7	209	21.6	-14	44.5	170	13.5
7	328	00.9	325	30.6	224	22.4		44.4	+19	42.3
8	343	03.3	340	30.4	239	23.3		44.3	185	15.8
9	358	05.8	355	30.2	254	24.1		44.2	200	18.2
10	13	08.2	10	30.0	269	25.0		44.1	215	20.5
11	28	10.7	25	29.8	284	25.9		44.0	230	22.8
12	43	13.2	40	29.7	299	26.7	-14	43.9	245	25.2
13	58	15.6	55	29.5	314	27.6		43.8	260	27.5
14	73	18.1	70	29.3	329	28.4		43.7	+19	42.1
15	88	20.6	85	29.1	344	29.3		43.6	275	29.8
16	103	23.0	100	28.9	359	30.1		43.5	290	32.2
17	118	25.5	115	28.8	14	31.0	-14	43.4	305	34.5
18	133	28.0	130	28.6	29	31.8		43.3	320	36.8
19	148	30.4	145	28.4	44	32.7		43.2	335	39.1
20	163	32.9	160	28.2	59	33.5		43.1	350	41.5
21	178	35.3	175	28.0	74	34.4		43.0	+19	41.9
22	193	37.8	190	27.9	89	35.2		42.9	5	43.8
23	208	40.3	205	27.7	104	36.1		42.9	20	46.1
24	223	42.7	220	27.5	119	36.9	-14	42.8	35	48.5
Dif	—		-2	+10	+9	-2	+28	+1	+23	

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15'9			Edad: 8 ^d 2	PHE { 4 ^h : 54'3 12 ^h : 54'2 20 ^h : 54'2									
	PMG: 11 ^h 56 ^m 6													
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	
0	180	50.1	+16 26.2	76	20.4	+16 40.7	60 N	20 10	21 07	22 47	11 30 85	2 59 **		
1	195	50.2	27.0	90	54.5 ¹⁵¹	28.7 ¹²⁰	58	19 59	20 50	22 08	39 81	49 3		
2	210	50.2	27.7	105	28.6 ¹⁵¹	16.8 ¹¹⁹	56	49	36	21 42	47 77	40 6		
3	225	50.3	28.4	120	02.8 ¹⁵²	+16 04.7 ¹²¹	54	40	23	22	11 54 74	32 9		
4	240	50.3	29.1	134	37.1 ¹⁵³	+15 52.6 ¹²¹	52	33	13	21 06	12 00 72	25 12		
5	255	50.4	+16 29.8	149	11.5 ¹⁵⁴	+15 40.5 ¹²¹	50	19 26	20 04	20 53	12 06 69	2 19 14		
6	270	50.4	+16 30.5	163	45.9 ¹⁵⁴	+15 28.3 ¹²²	45	19 11	19 45	20 26	12 18 64	2 06 18		
7	285	50.5	31.2	178	20.4 ¹⁵⁵	16.0 ¹²³	40	18 59	29	20 06	28 60	1 54 22		
8	300	50.5	31.9	192	54.9 ¹⁵⁵	+15 03.7 ¹²³	35	49	17	19 50	36 57	45 25		
9	315	50.6	32.6	207	29.5 ¹⁵⁶	+14 51.3 ¹²⁴	30	40	19 06	37	43 54	36 28		
10	330	50.6	33.3	222	04.2 ¹⁵⁷	38.9 ¹²⁴	20	25	18 49	16	12 56 49	21 33		
11	345	50.6	+16 34.0	236	38.9 ¹⁵⁷	+14 26.4 ¹²⁵	10 N	18 12	18 34	19 00	13 07 45	1 08 38		
12	0	50.7	+16 34.7	251	13.6 ¹⁵⁷	+14 13.9 ¹²⁵	0	18 00	18 22	18 47	13 18 40	0 56 41		
13	15	50.7	35.4	265	48.5 ¹⁵⁹	+14 01.3 ¹²⁶	10 S	17 48	18 10	35	28 36	44 45		
14	30	50.8	36.1	280	23.3 ¹⁵⁸	+13 48.6 ¹²⁷	20	35	17 58	25	39 32	30 50		
15	45	50.8	36.8	294	58.3 ¹⁶⁰	36.0 ¹²⁶	30	21	46	14	51 27	15 55		
16	60	50.9	37.5	309	33.3 ¹⁶⁰	23.2 ¹²⁸	35	13	39	09	13 59 24	0 06 58		
17	75	50.9	+16 38.2	324	08.3 ¹⁶⁰	+13 10.4 ¹²⁸	40	17 03	17 32	18 04	14 07 21	** ** *		
18	90	51.0	+16 38.9	338	43.4 ¹⁶¹	+12 57.6 ¹²⁸	45	16 52	17 23	17 58	14 16 17	** ** *		
19	105	51.0	39.6	353	18.5 ¹⁶¹	44.7 ¹²⁹	50	39	14	52	27 13	** ** *		
20	120	51.1	40.3	7	53.7 ¹⁶²	31.8 ¹²⁹	52	33	09	50	33 10	** ** *		
21	135	51.1	41.0	22	28.9 ¹⁶²	18.9 ¹²⁹	54	26	17 04	47	38 8	** ** *		
22	150	51.1	41.7	37	04.2 ¹⁶³	+12 05.9 ¹³⁰	56	18	16 59	44	45 5	** ** *		
23	165	51.2	42.4	51	39.6 ¹⁶⁴	+11 52.8 ¹³¹	58	10	53	41	14 52 2	** ** *		
24	180	51.2	+16 43.0	66	14.9 ¹⁶³	+11 39.7 ¹³¹	60 S	16 00	16 47	17 37	15 00 **	** ** *		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG		Mag: -4.1		Mag: +1.5		Mag: -2.5		Mag: +0.3	
	9 ^h 03 ^m 7		PMG: 9 ^h 18 ^m		PMG: 16 ^h 01 ^m		PMG: 23 ^h 48 ^m		PMG: 17 ^h 33 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	223	42.7	220	27.5	119	36.9	+24 22.1	1 56.5	-14 42.8	95 57.8
1	238	45.2	235	27.3	134	37.8	21.9	16 59.3	42.7	111 00.1
2	253	47.7	250	27.1	149	38.7	21.8	32 02.0	42.6	126 02.4
3	268	50.1	265	27.0	164	39.5	21.6	47 04.8	42.5	141 04.7
4	283	52.6	280	26.8	179	40.4	21.5	62 07.6	42.4	156 07.1
5	298	55.1	295	26.6	194	41.2	+24 21.3	77 10.4	-14 42.3	171 09.4
6	313	57.5	310	26.4	209	42.1	+24 21.2	92 13.2	-14 42.2	186 11.7
7	329	00.0	325	26.2	224	42.9	21.0	107 15.9	42.1	201 14.1
8	344	02.5	340	26.0	239	43.8	20.8	122 18.7	42.0	216 16.4
9	359	04.9	355	25.9	254	44.6	20.7	137 21.5	41.9	231 18.7
10	14	07.4	10	25.7	269	45.5	20.5	152 24.3	41.8	246 21.0
11	29	09.8	25	25.5	284	46.3	+24 20.4	167 27.1	-14 41.8	261 23.4
12	44	12.3	40	25.3	299	47.2	+24 20.2	182 29.8	-14 41.7	276 25.7
13	59	14.8	55	25.1	314	48.0	20.1	197 32.6	41.6	291 28.0
14	74	17.2	70	25.0	329	48.9	19.9	212 35.4	41.5	306 30.3
15	89	19.7	85	24.8	344	49.7	19.7	227 38.2	41.4	321 32.7
16	104	22.2	100	24.6	359	50.6	19.6	242 41.0	41.3	336 35.0
17	119	24.6	115	24.4	+0 05.3	14 51.5	+24 19.4	257 43.7	-14 41.2	351 37.3
18	134	27.1	130	24.2	+0 06.3	29 52.3	+24 19.3	272 46.5	-14 41.1	6 39.6
19	149	29.6	145	24.0	07.3	44 53.2	19.1	287 49.3	41.0	21 42.0
20	164	32.0	160	23.9	08.4	59 54.0	18.9	302 52.1	40.9	36 44.3
21	179	34.5	175	23.7	09.4	74 54.9	18.8	317 54.9	40.8	51 46.6
22	194	37.0	190	23.5	10.4	89 55.7	18.6	332 57.6	40.8	66 48.9
23	209	39.4	205	23.3	11.5	104 56.6	18.5	348 00.4	40.7	81 51.3
24	224	41.9	220	23.1	+0 12.5	119 57.4	+24 18.3	3 03.2	-14 40.6	96 53.6
Dif	—		-2	+10	+9	-2		+28	+1	+23

UT	SOL				LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 15 ^h 9 PMG: 11 ^h 56 ^m 6				Edad: 9 ^d 2 PHE { 4 ^h : 54 ^m 2 12 ^h : 54 ^m 2 20 ^h : 54 ^m 2 PMG: 20 ^h 08 ^m R ^o : 39 ^m															
	hG ☉	Dec			hG ☾	Dif				Náutico	Civil		Hora	R ^o	Hora	R ^o				
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m		
0	180	51.2	+16	43.0	66	14.9	+11	39.7	60 N	1 06	2 46	3 43	12 55	82	2 58	**				
1	195	51.3		43.7	80	50.3 ¹⁶⁴		26.6 ¹³¹	58	1 45	3 03	3 54	13 00	79	52	2				
2	210	51.3		44.4	95	25.8 ¹⁶⁵		13.4 ¹³²	56	2 10	17	4 03	04 76		46	5				
3	225	51.4		45.1	110	01.3 ¹⁶⁵	+11	00.2 ¹³²	54	30	29	12	08 73		41	8				
4	240	51.4		45.8	124	36.8 ¹⁶⁵	+10	46.9 ¹³³	52	2 46	40	20	12 70		37	9				
5	255	51.5	+16	46.5	139	12.4 ¹⁶⁶	+10	33.6 ¹³³	50	3 00	3 49	4 27	13 15	68	2 33	11				
6	270	51.5	+16	47.2	153	48.0 ¹⁶⁶	+10	20.3 ¹³³	45	3 27	4 08	4 41	13 22	64	2 24	16				
7	285	51.5		47.9	168	23.6 ¹⁶⁶	+10	06.9 ¹³⁴	40	3 47	23	4 53	28 60		16	20				
8	300	51.6		48.6	182	59.3 ¹⁶⁷	+9	53.5 ¹³⁴	35	4 03	36	5 03	33 56		10	23				
9	315	51.6		49.3	197	35.0 ¹⁶⁷		40.1 ¹³⁴	30	16	4 47	12	37 54		2 04	26				
10	330	51.7		50.0	212	10.8 ¹⁶⁸		26.6 ¹³⁵	20	37	5 04	28	45 48		1 54	31				
11	345	51.7	+16	50.7	226	46.6 ¹⁶⁸	+9	13.1 ¹³⁵	10 N	4 53	5 19	5 41	13 52	43	1 46	35				
12	0	51.7	+16	51.3	241	22.4 ¹⁶⁸	+8	59.5 ¹³⁶	0	5 06	5 31	5 53	13 58	39	1 37	40				
13	15	51.8		52.0	255	58.2 ¹⁶⁸		45.9 ¹³⁶	10 S	18	43	6 05	14 04	35	29	44				
14	30	51.8		52.7	270	34.1 ¹⁶⁹		32.3 ¹³⁶	20	29	5 55	18	11 31		20	48				
15	45	51.9		53.4	285	10.0 ¹⁶⁹		18.7 ¹³⁶	30	39	6 08	33	18 26		10	53				
16	60	51.9		54.1	299	45.9 ¹⁶⁹	+8	05.0 ¹³⁷	35	44	14	41	23 22		1 04	56				
17	75	51.9	+16	54.8	314	21.9 ¹⁷⁰	+7	51.3 ¹³⁷	40	5 50	6 22	6 51	14 28	19	0 57	60				
18	90	52.0	+16	55.5	328	57.9 ¹⁷⁰	+7	37.6 ¹³⁷	45	5 55	6 30	7 02	14 33	16	0 49	64				
19	105	52.0		56.1	343	33.9 ¹⁷⁰		23.8 ¹³⁸	50	6 02	40	15	40 11		39	69				
20	120	52.1		56.8	358	09.9 ¹⁷⁰	+7	10.0 ¹³⁸	52	04	45	21	43 9		35	71				
21	135	52.1		57.5	12	45.9 ¹⁷⁰	+6	56.2 ¹³⁸	54	07	50	28	46 7		30	73				
22	150	52.1		58.2	27	22.0 ¹⁷¹		42.3 ¹³⁹	56	10	6 55	36	50 4		24	77				
23	165	52.2		58.9	41	58.1 ¹⁷¹		28.4 ¹³⁹	58	13	7 01	45	54 2		18	80				
24	180	52.2	+16	59.6	56	34.2 ¹⁷¹	+6	14.5 ¹³⁹	60 S	6 17	7 07	7 55	14 59	**	0 11	83				
UT	ARIES				VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 8 ^h 59 ^m 7				Mag: -4.1 PMG: 9 ^h 19 ^m				Mag: +1.5 PMG: 15 ^h 59 ^m				Mag: -2.5 PMG: 23 ^h 43 ^m				Mag: +0.3 PMG: 17 ^h 30 ^m			
	hG ♈	Dec			hG ♀	Dec			hG ♂	Dec			hG ♃	Dec			hG ♄	Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	224	41.9	220	23.1	+0	12.5	119	57.4	+24	18.3	3	03.2	-14	40.6	96	53.6	+19	40.9		
1	239	44.3	235	22.9		13.5	134	58.3		18.1	18	06.0		40.5	111	55.9		40.9		
2	254	46.8	250	22.8		14.6	149	59.1		18.0	33	08.8		40.4	126	58.2		40.9		
3	269	49.3	265	22.6		15.6	165	00.0		17.8	48	11.5		40.3	142	00.5		40.8		
4	284	51.7	280	22.4		16.6	180	00.8		17.6	63	14.3		40.2	157	02.9		40.8		
5	299	54.2	295	22.2	+0	17.6	195	01.7	+24	17.5	78	17.1	-14	40.1	172	05.2	+19	40.8		
6	314	56.7	310	22.0	+0	18.7	210	02.5	+24	17.3	93	19.9	-14	40.0	187	07.5	+19	40.7		
7	329	59.1	325	21.8		19.7	225	03.4		17.1	108	22.6		39.9	202	09.8		40.7		
8	345	01.6	340	21.7		20.7	240	04.3		17.0	123	25.4		39.8	217	12.2		40.7		
9	0	04.1	355	21.5		21.8	255	05.1		16.8	138	28.2		39.7	232	14.5		40.6		
10	15	06.5	10	21.3		22.8	270	06.0		16.7	153	31.0		39.7	247	16.8		40.6		
11	30	09.0	25	21.1	+0	23.8	285	06.8	+24	16.5	168	33.8	-14	39.6	262	19.1	+19	40.6		
12	45	11.4	40	20.9	+0	24.9	300	07.7	+24	16.3	183	36.5	-14	39.5	277	21.4	+19	40.5		
13	60	13.9	55	20.7		25.9	315	08.5		16.2	198	39.3		39.4	292	23.8		40.5		
14	75	16.4	70	20.6		26.9	330	09.4		16.0	213	42.1		39.3	307	26.1		40.5		
15	90	18.8	85	20.4		28.0	345	10.2		15.8	228	44.9		39.2	322	28.4		40.4		
16	105	21.3	100	20.2		29.0	0	11.1		15.7	243	47.7		39.1	337	30.7		40.4		
17	120	23.8	115	20.0	+0	30.0	15	11.9	+24	15.5	258	50.4	-14	39.0	352	33.1	+19	40.4		
18	135	26.2	130	19.8	+0	31.1	30	12.8	+24	15.3	273	53.2	-14	38.9	7	35.4	+19	40.3		
19	150	28.7	145	19.6		32.1	45	13.6		15.2	288	56.0		38.8	22	37.7		40.3		
20	165	31.2	160	19.4		33.1	60	14.5		15.0	303	58.8		38.7	37	40.0		40.3		
21	180	33.6	175	19.3		34.2	75	15.4		14.8	319	01.6		38.6	52	42.3		40.2		
22	195	36.1	190	19.1		35.2	90	16.2		14.7	334	04.3		38.6	67	44.7		40.2		
23	210	38.6	205	18.9		36.2	105	17.1		14.5	349	07.1		38.5	82	47.0		40.2		
24	225	41.0	220	18.7	+0	37.3	120	17.9	+24	14.3	4	09.9	-14	38.4	97	49.3	+19	40.1		
Dif	—				-2				+10				+28				+1			

UT	SOL		LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 15'8		Edad: 10 ^d 2 PHE { 4 ^h : 54'3 12 ^h : 54'3 20 ^h : 54'4 R°: 39 ^m						Civil		Náutico	Hora	R°	Hora	R°
	hG ☉	Dec	hG ☾	Dif	Dec	Dif									
h	°	'	°	'	°	'	°	h m	h m	h m	h m	m	m	m	m
0	180	52.2	+16	59.6	56	34.2	+6 14.5	60 N	20 15	21 13	23 03	14 17	83	2 56	**
1	195	52.2	+17	00.3	71	10.3 ¹⁷¹	+6 00.6 ¹³⁹	58	20 03	20 55	22 17	19 79		54	1
2	210	52.3		00.9	85	46.4 ¹⁷¹	+5 46.7 ¹³⁹	56	19 53	40	21 49	20 76		51	4
3	225	52.3		01.6	100	22.6 ¹⁷²	32.7 ¹⁴⁰	54	44	28	28	21 74		49	
4	240	52.4		02.3	114	58.7 ¹⁷¹	18.7 ¹⁴⁰	52	36	17	21 11	22 71		46	9
5	255	52.4	+17	03.0	129	34.9 ¹⁷²	+5 04.6 ¹⁴¹	50	19 29	20 07	20 57	14 23	69	2 44	11
6	270	52.4	+17	03.7	144	11.1 ¹⁷²	+4 50.6 ¹⁴⁰	45	19 14	19 47	20 29	14 26	64	2 40	15
7	285	52.5		04.3	158	47.3 ¹⁷²	36.5 ¹⁴¹	40	19 01	31	20 08	28 59		36	20
8	300	52.5		05.0	173	23.5 ¹⁷²	22.5 ¹⁴⁰	35	18 51	19	19 52	29 57		33	23
9	315	52.5		05.7	187	59.7 ¹⁷²	+4 08.3 ¹⁴²	30	42	19 08	38	31 53		30	26
10	330	52.6		06.4	202	35.9 ¹⁷²	+3 54.2 ¹⁴¹	20	26	18 49	17	33 48		25	31
11	345	52.6	+17	07.0	217	12.1 ¹⁷²	+3 40.1 ¹⁴¹	10 N	18 13	18 35	19 00	14 35	44	2 21	35
12	0	52.6	+17	07.7	231	48.4 ¹⁷³	+3 25.9 ¹⁴²	0	18 00	18 22	18 47	14 37	40	2 17	39
13	15	52.7		08.4	246	24.6 ¹⁷²	+3 11.7 ¹⁴²	10 S	17 48	18 09	35	39 35		13	43
14	30	52.7		09.1	261	00.8 ¹⁷²	+2 57.5 ¹⁴²	20	34	17 57	24	42 30		08	48
15	45	52.8		09.7	275	37.1 ¹⁷³	43.3 ¹⁴²	30	19	44	13	44 25		03	53
16	60	52.8		10.4	290	13.3 ¹⁷²	29.1 ¹⁴²	35	11	37	08	45 23		2 00	56
17	75	52.8	+17	11.1	304	49.5 ¹⁷²	+2 14.9 ¹⁴²	40	17 01	17 30	18 02	14 47	19	1 57	59
18	90	52.9	+17	11.8	319	25.8 ¹⁷³	+2 00.6 ¹⁴³	45	16 50	17 21	17 56	14 49	15	1 53	63
19	105	52.9		12.4	334	02.0 ¹⁷²	+1 46.4 ¹⁴²	50	36	11	50	51 11		48	68
20	120	52.9		13.1	348	38.2 ¹⁷²	32.1 ¹⁴³	52	29	06	47	52 9		46	70
21	135	53.0		13.8	3	14.4 ¹⁷²	17.8 ¹⁴³	54	22	17 01	44	53 7		43	74
22	150	53.0		14.5	17	50.6 ¹⁷²	+1 03.5 ¹⁴³	56	14	16 56	41	54 5		41	76
23	165	53.0		15.1	32	26.8 ¹⁷²	+0 49.2 ¹⁴³	58	16 05	49	37	56 1		38	79
24	180	53.0	+17	15.8	47	03.0 ¹⁷²	+0 34.9 ¹⁴³	60 S	15 55	16 43	17 33	14 57	**	1 34	83
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG 8 ^h 55 ^m 8		Mag: -4.1 PMG: 9 ^h 19 ^m		Mag: +1.5 PMG: 15 ^h 58 ^m		Mag: -2.5 PMG: 23 ^h 39 ^m		Mag: +0.3 PMG: 17 ^h 26 ^m						
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'					
0	225	41.0	220	18.7	120	17.9	4	09.9	97	49.3					
1	240	43.5	235	18.5	135	18.8	19	12.7	112	51.6					
2	255	45.9	250	18.3	150	19.6	34	15.4	127	53.9					
3	270	48.4	265	18.1	165	20.5	49	18.2	142	56.3					
4	285	50.9	280	18.0	180	21.3	64	21.0	157	58.6					
5	300	53.3	295	17.8	195	22.2	79	23.8	173	00.9					
6	315	55.8	310	17.6	210	23.0	94	26.6	188	03.2					
7	330	58.3	325	17.4	225	23.9	109	29.3	203	05.5					
8	346	00.7	340	17.2	240	24.7	124	32.1	218	07.8					
9	1	03.2	355	17.0	255	25.6	139	34.9	233	10.2					
10	16	05.7	10	16.8	270	26.5	154	37.7	248	12.5					
11	31	08.1	25	16.6	285	27.3	169	40.4	263	14.8					
12	46	10.6	40	16.5	300	28.2	184	43.2	278	17.1					
13	61	13.0	55	16.3	315	29.0	199	46.0	293	19.4					
14	76	15.5	70	16.1	330	29.9	214	48.8	308	21.7					
15	91	18.0	85	15.9	345	30.7	229	51.6	323	24.1					
16	106	20.4	100	15.7	0	31.6	244	54.3	338	26.4					
17	121	22.9	115	15.5	15	32.4	259	57.1	353	28.7					
18	136	25.4	130	15.3	30	33.3	274	59.9	8	31.0					
19	151	27.8	145	15.1	45	34.1	290	02.7	23	33.3					
20	166	30.3	160	15.0	60	35.0	305	05.5	38	35.6					
21	181	32.8	175	14.8	75	35.9	320	08.2	53	38.0					
22	196	35.2	190	14.6	90	36.7	335	11.0	68	40.3					
23	211	37.7	205	14.4	105	37.6	350	13.8	83	42.6					
24	226	40.2	220	14.2	120	38.4	5	16.6	98	44.9					
Dif	—		-2	+10	+9	-2	+28	+1	+23	0					

UT	SOL				LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna			Puesta de Luna								
	SD: 15 ^h 8 PMG: 11 ^h 56 ^m 4				Edad: 11 ^d 2 PHE { SD: 14 ^h 8 PMG: 21 ^h 26 ^m																			
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°								
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m						
0	180	53.0	+17	15.8	47	03.0	+0	34.9	60 N	0 49	2 39	3 37	15 40	84	2 55	**								
1	195	53.1		16.5	61	39.2 ¹⁷²		20.5 ¹⁴⁴	58	1 35	2 57	49	38 81		55	1								
2	210	53.1		17.1	76	15.4 ¹⁷²	+0	06.2 ¹⁴³	56	2 03	3 12	3 59	36 78		55	4								
3	225	53.1		17.8	90	51.5 ¹⁷¹	-0	08.1 ¹⁴³	54	24	25	4 08	35 75		55	7								
4	240	53.2		18.5	105	27.7 ¹⁷²		22.5 ¹⁴⁴	52	41	36	16	33 73		55	9								
5	255	53.2	+17	19.2	120	03.8 ¹⁷¹	-0	36.9 ¹⁴⁴	50	2 56	3 45	4 23	15 32	71	2 55	11								
6	270	53.2	+17	19.8	134	39.9 ¹⁷¹	-0	51.2 ¹⁴³	45	3 23	4 05	4 39	15 30	65	2 55	16								
7	285	53.3		20.5	149	16.0 ¹⁷¹	-1	05.6 ¹⁴⁴	40	3 44	21	4 51	27 62		56	19								
8	300	53.3		21.2	163	52.1 ¹⁷¹		19.9 ¹⁴³	35	4 01	34	5 02	26 57		56	22								
9	315	53.3		21.8	178	28.2 ¹⁷¹		34.3 ¹⁴⁴	30	14	4 45	11	24 55		56	25								
10	330	53.4		22.5	193	04.2 ¹⁷⁰	-1	48.7 ¹⁴⁴	20	36	5 03	27	21 50		56	31								
11	345	53.4	+17	23.1	207	40.2 ¹⁷⁰	-2	03.1 ¹⁴⁴	10 N	4 52	5 18	5 40	15 19	45	2 56	35								
12	0	53.4	+17	23.8	222	16.2 ¹⁷⁰	-2	17.4 ¹⁴³	0	5 06	5 31	5 53	15 17	40	2 56	40								
13	15	53.4		24.5	236	52.2 ¹⁷⁰		31.8 ¹⁴⁴	10 S	18	44	6 06	14 36		56	44								
14	30	53.5		25.1	251	28.1 ¹⁶⁹	-2	46.2 ¹⁴⁴	20	29	5 56	19	12 32		56	49								
15	45	53.5		25.8	266	04.0 ¹⁶⁹	-3	00.6 ¹⁴⁴	30	40	6 09	34	09 27		56	54								
16	60	53.5		26.5	280	39.9 ¹⁶⁹		14.9 ¹⁴³	35	46	16	43	08 23		56	57								
17	75	53.6	+17	27.1	295	15.8 ¹⁶⁹	-3	29.3 ¹⁴⁴	40	5 51	6 24	6 52	15 06	20	2 56	61								
18	90	53.6	+17	27.8	309	51.6 ¹⁶⁸	-3	43.6 ¹⁴³	45	5 57	6 33	7 04	15 04	17	2 56	65								
19	105	53.6		28.5	324	27.4 ¹⁶⁸	-3	58.0 ¹⁴⁴	50	6 04	43	18	02 12		56	70								
20	120	53.6		29.1	339	03.2 ¹⁶⁸	-4	12.4 ¹⁴⁴	52	07	48	25	01 9		56	72								
21	135	53.7		29.8	353	38.9 ¹⁶⁷		26.7 ¹⁴³	54	10	53	32	15 00	7	57	74								
22	150	53.7		30.4	8	14.6 ¹⁶⁷		41.0 ¹⁴³	56	13	6 58	40	14 59	4	57	76								
23	165	53.7		31.1	22	50.3 ¹⁶⁷	-4	55.4 ¹⁴⁴	58	17	7 05	49	57 2		57	79								
24	180	53.7	+17	31.8	37	25.9 ¹⁶⁶	-5	09.7 ¹⁴³	60 S	6 21	7 12	7 59	14 56	**	2 57	83								
UT	ARIES				VENUS				MARTE				JÚPITER				SATURNO							
	PMG 8 ^h 51 ^m 9				Mag: -4.1 PMG: 9 ^h 19 ^m				Mag: +1.6 PMG: 15 ^h 57 ^m				Mag: -2.5 PMG: 23 ^h 35 ^m				Mag: +0.3 PMG: 17 ^h 22 ^m							
	hG ♈		Dec		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	226	40.2	220	14.2	+1	02.1	120	38.4	+24	10.2	5	16.6	-14	36.2	98	44.9	+19	39.3						
1	241	42.6	235	14.0		03.2	135	39.3		10.0	20	19.3		36.1	113	47.2		39.3						
2	256	45.1	250	13.8		04.2	150	40.1		09.9	35	22.1		36.0	128	49.5		39.2						
3	271	47.5	265	13.6		05.3	165	41.0		09.7	50	24.9		35.9	143	51.9		39.2						
4	286	50.0	280	13.4		06.3	180	41.8		09.5	65	27.7		35.8	158	54.2		39.2						
5	301	52.5	295	13.2	+1	07.3	195	42.7	+24	09.3	80	30.5	-14	35.7	173	56.5	+19	39.1						
6	316	54.9	310	13.1	+1	08.4	210	43.5	+24	09.1	95	33.2	-14	35.6	188	58.8	+19	39.1						
7	331	57.4	325	12.9		09.4	225	44.4		09.0	110	36.0		35.6	204	01.1		39.1						
8	346	59.9	340	12.7		10.5	240	45.2		08.8	125	38.8		35.5	219	03.4		39.0						
9	2	02.3	355	12.5		11.5	255	46.1		08.6	140	41.6		35.4	234	05.7		39.0						
10	17	04.8	10	12.3		12.5	270	47.0		08.4	155	44.3		35.3	249	08.1		39.0						
11	32	07.3	25	12.1	+1	13.6	285	47.8	+24	08.3	170	47.1	-14	35.2	264	10.4	+19	38.9						
12	47	09.7	40	11.9	+1	14.6	300	48.7	+24	08.1	185	49.9	-14	35.1	279	12.7	+19	38.9						
13	62	12.2	55	11.7		15.7	315	49.5		07.9	200	52.7		35.0	294	15.0		38.9						
14	77	14.7	70	11.5		16.7	330	50.4		07.7	215	55.4		34.9	309	17.3		38.8						
15	92	17.1	85	11.3		17.7	345	51.2		07.5	230	58.2		34.8	324	19.6		38.8						
16	107	19.6	100	11.2		18.8	0	52.1		07.4	246	01.0		34.7	339	21.9		38.7						
17	122	22.0	115	11.0	+1	19.8	15	52.9	+24	07.2	261	03.8	-14	34.6	354	24.3	+19	38.7						
18	137	24.5	130	10.8	+1	20.9	30	53.8	+24	07.0	276	06.6	-14	34.6	9	26.6	+19	38.7						
19	152	27.0	145	10.6		21.9	45	54.6		06.8	291	09.3		34.5	24	28.9		38.6						
20	167	29.4	160	10.4		22.9	60	55.5		06.6	306	12.1		34.4	39	31.2		38.6						
21	182	31.9	175	10.2		24.0	75	56.4		06.5	321	14.9		34.3	54	33.5		38.6						
22	197	34.4	190	10.0		25.0	90	57.2		06.3	336	17.7		34.2	69	35.8		38.5						
23	212	36.8	205	09.8		26.1	105	58.1		06.1	351	20.4		34.1	84	38.1		38.5						
24	227	39.3	220	09.6	+1	27.1	120	58.9	+24	05.9	6	23.2	-14	34.0	99	40.4	+19	38.5						
Dif	—				-2				+10				+28				+1				+23			

UT	SOL		LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8		Edad: 12 ^d 2 PHE { 4 ^h : 54 ^m 8 12 ^h : 54 ^m 9 20 ^h : 55 ^m 1 R°: 43 ^m											
	PMG: 11 ^h 56 ^m 4		SD: 14 ^h 9 PMG: 22 ^h 07 ^m											
	hG ☉	Dec	hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	h m	h m	h m	h m m		h m m	
0	180	53.7	+17	31.8	37	25.9	-5 09.7	60 N	20 20	21 19	23 28	17 04 90	2 53	**
1	195	53.8		32.4	52	01.5 ¹⁶⁶	24.0 ¹⁴³	58	20 07	21 00	22 27	16 59 85	56	3
2	210	53.8		33.1	66	37.1 ¹⁶⁶	38.3 ¹⁴³	56	19 57	20 45	21 56	54 82	2 59	5
3	225	53.8		33.7	81	12.6 ¹⁶⁵	-5 52.6 ¹⁴³	54	48	32	34	50 79	3 02	8
4	240	53.9		34.4	95	48.1 ¹⁶⁵	-6 06.8 ¹⁴²	52	39	20	16	46 76	04	10
5	255	53.9	+17	35.0	110	23.5 ¹⁶⁴	-6 21.1 ¹⁴³	50	19 32	20 10	21 01	16 43 73	3 06	13
6	270	53.9	+17	35.7	124	58.9 ¹⁶⁴	-6 35.4 ¹⁴³	45	19 16	19 50	20 32	16 35 68	3 11	17
7	285	53.9		36.3	139	34.3 ¹⁶⁴	-6 49.6 ¹⁴²	40	19 03	34	20 11	29 63	15	21
8	300	54.0		37.0	154	09.6 ¹⁶³	-7 03.8 ¹⁴²	35	18 53	20	19 54	23 61	18	25
9	315	54.0		37.7	168	44.8 ¹⁶²	18.0 ¹⁴²	30	43	19 09	40	19 57	21	28
10	330	54.0		38.3	183	20.0 ¹⁶²	32.2 ¹⁴²	20	27	18 50	18	11 51	27	32
11	345	54.0	+17	39.0	197	55.2 ¹⁶²	-7 46.4 ¹⁴²	10 N	18 13	18 35	19 01	16 04 47	3 31	37
12	0	54.0	+17	39.6	212	30.3 ¹⁶¹	-8 00.5 ¹⁴¹	0	18 00	18 22	18 47	15 57 43	3 36	41
13	15	54.1		40.3	227	05.3 ¹⁶⁰	14.6 ¹⁴¹	10 S	17 47	18 09	34	50 39	40	46
14	30	54.1		40.9	241	40.3 ¹⁶⁰	28.7 ¹⁴¹	20	33	17 56	23	44 34	45	50
15	45	54.1		41.6	256	15.3 ¹⁶⁰	42.8 ¹⁴¹	30	18	43	12	36 29	50	56
16	60	54.1		42.2	270	50.2 ¹⁵⁹	-8 56.9 ¹⁴¹	35	17 09	36	06	31 26	53	59
17	75	54.2	+17	42.9	285	25.0 ¹⁵⁸	-9 10.9 ¹⁴⁰	40	16 59	17 28	18 00	15 26 23	3 57	62
18	90	54.2	+17	43.5	299	59.8 ¹⁵⁸	-9 24.9 ¹⁴⁰	45	16 47	17 19	17 54	15 21 18	4 01	66
19	105	54.2		44.2	314	34.5 ¹⁵⁷	38.9 ¹⁴⁰	50	33	08	47	14 13	06	71
20	120	54.2		44.8	329	09.2 ¹⁵⁷	-9 52.8 ¹³⁹	52	26	17 03	44	10 12	08	74
21	135	54.2		45.5	343	43.8 ¹⁵⁶	-10 06.8 ¹⁴⁰	54	19	16 58	41	07 9	11	76
22	150	54.3		46.1	358	18.4 ¹⁵⁶	20.7 ¹³⁹	56	10	52	37	15 03 6	13	80
23	165	54.3		46.8	12	52.8 ¹⁵⁴	34.5 ¹³⁸	58	16 01	46	34	14 59 3	16	83
24	180	54.3	+17	47.4	27	27.3 ¹⁵⁵	-10 48.4 ¹³⁹	60 S	15 50	16 38	17 30	14 54 **	4 20	87

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 8 ^h 47 ^m 9		Mag: -4.1 PMG: 9 ^h 19 ^m		Mag: +1.6 PMG: 15 ^h 55 ^m		Mag: -2.5 PMG: 23 ^h 30 ^m		Mag: +0.3 PMG: 17 ^h 19 ^m	
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♏	Dec	
h	°	'	°	'	°	'	°	'	°	'
0	227	39.3	220	09.6	+1	27.1	120	58.9	+24	05.9
1	242	41.8	235	09.4		28.1	135	59.8		05.7
2	257	44.2	250	09.2		29.2	151	00.6		05.6
3	272	46.7	265	09.0		30.2	166	01.5		05.4
4	287	49.1	280	08.8		31.3	181	02.3		05.2
5	302	51.6	295	08.7	+1	32.3	196	03.2	+24	05.0
6	317	54.1	310	08.5	+1	33.3	211	04.1	+24	04.8
7	332	56.5	325	08.3		34.4	226	04.9		04.6
8	347	59.0	340	08.1		35.4	241	05.8		04.5
9	3	01.5	355	07.9		36.5	256	06.6		04.3
10	18	03.9	10	07.7		37.5	271	07.5		04.1
11	33	06.4	25	07.5	+1	38.6	286	08.3	+24	03.9
12	48	08.9	40	07.3	+1	39.6	301	09.2	+24	03.7
13	63	11.3	55	07.1		40.6	316	10.0		03.5
14	78	13.8	70	06.9		41.7	331	10.9		03.4
15	93	16.3	85	06.7		42.7	346	11.7		03.2
16	108	18.7	100	06.5		43.8	1	12.6		03.0
17	123	21.2	115	06.3	+1	44.8	16	13.5	+24	02.8
18	138	23.6	130	06.1	+1	45.9	31	14.3	+24	02.6
19	153	26.1	145	05.9		46.9	46	15.2		02.4
20	168	28.6	160	05.7		47.9	61	16.0		02.2
21	183	31.0	175	05.5		49.0	76	16.9		02.1
22	198	33.5	190	05.3		50.0	91	17.7		01.9
23	213	36.0	205	05.2		51.1	106	18.6		01.7
24	228	38.4	220	05.0	+1	52.1	121	19.4	+24	01.5
Dif	—		-2		+10		+9		-2	

	+28	+1	+23	0

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8 PMG: 11 ^h 56 ^m 4			Edad: 13 ^d 2 PHE { SD: 15 ^h 0 PMG: 22 ^h 50 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora
h	°	'	°	°	'	°	'	h	m	h	m	h	m	m
0	180	54.3	+17 47.4	27	27.3	-10 48.4		60 N	0 24	2 33	3 32	18 34	96	2 52 **
1	195	54.3	48.0	42	01.6 ¹⁵³	-11 02.2 ¹³⁸		58	1 25	2 52	45	24 91		2 59 3
2	210	54.3	48.7	56	35.9 ¹⁵³	15.9 ¹³⁷		56	1 56	3 07	3 55	16 86		3 04 7
3	225	54.4	49.3	71	10.1 ¹⁵²	29.7 ¹³⁸		54	2 18	20	4 05	09 82		10
4	240	54.4	50.0	85	44.3 ¹⁵²	43.4 ¹³⁷		52		36	32	13	18 02	79 14 13
5	255	54.4	+17 50.6	100	18.4 ¹⁵¹	-11 57.0 ¹³⁶		50	2 51	3 42	4 20	17 56	77	3 19 14
6	270	54.4	+17 51.3	114	52.4 ¹⁵⁰	-12 10.7 ¹³⁷		45	3 20	4 02	4 36	17 43	71	3 28 20
7	285	54.4	51.9	129	26.4 ¹⁵⁰	24.3 ¹³⁶		40		42	19	4 49	32 67	36 24
8	300	54.5	52.6	144	00.2 ¹⁴⁸	37.8 ¹³⁵		35	3 59	32	5 00	24 63		43 27
9	315	54.5	53.2	158	34.0 ¹⁴⁸	-12 51.3 ¹³⁵		30	4 12	4 44	09	16 60		49 30
10	330	54.5	53.8	173	07.8 ¹⁴⁸	-13 04.8 ¹³⁵		20		35	5 02	26	17 02	55 3 59 36
11	345	54.5	+17 54.5	187	41.4 ¹⁴⁶	-13 18.2 ¹³⁴		10 N	4 52	5 18	5 40	16 51	50	4 08 40
12	0	54.5	+17 55.1	202	15.0 ¹⁴⁶	-13 31.6 ¹³⁴		0	5 06	5 31	5 53	16 40	46	4 17 44
13	15	54.6	55.8	216	48.5 ¹⁴⁵	44.9 ¹³³		10 S		18	44	6 06	29 42	26 48
14	30	54.6	56.4	231	21.9 ¹⁴⁴	-13 58.2 ¹³³		20		30	5 56	20	18 37	35 53
15	45	54.6	57.0	245	55.3 ¹⁴⁴	-14 11.5 ¹³³		30	41	6 10	35	16 05	32	46 58
16	60	54.6	57.7	260	28.5 ¹⁴²	24.7 ¹³²		35		47	17	44	15 57	30 52 61
17	75	54.6	+17 58.3	275	01.7 ¹⁴²	-14 37.8 ¹³¹		40	5 53	6 26	6 54	15 49	26	4 59 65
18	90	54.6	+17 58.9	289	34.8 ¹⁴¹	-14 50.9 ¹³¹		45	5 59	6 35	7 06	15 39	22	5 07 70
19	105	54.6	+17 59.6	304	07.8 ¹⁴⁰	-15 03.9 ¹³⁰		50	6 06	46	21	27 17		17 75
20	120	54.7	+18 00.2	318	40.8 ¹⁴⁰	16.9 ¹³⁰		52		10	51	28	22 14	22 77
21	135	54.7	00.9	333	13.6 ¹³⁸	29.8 ¹²⁹		54	13	6 56	35	16 11		27 81
22	150	54.7	01.5	347	46.4 ¹³⁸	42.7 ¹²⁹		56	16	7 02	44	09 8		33 84
23	165	54.7	02.1	2	19.1 ¹³⁷	-15 55.5 ¹²⁸		58	20	08	7 53	15 02	4	39 88
24	180	54.7	+18 02.8	16	51.7 ¹³⁶	-16 08.3 ¹²⁸		60 S	6 24	7 16	8 04	14 53	0	5 47 92

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO		
	PMG: 8 ^h 44 ^m 0		Mag: -4.1 PMG: 9 ^h 20 ^m		Mag: +1.6 PMG: 15 ^h 54 ^m		Mag: -2.5 PMG: 23 ^h 26 ^m		Mag: +0.3 PMG: 17 ^h 15 ^m		
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	
0	228	38.4	220 05.0	+1 52.1	121 19.4	+24 01.5	7 29.8	-14 31.8	100 35.9	+19 37.6	
1	243	40.9	235 04.8	53.2	136 20.3	01.3	22 32.6	31.7	115 38.2	37.6	
2	258	43.4	250 04.6	54.2	151 21.2	01.1	37 35.4	31.7	130 40.5	37.5	
3	273	45.8	265 04.4	55.2	166 22.0	00.9	52 38.2	31.6	145 42.8	37.5	
4	288	48.3	280 04.2	56.3	181 22.9	00.7	67 40.9	31.5	160 45.1	37.4	
5	303	50.7	295 04.0	+1 57.3	196 23.7	+24 00.5	82 43.7	-14 31.4	175 47.4	+19 37.4	
6	318	53.2	310 03.8	+1 58.4	211 24.6	+24 00.4	97 46.5	-14 31.3	190 49.7	+19 37.4	
7	333	55.7	325 03.6	+1 59.4	226 25.4	+24 00.2	112 49.3	31.2	205 52.0	37.3	
8	348	58.1	340 03.4	+2 00.5	241 26.3	+24 00.0	127 52.0	31.1	220 54.3	37.3	
9	4	00.6	355 03.2	01.5	256 27.1	+23 59.8	142 54.8	31.0	235 56.6	37.3	
10	19	03.1	10 03.0	02.6	271 28.0	59.6	157 57.6	30.9	250 58.9	37.2	
11	34	05.5	25 02.8	+2 03.6	286 28.9	+23 59.4	173 00.4	-14 30.8	266 01.2	+19 37.2	
12	49	08.0	40 02.6	+2 04.6	301 29.7	+23 59.2	188 03.1	-14 30.8	281 03.6	+19 37.1	
13	64	10.5	55 02.4	05.7	316 30.6	59.0	203 05.9	30.7	296 05.9	37.1	
14	79	12.9	70 02.2	06.7	331 31.4	58.8	218 08.7	30.6	311 08.2	37.1	
15	94	15.4	85 02.0	07.8	346 32.3	58.6	233 11.5	30.5	326 10.5	37.0	
16	109	17.9	100 01.8	08.8	1 33.1	58.4	248 14.2	30.4	341 12.8	37.0	
17	124	20.3	115 01.6	+2 09.9	16 34.0	+23 58.3	263 17.0	-14 30.3	356 15.1	+19 37.0	
18	139	22.8	130 01.4	+2 10.9	31 34.8	+23 58.1	278 19.8	-14 30.2	11 17.4	+19 36.9	
19	154	25.2	145 01.2	12.0	46 35.7	57.9	293 22.6	30.1	26 19.7	36.9	
20	169	27.7	160 01.0	13.0	61 36.6	57.7	308 25.3	30.0	41 22.0	36.8	
21	184	30.2	175 00.8	14.1	76 37.4	57.5	323 28.1	29.9	56 24.3	36.8	
22	199	32.6	190 00.6	15.1	91 38.3	57.3	338 30.9	29.9	71 26.6	36.8	
23	214	35.1	205 00.4	16.1	106 39.1	57.1	353 33.7	29.8	86 28.9	36.7	
24	229	37.6	220 00.2	+2 17.2	121 40.0	+23 56.9	8 36.4	-14 29.7	101 31.2	+19 36.7	
Dif	—		-2	+10		+9	-2	+28	+1	+23	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 3		Edad: 14 ^d 2 PHE { 4 ^h : 55 ^m 7 12 ^h : 55 ^m 9 20 ^h : 56 ^m 1 R°: 51 ^m						Civil		Náutico	Hora	R°	Hora	R°
	hG ☉	Dec	hG ☾	Dif	Dec	Dif									
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m	
0	180	54.7	+18 02.8	16	51.7	-16 08.3	60 N	20 24	21 26	** **	20 10 103	2 51	1		
1	195	54.7	03.4	31	24.2 ¹³⁵	21.0 ¹²⁷	58	12	21 06	22 38	19 55 95	3 02	5		
2	210	54.8	04.0	45	56.6 ¹³⁴	33.6 ¹²⁶	56	20 01	20 50	22 03	42 90	11	10		
3	225	54.8	04.7	60	28.9 ¹³³	46.2 ¹²⁶	54	19 51	36	21 39	31 85	19	14		
4	240	54.8	05.3	75	01.1 ¹³²	-16 58.7 ¹²⁵	52	43	24	21	21 82	27	16		
5	255	54.8	+18 05.9	89	33.3 ¹³²	-17 11.2 ¹²⁵	50	19 35	20 14	21 05	19 13 78	3 33	20		
6	270	54.8	+18 06.5	104	05.3 ¹³⁰	-17 23.6 ¹²⁴	45	19 19	19 53	20 35	18 54 73	3 48	24		
7	285	54.8	07.2	118	37.3 ¹³⁰	35.9 ¹²³	40	19 05	36	20 13	39 69	4 00	29		
8	300	54.8	07.8	133	09.1 ¹²⁸	-17 48.1 ¹²²	35	18 54	22	19 56	27 65	10	32		
9	315	54.8	08.4	147	40.9 ¹²⁸	-18 00.3 ¹²²	30	44	19 10	42	18 16 62	19	35		
10	330	54.9	09.1	162	12.6 ¹²⁷	12.4 ¹²¹	20	28	18 51	19	17 57 58	35	40		
11	345	54.9	+18 09.7	176	44.2 ¹²⁶	-18 24.5 ¹²¹	10 N	18 13	18 35	19 01	17 41 54	4 48	45		
12	0	54.9	+18 10.3	191	15.6 ¹²⁴	-18 36.4 ¹¹⁹	0	18 00	18 22	18 47	17 26 50	5 01	48		
13	15	54.9	10.9	205	47.0 ¹²⁴	-18 48.3 ¹¹⁹	10 S	17 47	18 09	34	17 11 47	14	52		
14	30	54.9	11.6	220	18.3 ¹²³	-19 00.1 ¹¹⁸	20	33	17 56	22	16 55 43	28	56		
15	45	54.9	12.2	234	49.5 ¹²²	11.8 ¹¹⁷	30	17	42	11	37 38	44	61		
16	60	54.9	12.8	249	20.6 ¹²¹	23.5 ¹¹⁷	35	17 07	34	18 05	27 35	5 53	65		
17	75	54.9	+18 13.4	263	51.6 ¹²⁰	-19 35.1 ¹¹⁶	40	16 57	17 26	17 58	16 15 32	6 04	68		
18	90	54.9	+18 14.1	278	22.4 ¹¹⁸	-19 46.5 ¹¹⁴	45	16 45	17 16	17 52	16 01 28	6 17	72		
19	105	55.0	14.7	292	53.2 ¹¹⁸	-19 58.0 ¹¹⁵	50	30	05	44	15 44 23	32	78		
20	120	55.0	15.3	307	23.9 ¹¹⁷	-20 09.3 ¹¹³	52	23	17 00	41	36 20	39	81		
21	135	55.0	15.9	321	54.5 ¹¹⁶	20.5 ¹¹²	54	15	16 55	38	27 17	48	83		
22	150	55.0	16.6	336	25.0 ¹¹⁵	31.6 ¹¹¹	56	16 07	49	34	17 13	6 57	87		
23	165	55.0	17.2	350	55.3 ¹¹³	42.7 ¹¹¹	58	15 57	42	30	15 06 9	7 07	93		
24	180	55.0	+18 17.8	5	25.6 ¹¹³	-20 53.7 ¹¹⁰	60 S	15 46	16 34	17 26	14 53 3	7 19	99		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 8 ^h 40 ^m 1		Mag: -4.1 PMG: 9 ^h 20 ^m		Mag: +1.6 PMG: 15 ^h 52 ^m		Mag: -2.5 PMG: 23 ^h 21 ^m		Mag: +0.3 PMG: 17 ^h 11 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	229	37.6	220 00.2	+2 17.2	121 40.0	+23 56.9	8 36.4	-14 29.7	101 31.2	+19 36.7
1	244	40.0	235 00.0	18.2	136 40.8	56.7	23 39.2	29.6	116 33.5	36.7
2	259	42.5	249 59.8	19.3	151 41.7	56.5	38 42.0	29.5	131 35.8	36.6
3	274	45.0	264 59.6	20.3	166 42.6	56.3	53 44.8	29.4	146 38.1	36.6
4	289	47.4	279 59.4	21.4	181 43.4	56.1	68 47.5	29.3	161 40.4	36.5
5	304	49.9	294 59.2	+2 22.4	196 44.3	+23 55.9	83 50.3	-14 29.2	176 42.7	+19 36.5
6	319	52.4	309 59.0	+2 23.5	211 45.1	+23 55.7	98 53.1	-14 29.1	191 45.0	+19 36.5
7	334	54.8	324 58.8	24.5	226 46.0	55.5	113 55.8	29.0	206 47.3	36.4
8	349	57.3	339 58.6	25.6	241 46.8	55.3	128 58.6	29.0	221 49.6	36.4
9	4 59.7	354 58.4	26.6	256 47.7	55.1	144 01.4	28.9	236 51.9	36.4	
10	20 02.2	9 58.2	27.7	271 48.5	54.9	159 04.2	28.8	251 54.2	36.3	
11	35 04.7	24 58.0	+2 28.7	286 49.4	+23 54.7	174 06.9	-14 28.7	266 56.5	+19 36.3	
12	50 07.1	39 57.8	+2 29.7	301 50.3	+23 54.5	189 09.7	-14 28.6	281 58.9	+19 36.2	
13	65 09.6	54 57.6	30.8	316 51.1	54.3	204 12.5	28.5	297 01.2	36.2	
14	80 12.1	69 57.4	31.8	331 52.0	54.1	219 15.3	28.4	312 03.5	36.2	
15	95 14.5	84 57.2	32.9	346 52.8	53.9	234 18.0	28.3	327 05.8	36.1	
16	110 17.0	99 57.0	33.9	1 53.7	53.8	249 20.8	28.2	342 08.1	36.1	
17	125 19.5	114 56.8	+2 35.0	16 54.5	+23 53.6	264 23.6	-14 28.2	357 10.4	+19 36.1	
18	140 21.9	129 56.6	+2 36.0	31 55.4	+23 53.4	279 26.4	-14 28.1	12 12.7	+19 36.0	
19	155 24.4	144 56.4	37.1	46 56.3	53.2	294 29.1	28.0	27 15.0	36.0	
20	170 26.8	159 56.2	38.1	61 57.1	53.0	309 31.9	27.9	42 17.3	35.9	
21	185 29.3	174 56.0	39.2	76 58.0	52.8	324 34.7	27.8	57 19.6	35.9	
22	200 31.8	189 55.8	40.2	91 58.8	52.6	339 37.4	27.7	72 21.9	35.9	
23	215 34.2	204 55.6	41.3	106 59.7	52.4	354 40.2	27.6	87 24.2	35.8	
24	230 36.7	219 55.4	+2 42.3	122 00.5	+23 52.2	9 43.0	-14 27.5	102 26.5	+19 35.8	
Dif	—	-2	+10	+9	-2	+28	+1	+23	0	

UT	SOL				LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15/8 PMG: 11 ^h 56 ^m 3				Edad: 15 ^d 2 PHE { 4 ^h : 56/2 12 ^h : 56/4 20 ^h : 56/6 R°: **m												
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	180	55.0	+18	17.8	5	25.6	-20	53.7	60 N	** **	2 26	3 28	21 53	105	2 52	3	
1	195	55.0		18.4	19	55.8 ¹¹²	-21	04.5 ¹⁰⁸	58	1 14	2 46	40	30 94		3 07	11	
2	210	55.0		19.0	34	25.8 ¹¹⁰		15.3 ¹⁰⁸	56	1 49	3 02	3 51	21 12	88	21	16	
3	225	55.0		19.7	48	55.8 ¹¹⁰		26.0 ¹⁰⁷	54	2 13	16	4 01	20 56	84	33	20	
4	240	55.0		20.3	63	25.6 ¹⁰⁸		36.6 ¹⁰⁶	52	31	28	10	43	80	43	24	
5	255	55.0	+18	20.9	77	55.4 ¹⁰⁸	-21	47.1 ¹⁰⁵	50	2 47	3 38	4 17	20 31	78	3 53	26	
6	270	55.0	+18	21.5	92	25.0 ¹⁰⁶	-21	57.4 ¹⁰³	45	3 17	4 00	4 34	20 07	73	4 12	32	
7	285	55.1		22.1	106	54.5 ¹⁰⁵	-22	07.7 ¹⁰³	40	39	17	47	19 48	69	29	35	
8	300	55.1		22.8	121	24.0 ¹⁰⁵		17.9 ¹⁰²	35	3 56	30	4 58	32	67	42	39	
9	315	55.1		23.4	135	53.3 ¹⁰³		28.0 ¹⁰¹	30	4 11	4 42	5 08	19 18	65	4 54	42	
10	330	55.1		24.0	150	22.5 ¹⁰²		38.0 ¹⁰⁰	20	33	5 01	25	18 55	61	5 15	45	
11	345	55.1	+18	24.6	164	51.6 ¹⁰¹	-22	47.8 ⁹⁸	10 N	4 51	5 17	5 39	18 35	58	5 33	49	
12	0	55.1	+18	25.2	179	20.6 ¹⁰⁰	-22	57.6 ⁹⁸	0	5 06	5 31	5 53	18 16	55	5 49	53	
13	15	55.1		25.8	193	49.5 ⁹⁹	-23	07.2 ⁹⁶	10 S	19	44	6 06	17 58	52	6 06	56	
14	30	55.1		26.4	208	18.3 ⁹⁸		16.8 ⁹⁶	20	31	5 57	20	38	49	24	60	
15	45	55.1		27.1	222	47.0 ⁹⁷		26.2 ⁹⁴	30	42	6 11	36	15	45	45	64	
16	60	55.1		27.7	237	15.6 ⁹⁶		35.5 ⁹³	35	48	19	46	17 02	43	6 58	66	
17	75	55.1	+18	28.3	251	44.0 ⁹⁴	-23	44.7 ⁹²	40	5 55	6 27	6 56	16 47	40	7 12	69	
18	90	55.1	+18	28.9	266	12.4 ⁹⁴	-23	53.8 ⁹¹	45	6 01	6 37	7 09	16 29	36	7 29	73	
19	105	55.1		29.5	280	40.6 ⁹²	-24	02.7 ⁸⁹	50	09	48	24	16 07	31	7 50	79	
20	120	55.1		30.1	295	08.8 ⁹²		11.6 ⁸⁹	52	12	53	31	15 56	29	8 00	81	
21	135	55.1		30.7	309	36.8 ⁹⁰		20.3 ⁸⁷	54	16	6 59	38	44	26	11	85	
22	150	55.1		31.3	324	04.8 ⁹⁰		28.9 ⁸⁶	56	19	7 05	47	30	22	24	90	
23	165	55.1		31.9	338	32.6 ⁸⁸		37.3 ⁸⁴	58	23	12	7 57	15 15	15	40	95	
24	180	55.1	+18	32.6	353	00.4 ⁸⁸	-24	45.7 ⁸⁴	60 S	6 28	7 19	8 08	14 56	7	8 58	104	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG 8 ^h 36 ^m 1		Mag: -4.1 PMG: 9 ^h 20 ^m		Mag: +1.6 PMG: 15 ^h 51 ^m		Mag: -2.5 PMG: 23 ^h 17 ^m		Mag: +0.3 PMG: 17 ^h 08 ^m									
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄									
h	°	'	°	'	°	'	°	'	°	'								
0	230	36.7	219	55.4	+2	42.3	122	00.5	+23	52.2	9	43.0	-14	27.5	102	26.5	+19	35.8
1	245	39.2	234	55.2		43.4	137	01.4		51.9	24	45.8		27.4	117	28.8		35.7
2	260	41.6	249	55.0		44.4	152	02.3		51.7	39	48.5		27.3	132	31.1		35.7
3	275	44.1	264	54.8		45.5	167	03.1		51.5	54	51.3		27.3	147	33.4		35.7
4	290	46.6	279	54.5		46.5	182	04.0		51.3	69	54.1		27.2	162	35.7		35.6
5	305	49.0	294	54.3	+2	47.5	197	04.8	+23	51.1	84	56.8	-14	27.1	177	38.0	+19	35.6
6	320	51.5	309	54.1	+2	48.6	212	05.7	+23	50.9	99	59.6	-14	27.0	192	40.3	+19	35.5
7	335	54.0	324	53.9		49.6	227	06.5		50.7	115	02.4		26.9	207	42.6		35.5
8	350	56.4	339	53.7		50.7	242	07.4		50.5	130	05.2		26.8	222	44.9		35.5
9	5	58.9	354	53.5		51.7	257	08.3		50.3	145	07.9		26.7	237	47.2		35.4
10	21	01.3	9	53.3		52.8	272	09.1		50.1	160	10.7		26.6	252	49.5		35.4
11	36	03.8	24	53.1	+2	53.8	287	10.0	+23	49.9	175	13.5	-14	26.5	267	51.8	+19	35.4
12	51	06.3	39	52.9	+2	54.9	302	10.8	+23	49.7	190	16.2	-14	26.5	282	54.1	+19	35.3
13	66	08.7	54	52.7		55.9	317	11.7		49.5	205	19.0		26.4	297	56.4		35.3
14	81	11.2	69	52.5		57.0	332	12.5		49.3	220	21.8		26.3	312	58.7		35.2
15	96	13.7	84	52.3		58.0	347	13.4		49.1	235	24.6		26.2	328	00.9		35.2
16	111	16.1	99	52.1	+2	59.1	2	14.3		48.9	250	27.3		26.1	343	03.2		35.2
17	126	18.6	114	51.9	+3	00.1	17	15.1	+23	48.7	265	30.1	-14	26.0	358	05.5	+19	35.1
18	141	21.1	129	51.7	+3	01.2	32	16.0	+23	48.5	280	32.9	-14	25.9	13	07.8	+19	35.1
19	156	23.5	144	51.5		02.2	47	16.8		48.3	295	35.6		25.8	28	10.1		35.0
20	171	26.0	159	51.3		03.3	62	17.7		48.1	310	38.4		25.7	43	12.4		35.0
21	186	28.5	174	51.0		04.3	77	18.5		47.9	325	41.2		25.7	58	14.7		35.0
22	201	30.9	189	50.8		05.4	92	19.4		47.7	340	44.0		25.6	73	17.0		34.9
23	216	33.4	204	50.6		06.4	107	20.3		47.5	355	46.7		25.5	88	19.3		34.9
24	231	35.8	219	50.4	+3	07.5	122	21.1	+23	47.2	10	49.5	-14	25.4	103	21.6	+19	34.8
Dif	—		-2		+10		+9		-2		+28		+1		+23		0	

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 : 56 ^m 8 12 ^h : 57 ^m 0 20 ^h : 57 ^m 1												
	PMG: 11 ^h 56 ^m 3			SD: 15 ^h 4 PMG: 0 ^h 29 ^m R°: 56 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°	
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m		h m m		
0	180	55.1	+18 32.6	353	00.4	-24 45.7	86	60 N	20 29	21 32	** **	23 38 88		2 55 11		
1	195	55.1	33.2	7	28.0	-24 53.9	82	58	16	21 11	22 50	23 04 79		3 18 22		
2	210	55.1	33.8	21	55.5	-25 02.0	81	56	20 05	20 54	22 11	22 40 74		37 28		
3	225	55.1	34.4	36	22.9	09.9	79	54	19 55	40	21 45	20 72		3 53 32		
4	240	55.1	35.0	50	50.3	17.7	78	52	46	28	26	22 03 71		4 07 35		
5	255	55.1	+18 35.6	65	17.5	-25 25.4	77	50	19 38	20 17	21 09	21 49 69		4 19 37		
6	270	55.1	+18 36.2	79	44.6	-25 32.9	75	45	19 21	19 55	20 38	21 20 67		4 44 42		
7	285	55.1	36.8	94	11.6	40.4	75	40	19 07	38	20 16	20 57 66		5 04 45		
8	300	55.1	37.4	108	38.6	47.6	72	35	18 56	24	19 58	39 64		21 47		
9	315	55.1	38.0	123	05.4	-25 54.8	72	30	46	19 12	43	20 23 63		5 36 49		
10	330	55.1	38.6	137	32.1	-26 01.8	70	20	28	18 52	20	19 56 61		6 00 52		
11	345	55.1	+18 39.2	151	58.7	-26 08.6	68	10 N	18 14	18 36	19 02	19 33 59		6 22 54		
12	0	55.1	+18 39.8	166	25.3	-26 15.3	67	0	18 00	18 22	18 47	19 11 59		6 42 57		
13	15	55.1	40.4	180	51.7	21.9	66	10 S	17 46	18 08	34	18 50 57		7 02 59		
14	30	55.1	41.0	195	18.1	28.3	64	20	32	17 55	22	27 55		24 61		
15	45	55.1	41.6	209	44.3	34.6	63	30	15	41	10	18 00 54		7 49 64		
16	60	55.1	42.2	224	10.5	40.7	61	35	17 06	33	18 03	17 45 52		8 04 66		
17	75	55.1	+18 42.8	238	36.5	-26 46.7	60	40	16 55	17 24	17 57	17 27 50		8 21 68		
18	90	55.1	+18 43.4	253	02.5	-26 52.5	58	45	16 42	17 14	17 50	17 05 49		8 42 70		
19	105	55.1	44.0	267	28.4	-26 58.1	56	50	27	17 03	42	16 38 45		9 09 73		
20	120	55.1	44.6	281	54.2	-27 03.7	56	52	20	16 57	39	25 43		21 76		
21	135	55.1	45.2	296	20.0	09.0	53	54	12	52	35	16 10 41		36 79		
22	150	55.1	45.8	310	45.6	14.2	52	56	16 03	45	31	15 52 37		9 54 82		
23	165	55.1	46.4	325	11.2	19.3	51	58	15 53	38	27	30 33		10 15 87		
24	180	55.1	+18 47.0	339	36.6	-27 24.1	48	60 S	15 41	16 30	17 22	15 03 22		10 42 98		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO				
	PMG: 8 ^h 32 ^m 2		Mag: -4.1 PMG: 9 ^h 21 ^m			Mag: +1.6 PMG: 15 ^h 50 ^m			Mag: -2.5 PMG: 23 ^h 12 ^m			Mag: +0.3 PMG: 17 ^h 04 ^m				
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec			
h	°	'	°	°	'	°	'	°	°	'	°	°	'	°	'	
0	231	35.8	219 50.4	+3 07.5	122 21.1	+23 47.2	10 49.5	-14 25.4	103 21.6	+19 34.8						
1	246	38.3	234 50.2	08.5	137 22.0	47.0	25 52.3	25.3	118 23.9	34.8						
2	261	40.8	249 50.0	09.6	152 22.8	46.8	40 55.0	25.2	133 26.2	34.8						
3	276	43.2	264 49.8	10.6	167 23.7	46.6	55 57.8	25.1	148 28.5	34.7						
4	291	45.7	279 49.6	11.7	182 24.5	46.4	71 00.6	25.0	163 30.8	34.7						
5	306	48.2	294 49.4	+3 12.7	197 25.4	+23 46.2	86 03.3	-14 25.0	178 33.1	+19 34.6						
6	321	50.6	309 49.2	+3 13.8	212 26.3	+23 46.0	101 06.1	-14 24.9	193 35.4	+19 34.6						
7	336	53.1	324 49.0	14.8	227 27.1	45.8	116 08.9	24.8	208 37.7	34.6						
8	351	55.6	339 48.8	15.9	242 28.0	45.6	131 11.7	24.7	223 40.0	34.5						
9	6	58.0	354 48.5	16.9	257 28.8	45.4	146 14.4	24.6	238 42.3	34.5						
10	22	00.5	9 48.3	18.0	272 29.7	45.2	161 17.2	24.5	253 44.6	34.4						
11	37	03.0	24 48.1	+3 19.0	287 30.6	+23 44.9	176 20.0	-14 24.4	268 46.9	+19 34.4						
12	52	05.4	39 47.9	+3 20.1	302 31.4	+23 44.7	191 22.7	-14 24.3	283 49.2	+19 34.4						
13	67	07.9	54 47.7	21.1	317 32.3	44.5	206 25.5	24.2	298 51.5	34.3						
14	82	10.3	69 47.5	22.2	332 33.1	44.3	221 28.3	24.2	313 53.8	34.3						
15	97	12.8	84 47.3	23.2	347 34.0	44.1	236 31.0	24.1	328 56.1	34.2						
16	112	15.3	99 47.1	24.3	2 34.8	43.9	251 33.8	24.0	343 58.3	34.2						
17	127	17.7	114 46.9	+3 25.3	17 35.7	+23 43.7	266 36.6	-14 23.9	359 00.6	+19 34.2						
18	142	20.2	129 46.6	+3 26.3	32 36.6	+23 43.5	281 39.3	-14 23.8	14 02.9	+19 34.1						
19	157	22.7	144 46.4	27.4	47 37.4	43.3	296 42.1	23.7	29 05.2	34.1						
20	172	25.1	159 46.2	28.4	62 38.3	43.0	311 44.9	23.6	44 07.5	34.0						
21	187	27.6	174 46.0	29.5	77 39.1	42.8	326 47.7	23.5	59 09.8	34.0						
22	202	30.1	189 45.8	30.5	92 40.0	42.6	341 50.4	23.5	74 12.1	34.0						
23	217	32.5	204 45.6	31.6	107 40.9	42.4	356 53.2	23.4	89 14.4	33.9						
24	232	35.0	219 45.4	+3 32.6	122 41.7	+23 42.2	11 56.0	-14 23.3	104 16.7	+19 33.9						
Dif	—		-2	+10	+9		-2	+28	+1		+23					

UT	SOL				LUNA							Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna			Puesta de Luna		
	SD: 15 ^h 8 PMG: 11 ^h 56 ^m 3				Edad: 17 ^d 2 PHE { 4 ^h : 57 ^m 3 12 ^h : 57 ^m 5 20 ^h : 57 ^m 6 PMG: 1 ^h 25 ^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	h m m	h m m			
0	180	55.1	+18	47.0	339	36.6			-27	24.1		60 N	** **	2 20	3 23	** **	** **	3 06 36			
1	195	55.1		47.6	354	02.0	64			28.9	48	58	1 02	41	36	** **	** **	3 40 44			
2	210	55.1		48.2	8	27.4	64			33.4	45	56	1 41	2 58	48	23 54	52	4 05 48			
3	225	55.1		48.8	22	52.6	62			37.8	44	54	2 07	3 12	3 58	32 54		25 50			
4	240	55.1		49.4	37	17.8	62			42.1	43	52	27	24	4 06	23 14	54	42 52			
5	255	55.1	+18	49.9	51	42.9	61		-27	46.1	40	50	2 43	3 35	4 14	22 58	56	4 56 53			
6	270	55.1	+18	50.5	66	07.9	60		-27	50.0	39	45	3 14	3 57	4 31	22 27	57	5 26 55			
7	285	55.1		51.1	80	32.9	60			53.8	38	40	37	4 14	45	22 03	57	5 49 56			
8	300	55.1		51.7	94	57.8	59		-27	57.3	35	35	3 55	29	4 57	21 43	58	6 08 57			
9	315	55.1		52.3	109	22.6	58		-28	00.8	35	30	4 09	4 41	5 07	21 26	58	25 57			
10	330	55.1		52.9	123	47.4	58			04.0	32	20	32	5 00	24	20 57	59	6 52 59			
11	345	55.1	+18	53.5	138	12.1	57		-28	07.1	31	10 N	4 51	5 17	5 39	20 32	60	7 16 59			
12	0	55.1	+18	54.1	152	36.7	56		-28	09.9	28	0	5 06	5 31	5 53	20 10	60	7 39 59			
13	15	55.1		54.7	167	01.3	56			12.7	28	10 S	19	44	6 07	19 47	60	8 01 60			
14	30	55.0		55.3	181	25.8	55			15.2	25	20	31	5 58	21	19 22	61	25 61			
15	45	55.0		55.8	195	50.3	55			17.6	24	30	43	6 12	38	18 54	61	8 53 61			
16	60	55.0		56.4	210	14.8	55			19.8	22	35	50	20	47	37 61		9 10 61			
17	75	55.0	+18	57.0	224	39.1	53		-28	21.8	20	40	5 56	6 29	6 58	18 17	62	9 29 62			
18	90	55.0	+18	57.6	239	03.5	54		-28	23.7	19	45	6 03	6 39	7 11	17 54	61	9 52 63			
19	105	55.0		58.2	253	27.8	53			25.4	17	50	11	51	26	23 62		10 22 63			
20	120	55.0		58.8	267	52.0	52			26.9	15	52	15	6 56	34	17 08	62	37 63			
21	135	55.0		59.4	282	16.2	52			28.2	13	54	18	7 02	42	16 51	61	10 55 63			
22	150	55.0	+18	59.9	296	40.4	52			29.3	11	56	22	08	7 51	29 62		11 16 63			
23	165	55.0	+19	00.5	311	04.5	51			30.3	10	58	27	15	8 01	16 03	61	11 42 64			
24	180	55.0	+19	01.1	325	28.6	51		-28	31.1	8	60 S	6 31	7 23	8 13	15 25	61	12 20 65			

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG 8 ^h 28 ^m 3		Mag: -4.1 PMG: 9 ^h 21 ^m			Mag: +1.6 PMG: 15 ^h 48 ^m			Mag: -2.5 PMG: 23 ^h 08 ^m			Mag: +0.3 PMG: 17 ^h 00 ^m		
	hG ♈		hG ♀		Dec	hG ♂		Dec	hG ♃		Dec	hG ♄		Dec
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	232	35.0	219	45.4	+3 32.6	122	41.7	+23 42.2	11	56.0	-14 23.3	104	16.7	+19 33.9
1	247	37.4	234	45.2	33.7	137	42.6	42.0	26	58.7	23.2	119	19.0	33.8
2	262	39.9	249	44.9	34.7	152	43.4	41.8	42	01.5	23.1	134	21.3	33.8
3	277	42.4	264	44.7	35.8	167	44.3	41.5	57	04.3	23.0	149	23.6	33.8
4	292	44.8	279	44.5	36.8	182	45.1	41.3	72	07.0	22.9	164	25.9	33.7
5	307	47.3	294	44.3	+3 37.9	197	46.0	+23 41.1	87	09.8	-14 22.8	179	28.2	+19 33.7
6	322	49.8	309	44.1	+3 38.9	212	46.9	+23 40.9	102	12.6	-14 22.7	194	30.4	+19 33.6
7	337	52.2	324	43.9	40.0	227	47.7	40.7	117	15.3	22.7	209	32.7	33.6
8	352	54.7	339	43.7	41.0	242	48.6	40.5	132	18.1	22.6	224	35.0	33.6
9	7	57.2	354	43.4	42.1	257	49.4	40.3	147	20.9	22.5	239	37.3	33.5
10	22	59.6	9	43.2	43.1	272	50.3	40.0	162	23.6	22.4	254	39.6	33.5
11	38	02.1	24	43.0	+3 44.2	287	51.2	+23 39.8	177	26.4	-14 22.3	269	41.9	+19 33.4
12	53	04.6	39	42.8	+3 45.2	302	52.0	+23 39.6	192	29.2	-14 22.2	284	44.2	+19 33.4
13	68	07.0	54	42.6	46.3	317	52.9	39.4	207	31.9	22.1	299	46.5	33.3
14	83	09.5	69	42.4	47.3	332	53.7	39.2	222	34.7	22.0	314	48.8	33.3
15	98	11.9	84	42.2	48.4	347	54.6	39.0	237	37.5	22.0	329	51.1	33.3
16	113	14.4	99	41.9	49.4	2	55.5	38.7	252	40.2	21.9	344	53.4	33.2
17	128	16.9	114	41.7	+3 50.5	17	56.3	+23 38.5	267	43.0	-14 21.8	359	55.6	+19 33.2
18	143	19.3	129	41.5	+3 51.5	32	57.2	+23 38.3	282	45.8	-14 21.7	14	57.9	+19 33.1
19	158	21.8	144	41.3	52.6	47	58.0	38.1	297	48.5	21.6	30	00.2	33.1
20	173	24.3	159	41.1	53.6	62	58.9	37.9	312	51.3	21.5	45	02.5	33.1
21	188	26.7	174	40.9	54.7	77	59.7	37.6	327	54.1	21.4	60	04.8	33.0
22	203	29.2	189	40.6	55.7	93	00.6	37.4	342	56.8	21.3	75	07.1	33.0
23	218	31.7	204	40.4	56.8	108	01.5	37.2	357	59.6	21.3	90	09.4	32.9
24	233	34.1	219	40.2	+3 57.8	123	02.3	+23 37.0	13	02.4	-14 21.2	105	11.7	+19 32.9
Dif	—		-2		+10	+9		-2	+28		+1	+23		0

UT	SOL				LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8				Edad: 18 ^d 2 PHE { 4 ^h : 57 ^m 8 12 ^h : 57 ^m 9 20 ^h : 58 ^m 1											
	PMG: 11 ^h 56 ^m 3				SD: 15 ^h 7 PMG: 2 ^h 24 ^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	55.0	+19 01.1	325	28.6	-28 31.1	6	60 N	20 34	21 39	** **	1 06 41	3 42 84			
1	195	55.0		339	52.7	31.7	6	58	20	21 17	23 04	0 23 49	4 24 77			
2	210	54.9	02.3	354	16.7	32.1	4	56	20 08	20 59	22 19	** ** *	4 53 74			
3	225	54.9	02.8	8	40.7	32.3	2	54	19 58	44	21 51	** ** *	5 15 72			
4	240	54.9	03.4	23	04.7	32.4	1	52	49	31	30	** ** *	34 70			
5	255	54.9	+19 04.0	37	28.6	-28 32.3	1	50	19 41	20 20	21 14	23 54 40	5 49 69			
6	270	54.9	+19 04.6	51	52.6	-28 32.0	3	45	19 23	19 58	20 42	23 24 45	6 21 67			
7	285	54.9	05.2	66	16.5	31.5	5	40	19 09	40	18	23 00 48	6 45 66			
8	300	54.9	05.7	80	40.4	30.8	7	35	18 57	25	20 00	22 41 50	7 05 65			
9	315	54.9	06.3	95	04.3	30.0	8	30	47	19 13	19 45	22 24 52	22 64			
10	330	54.9	06.9	109	28.2	29.0	10	20	29	18 53	21	21 56 55	7 51 62			
11	345	54.8	+19 07.5	123	52.1	-28 27.8	12	10 N	18 14	18 36	19 03	21 32 57	8 15 62			
12	0	54.8	+19 08.0	138	15.9	-28 26.4	14	0	18 00	18 22	18 47	21 10 59	8 38 60			
13	15	54.8	08.6	152	39.8	24.8	16	10 S	17 46	18 08	34	20 47 62	9 01 59			
14	30	54.8	09.2	167	03.7	23.0	18	20	31	17 54	21	20 23 64	26 57			
15	45	54.8	09.8	181	27.5	21.1	19	30	14	40	09	19 55 66	9 54 56			
16	60	54.8	10.3	195	51.4	19.0	21	35	17 04	31	18 02	38 68	10 11 54			
17	75	54.8	+19 10.9	210	15.3	-28 16.7	23	40	16 53	17 22	17 55	19 19 69	10 31 53			
18	90	54.8	+19 11.5	224	39.2	-28 14.2	25	45	16 40	17 12	17 48	18 55 72	10 55 50			
19	105	54.7	12.0	239	03.1	11.5	27	50	24	17 00	40	25 76	11 25 48			
20	120	54.7	12.6	253	27.0	08.6	29	52	17	16 55	36	18 10 77	40 46			
21	135	54.7	13.2	267	50.9	05.6	30	54	09	49	32	17 52 80	11 58 44			
22	150	54.7	13.8	282	14.8	-28 02.4	32	56	16 00	42	28	31 84	12 19 41			
23	165	54.7	14.3	296	38.8	-27 59.0	34	58	15 49	35	24	17 04 89	12 46 36			
24	180	54.7	+19 14.9	311	02.8	-27 55.4	36	60 S	15 37	16 27	17 19	16 26 99	13 25 25			

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 8 ^h 24 ^m 3		Mag: -4.1 PMG: 9 ^h 21 ^m		Mag: +1.6 PMG: 15 ^h 47 ^m		Mag: -2.5 PMG: 23 ^h 04 ^m		Mag: +0.3 PMG: 16 ^h 57 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	233	34.1	219 40.2	+3 57.8	123 02.3	+23 37.0	13 02.4	-14 21.2	105 11.7	+19 32.9
1	248	36.6	234 40.0	58.9	138 03.2	36.8	28 05.1	21.1	120 14.0	32.9
2	263	39.1	249 39.8	+3 59.9	153 04.0	36.5	43 07.9	21.0	135 16.3	32.8
3	278	41.5	264 39.6	+4 01.0	168 04.9	36.3	58 10.7	20.9	150 18.5	32.8
4	293	44.0	279 39.3	02.0	183 05.8	36.1	73 13.4	20.8	165 20.8	32.7
5	308	46.4	294 39.1	+4 03.1	198 06.6	+23 35.9	88 16.2	-14 20.7	180 23.1	+19 32.7
6	323	48.9	309 38.9	+4 04.1	213 07.5	+23 35.7	103 19.0	-14 20.7	195 25.4	+19 32.6
7	338	51.4	324 38.7	05.2	228 08.3	35.4	118 21.7	20.6	210 27.7	32.6
8	353	53.8	339 38.5	06.2	243 09.2	35.2	133 24.5	20.5	225 30.0	32.6
9	8	56.3	354 38.2	07.3	258 10.1	35.0	148 27.3	20.4	240 32.3	32.5
10	23	58.8	9 38.0	08.3	273 10.9	34.8	163 30.0	20.3	255 34.6	32.5
11	39	01.2	24 37.8	+4 09.4	288 11.8	+23 34.5	178 32.8	-14 20.2	270 36.8	+19 32.4
12	54	03.7	39 37.6	+4 10.4	303 12.6	+23 34.3	193 35.6	-14 20.1	285 39.1	+19 32.4
13	69	06.2	54 37.4	11.5	318 13.5	34.1	208 38.3	20.0	300 41.4	32.4
14	84	08.6	69 37.1	12.5	333 14.4	33.9	223 41.1	20.0	315 43.7	32.3
15	99	11.1	84 36.9	13.6	348 15.2	33.6	238 43.8	19.9	330 46.0	32.3
16	114	13.6	99 36.7	14.6	3 16.1	33.4	253 46.6	19.8	345 48.3	32.2
17	129	16.0	114 36.5	+4 15.7	18 16.9	+23 33.2	268 49.4	-14 19.7	0 50.6	+19 32.2
18	144	18.5	129 36.3	+4 16.7	33 17.8	+23 33.0	283 52.1	-14 19.6	15 52.9	+19 32.1
19	159	20.9	144 36.0	17.8	48 18.7	32.7	298 54.9	19.5	30 55.1	32.1
20	174	23.4	159 35.8	18.8	63 19.5	32.5	313 57.7	19.4	45 57.4	32.1
21	189	25.9	174 35.6	19.9	78 20.4	32.3	329 00.4	19.4	60 59.7	32.0
22	204	28.3	189 35.4	20.9	93 21.2	32.1	344 03.2	19.3	76 02.0	32.0
23	219	30.8	204 35.1	22.0	108 22.1	31.8	359 06.0	19.2	91 04.3	31.9
24	234	33.3	219 34.9	+4 23.0	123 23.0	+23 31.6	14 08.7	-14 19.1	106 06.6	+19 31.9
Dif	—		-2	+11	+9	-2	+28	+1	+23	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 4				Edad: 19 ^d 2 PHE { 4 ^h : 58/2 12 ^h : 58/3 20 ^h : 58/5 SD: 15/8 PMG: 3 ^h 24 ^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	+19	14.9	311	02.8			-27	55.4			60 N	** **	2 13	3 18		1 47	13	5 06	110	
1	195	54.7		15.5	325	26.8	50			51.7	37		58	0 48	35	32		1 12	24	5 41	99	
2	210	54.6		16.0	339	50.8	50			47.7	40		56	1 33	2 53	44		0 46	31	6 07	91	
3	225	54.6		16.6	354	14.9	51			43.6	41		54	2 01	3 08	3 54		26	34	27	87	
4	240	54.6		17.2	8	38.9	50			39.3	43		52	22	21	4 03		0 08	38	44	84	
5	255	54.6	+19	17.7	23	03.1	52			-27	34.9	44	50	2 39	3 32	4 12		** **	**	6 58	82	
6	270	54.6	+19	18.3	37	27.2	51			-27	30.2	47	45	3 11	3 55	4 29		** **	**	7 28	76	
7	285	54.6		18.9	51	51.4	52			25.4	48		40	34	4 12	43		23 48	39	7 51	73	
8	300	54.5		19.4	66	15.6	52			20.4	50		35	3 53	27	4 55		31	42	8 10	70	
9	315	54.5		20.0	80	39.9	53			15.2	52		30	4 08	4 39	5 06		23 16	45	26	68	
10	330	54.5		20.5	95	04.2	53			09.8	54		20	32	5 00	23		22 51	50	8 53	64	
11	345	54.5	+19	21.1	109	28.5	53			-27	04.3	55	10 N	4 50	5 16	5 39		22 29	54	9 17	61	
12	0	54.5	+19	21.7	123	52.9	54			-26	58.6	57	0	5 05	5 31	5 53		22 09	57	9 38	58	
13	15	54.4		22.2	138	17.4	55			52.7	59		10 S	19	45	6 07		21 49	60	10 00	55	
14	30	54.4		22.8	152	41.9	55			46.7	60		20	32	5 59	22		27	64	23	52	
15	45	54.4		23.4	167	06.4	55			40.4	63		30	44	6 13	39		21 01	69	10 50	48	
16	60	54.4		23.9	181	31.0	56			34.0	64		35	51	22	6 49		20 46	71	11 05	46	
17	75	54.4	+19	24.5	195	55.6	56			-26	27.5	65	40	5 58	6 31	7 00		20 28	75	11 24	43	
18	90	54.4	+19	25.0	210	20.3	57			-26	20.7	68	45	6 05	6 41	7 13		20 07	79	11 45	40	
19	105	54.3		25.6	224	45.1	58			13.8	69		50	14	53	29		19 41	84	12 13	34	
20	120	54.3		26.1	239	09.9	58			-26	06.8	70	52	17	6 59	37		27	88	26	32	
21	135	54.3		26.7	253	34.8	59			-25	59.5	73	54	21	7 05	45		19 12	91	12 42	28	
22	150	54.3		27.3	267	59.7	59			52.1	74		56	25	11	7 54		18 55	95	13 00	24	
23	165	54.3		27.8	282	24.7	60			44.6	75		58	30	19	8 05		33	102	22	18	
24	180	54.2	+19	28.4	296	49.8	61			-25	36.9	77	60 S	6 35	7 27	8 17		18 05	112	13 50	9	

UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO														
	PMG 8 ^h 20 ^m 4			Mag: -4.0 PMG: 9 ^h 22 ^m			Mag: +1.6 PMG: 15 ^h 46 ^m			Mag: -2.5 PMG: 22 ^h 59 ^m			Mag: +0.3 PMG: 16 ^h 53 ^m														
	hG ♈		Dec	hG ♀		Dec	hG ♂		Dec	hG ♃		Dec	hG ♄		Dec												
h	°	'		°	'		°	'		°	'		°	'													
0	234	33.3		219	34.9	+4	123	23.0	+23	14	08.7	-14	106	06.6	+19												
1	249	35.7		234	34.7		138	23.8		29	11.5		121	08.9													
2	264	38.2		249	34.5		153	24.7		44	14.3		136	11.1													
3	279	40.7		264	34.3		168	25.5		59	17.0		151	13.4													
4	294	43.1		279	34.0		183	26.4		74	19.8		166	15.7													
5	309	45.6		294	33.8	+4	198	27.3	+23	89	22.5	-14	181	18.0	+19												
6	324	48.1		309	33.6	+4	213	28.1	+23	104	25.3	-14	196	20.3	+19												
7	339	50.5		324	33.4		228	29.0		119	28.1		211	22.6													
8	354	53.0		339	33.1		243	29.8		134	30.8		226	24.8													
9	9	55.4		354	32.9		258	30.7		149	33.6		241	27.1													
10	24	57.9		9	32.7		273	31.6		164	36.4		256	29.4													
11	40	00.4		24	32.5	+4	288	32.4	+23	179	39.1	-14	271	31.7	+19												
12	55	02.8		39	32.2	+4	303	33.3	+23	194	41.9	-14	286	34.0	+19												
13	70	05.3		54	32.0		318	34.1		209	44.6		301	36.3													
14	85	07.8		69	31.8		333	35.0		224	47.4		316	38.6													
15	100	10.2		84	31.6		348	35.9		239	50.2		331	40.8													
16	115	12.7		99	31.3		3	36.7		254	52.9		346	43.1													
17	130	15.2		114	31.1	+4	18	37.6	+23	269	55.7	-14	1	45.4	+19												
18	145	17.6		129	30.9	+4	33	38.5	+23	284	58.5	-14	16	47.7	+19												
19	160	20.1		144	30.7		48	39.3		300	01.2		31	50.0													
20	175	22.6		159	30.4		63	40.2		315	04.0		46	52.2													
21	190	25.0		174	30.2		78	41.0		330	06.7		61	54.5													
22	205	27.5		189	30.0		93	41.9		345	09.5		76	56.8													
23	220	29.9		204	29.7		108	42.8		0	12.3		91	59.1													
24	235	32.4		219	29.5	+4	123	43.6	+23	15	15.0	-14	107	01.4	+19												
Dif	—			-2			+10			+9			-2			+28			+1			+23			0		

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8			Edad: 20 ^d 2	PHE {	4 ^h : 58 ^m 6 12 ^h : 58 ^m 7 20 ^h : 58 ^m 8			Final del crepúsculo		Salida de Luna		Puesta de Luna	
	PMG: 11 ^h 56 ^m 4								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	180	54.2	+19 28.4	296	49.8	-25 36.9	61	60 N	20 39	21 45	** **	2 00 4	6 56 112	
1	195	54.2	28.9	311	14.9	29.0	79	58	24	22	23 23	1 36 12	7 20 103	
2	210	54.2	29.5	325	40.1	20.9	81	56	12	21 03	22 27	17 18	38 98	
3	225	54.2	30.0	340	05.4	12.7	82	54	20 01	20 48	21 57	1 00 23	7 54 93	
4	240	54.1	30.6	354	30.7	-25 04.3	84	52	19 52	35	35	0 46 26	8 08 89	
5	255	54.1	+19 31.1	8	56.1	-24 55.8	85	50	19 43	20 23	21 18	0 34 29	8 20 86	
6	270	54.1	+19 31.7	23	21.5	-24 47.1	87	45	19 25	20 00	20 45	0 09 34	8 44 80	
7	285	54.1	32.2	37	47.1	38.3	88	40	19 11	19 42	20	** ** *	9 04 75	
8	300	54.1	32.8	52	12.7	29.3	90	35	18 59	27	20 02	** ** *	20 71	
9	315	54.0	33.3	66	38.4	20.2	91	30	48	19 15	19 46	** ** *	34 68	
10	330	54.0	33.9	81	04.1	10.9	93	20	30	18 54	22	23 41 44	9 57 64	
11	345	54.0	+19 34.4	95	29.9	-24 01.4	95	10 N	18 14	18 37	19 03	23 23 49	10 18 59	
12	0	54.0	+19 35.0	109	55.8	-23 51.8	96	0	18 00	18 22	18 47	23 06 53	10 36 56	
13	15	53.9	35.5	124	21.8	42.1	97	10 S	17 46	18 08	34	22 49 58	10 55 51	
14	30	53.9	36.1	138	47.9	32.2	99	20	30	17 54	21	31 62	11 15 47	
15	45	53.9	36.6	153	14.0	22.1	101	30	13	39	08	22 10 68	38 42	
16	60	53.9	37.2	167	40.2	12.0	101	35	17 03	30	18 01	21 57 72	11 51 39	
17	75	53.8	+19 37.7	182	06.5	-23 01.6	104	40	16 52	17 21	17 54	21 43 75	12 07 35	
18	90	53.8	+19 38.3	196	32.9	-22 51.2	104	45	16 38	17 10	17 46	21 26 80	12 25 31	
19	105	53.8	38.8	210	59.3	40.6	106	50	22	16 58	38	21 05 86	47 25	
20	120	53.8	39.3	225	25.8	29.8	108	52	14	52	34	20 55 89	12 58 22	
21	135	53.7	39.9	239	52.4	19.0	108	54	16 06	46	30	43 93	13 10 19	
22	150	53.7	40.4	254	19.1	-22 07.9	111	56	15 56	39	26	30 98	24 14	
23	165	53.7	41.0	268	45.9	-21 56.8	111	58	45	32	21	20 15 103	40 9	
24	180	53.6	+19 41.5	283	12.7	-21 45.5	113	60 S	15 33	16 23	17 16	19 57 109	13 59 3	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 8 ^h 16 ^m 5		Mag: -4.0 PMG: 9 ^h 22 ^m		Mag: +1.6 PMG: 15 ^h 44 ^m		Mag: -2.5 PMG: 22 ^h 55 ^m		Mag: +0.3 PMG: 16 ^h 49 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	235	32.4	219	29.5	123	43.6	15	15.0	107	01.4
1	250	34.9	234	29.3	138	44.5	30	17.8	122	03.7
2	265	37.3	249	29.1	153	45.3	45	20.5	137	05.9
3	280	39.8	264	28.8	168	46.2	60	23.3	152	08.2
4	295	42.3	279	28.6	183	47.1	75	26.1	167	10.5
5	310	44.7	294	28.4	198	47.9	90	28.8	182	12.8
6	325	47.2	309	28.1	213	48.8	105	31.6	197	15.1
7	340	49.7	324	27.9	228	49.7	120	34.3	212	17.3
8	355	52.1	339	27.7	243	50.5	135	37.1	227	19.6
9	10	54.6	354	27.5	258	51.4	150	39.9	242	21.9
10	25	57.1	9	27.2	273	52.2	165	42.6	257	24.2
11	40	59.5	24	27.0	288	53.1	180	45.4	272	26.5
12	56	02.0	39	26.8	303	54.0	195	48.1	287	28.7
13	71	04.4	54	26.5	318	54.8	210	50.9	302	31.0
14	86	06.9	69	26.3	333	55.7	225	53.7	317	33.3
15	101	09.4	84	26.1	348	56.5	240	56.4	332	35.6
16	116	11.8	99	25.8	3	57.4	255	59.2	347	37.9
17	131	14.3	114	25.6	18	58.3	271	01.9	2	40.1
18	146	16.8	129	25.4	33	59.1	286	04.7	17	42.4
19	161	19.2	144	25.1	49	00.0	301	07.5	32	44.7
20	176	21.7	159	24.9	64	00.9	316	10.2	47	47.0
21	191	24.2	174	24.7	79	01.7	331	13.0	62	49.3
22	206	26.6	189	24.4	94	02.6	346	15.7	77	51.5
23	221	29.1	204	24.2	109	03.4	1	18.5	92	53.8
24	236	31.5	219	24.0	124	04.3	16	21.2	107	56.1
Dif	—		-2	+10	+9	-2	+28	+1	+23	0

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15 ^h 8			Edad: 21 ^d 2	PHE { 4 ^h : 58/9 12 ^h : 59/0 20 ^h : 59/1	R°: 52 ^m		Náutico	Civil		Hora	R°	Hora	R°	
	PMG: 11 ^h 56 ^m 4	hG ☉	Dec												
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	180	53.6	+19	41.5	283	12.7	-21 45.5	60 N	** **	2 07	3 14	2 04	1	8 48	108
1	195	53.6		42.0	297	39.6	34.1 ¹¹⁴	58	0 29	30	28	1 48	7	9 03	102
2	210	53.6		42.6	312	06.6	80 22.6 ¹¹⁵	56	1 25	2 49	40	35	11	16	97
3	225	53.6		43.1	326	33.7	81 -21 10.9 ¹¹⁷	54	1 55	3 04	3 51	23	15	27	93
4	240	53.5		43.7	341	00.9	82 -20 59.1 ¹¹⁸	52	2 17	18	4 01	12	19	37	89
5	255	53.5	+19	44.2	355	28.1	82 -20 47.2 ¹¹⁹	50	2 35	3 29	4 09	1 03	21	9 46	86
6	270	53.5	+19	44.7	9	55.4	83 -20 35.1 ¹²¹	45	3 08	3 52	4 27	0 43	27	10 04	80
7	285	53.4		45.3	24	22.8	84 22.9 ¹²²	40	32	4 11	41	27	32	19	75
8	300	53.4		45.8	38	50.3	85 -20 10.7 ¹²²	35	3 51	25	4 54	13	36	31	71
9	315	53.4		46.4	53	17.8	85 -19 58.2 ¹²⁵	30	4 06	38	5 04	0 01	39	10 42	68
10	330	53.4		46.9	67	45.5	87 45.7 ¹²⁵	20	31	4 59	23	** **	**	11 01	61
11	345	53.3	+19	47.4	82	13.2	87 -19 33.1 ¹²⁶	10 N	4 50	5 16	5 38	** **	**	11 17	56
12	0	53.3	+19	48.0	96	41.0	88 -19 20.3 ¹²⁸	0	5 05	5 31	5 53	23	59	51	51
13	15	53.3		48.5	111	08.9	89 -19 07.4 ¹²⁹	10 S	19	45	6 07	47	55	11 46	48
14	30	53.2		49.0	125	36.8	89 -18 54.4 ¹³⁰	20	32	5 59	23	33	61	12 02	42
15	45	53.2		49.6	140	04.8	90 41.4 ¹³⁰	30	45	6 15	40	18	66	20	36
16	60	53.2		50.1	154	32.9	91 28.1 ¹³³	35	52	23	6 50	23	09	70	33
17	75	53.1	+19	50.6	169	01.1	92 -18 14.8 ¹³³	40	5 59	6 32	7 02	22	58	75	29
18	90	53.1	+19	51.1	183	29.4	93 -18 01.4 ¹³⁴	45	6 07	6 43	7 15	22	46	79	24
19	105	53.1		51.7	197	57.7	93 -17 47.9 ¹³⁵	50	16	6 56	32	31	86	13 12	19
20	120	53.1		52.2	212	26.1	94 34.3 ¹³⁶	52	20	7 01	40	24	89	20	16
21	135	53.0		52.7	226	54.6	95 20.5 ¹³⁸	54	24	08	48	16	92	29	13
22	150	53.0		53.3	241	23.1	95 -17 06.7 ¹³⁸	56	28	14	7 58	22	08	95	38
23	165	53.0		53.8	255	51.8	97 -16 52.8 ¹³⁹	58	33	22	8 09	21	58	99	13
24	180	52.9	+19	54.3	270	20.5	97 -16 38.7 ¹⁴¹	60 S	6 38	7 31	8 22	21	46	105	0

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 8 ^h 12 ^m 5		Mag: -4.0 PMG: 9 ^h 23 ^m		Mag: +1.6 PMG: 15 ^h 43 ^m		Mag: -2.5 PMG: 22 ^h 50 ^m		Mag: +0.3 PMG: 16 ^h 46 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	236	31.5	219	24.0	+5	13.4	124	04.3	+23	20.4	16	21.2	-14	15.0	107	56.1	+19	29.8
1	251	34.0	234	23.7		14.5	139	05.2		20.2	31	24.0		14.9	122	58.4		29.8
2	266	36.5	249	23.5		15.5	154	06.0		19.9	46	26.8		14.8	138	00.7		29.7
3	281	38.9	264	23.3		16.6	169	06.9		19.7	61	29.5		14.7	153	02.9		29.7
4	296	41.4	279	23.0		17.6	184	07.8		19.5	76	32.3		14.6	168	05.2		29.6
5	311	43.9	294	22.8	+5	18.7	199	08.6	+23	19.2	91	35.0	-14	14.6	183	07.5	+19	29.6
6	326	46.3	309	22.6	+5	19.7	214	09.5	+23	19.0	106	37.8	-14	14.5	198	09.8	+19	29.5
7	341	48.8	324	22.3		20.7	229	10.3		18.7	121	40.5		14.4	213	12.0		29.5
8	356	51.3	339	22.1		21.8	244	11.2		18.5	136	43.3		14.3	228	14.3		29.5
9	11	53.7	354	21.9		22.8	259	12.1		18.3	151	46.1		14.2	243	16.6		29.4
10	26	56.2	9	21.6		23.9	274	12.9		18.0	166	48.8		14.1	258	18.9		29.4
11	41	58.7	24	21.4	+5	24.9	289	13.8	+23	17.8	181	51.6	-14	14.1	273	21.2	+19	29.3
12	57	01.1	39	21.2	+5	26.0	304	14.7	+23	17.5	196	54.3	-14	14.0	288	23.4	+19	29.3
13	72	03.6	54	20.9		27.0	319	15.5		17.3	211	57.1		13.9	303	25.7		29.2
14	87	06.0	69	20.7		28.1	334	16.4		17.0	226	59.8		13.8	318	28.0		29.2
15	102	08.5	84	20.4		29.1	349	17.2		16.8	242	02.6		13.7	333	30.3		29.1
16	117	11.0	99	20.2		30.2	4	18.1		16.6	257	05.4		13.6	348	32.5		29.1
17	132	13.4	114	20.0	+5	31.2	19	19.0	+23	16.3	272	08.1	-14	13.6	3	34.8	+19	29.0
18	147	15.9	129	19.7	+5	32.3	34	19.8	+23	16.1	287	10.9	-14	13.5	18	37.1	+19	29.0
19	162	18.4	144	19.5		33.3	49	20.7		15.8	302	13.6		13.4	33	39.4		29.0
20	177	20.8	159	19.3		34.4	64	21.6		15.6	317	16.4		13.3	48	41.6		28.9
21	192	23.3	174	19.0		35.4	79	22.4		15.3	332	19.1		13.2	63	43.9		28.9
22	207	25.8	189	18.8		36.5	94	23.3		15.1	347	21.9		13.1	78	46.2		28.8
23	222	28.2	204	18.5		37.5	109	24.2		14.9	2	24.6		13.1	93	48.5		28.8
24	237	30.7	219	18.3	+5	38.6	124	25.0	+23	14.6	17	27.4	-14	13.0	108	50.7	+19	28.7
Dif	—		-2		+10		+9		-2		+28		+1		+23		0	

UT	SOL			 LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 15 ^h 8			Edad: 22 ^d 2	PHE {	4 ^h : 59/2 12 ^h : 59/2 20 ^h : 59/3	SD: 16 ^h 1			PMG: 6 ^h 11 ^m	R°: 50 ^m			Hora	R°	Hora	R°
	hG ☉	Dec															
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m	m	h m	m	m
0	180	52.9	+19	54.3	270	20.5	-16	38.7	60 N	20 43	21 52	** **	2 05	**	10 36	103	
1	195	52.9		54.8	284	49.2 ⁹⁷		24.6 ¹⁴¹	58	28	27	** **	1 55	4	45	99	
2	210	52.9		55.4	299	18.1 ⁹⁹	-16	10.4 ¹⁴²	56	15	21 08	22 36	46	8	10 53	94	
3	225	52.8		55.9	313	47.0 ⁹⁹	-15	56.1 ¹⁴³	54	20 04	20 52	22 03	38	11	11 00	91	
4	240	52.8		56.4	328	16.0 ¹⁰⁰		41.7 ¹⁴⁴	52	19 55	38	21 40	31	14	06	88	
5	255	52.8	+19	56.9	342	45.0 ¹⁰⁰	-15	27.2 ¹⁴⁵	50	19 46	20 27	21 22	1 24	17	11 12	85	
6	270	52.7	+19	57.5	357	14.1 ¹⁰¹	-15	12.6 ¹⁴⁶	45	19 28	20 03	20 48	1 10	23	11 24	79	
7	285	52.7		58.0	11	43.3 ¹⁰²	-14	58.0 ¹⁴⁶	40	13	19 44	23	0 59	27	34	74	
8	300	52.6		58.5	26	12.6 ¹⁰³		43.2 ¹⁴⁸	35	19 00	29	20 04	49	31	42	70	
9	315	52.6		59.0	40	41.9 ¹⁰³		28.4 ¹⁴⁸	30	18 49	19 16	19 48	40	35	11 50	66	
10	330	52.6	+19	59.6	55	11.2 ¹⁰³	-14	13.5 ¹⁴⁹	20	31	18 55	23	25	40	12 02	60	
11	345	52.5	+20	00.1	69	40.7 ¹⁰⁵	-13	58.5 ¹⁵⁰	10 N	18 15	18 37	19 04	0 12	45	12 13	55	
12	0	52.5	+20	00.6	84	10.2 ¹⁰⁵	-13	43.4 ¹⁵¹	0	18 00	18 22	18 48	** **	**	12 23	50	
13	15	52.5		01.1	98	39.7 ¹⁰⁵		28.3 ¹⁵¹	10 S	17 45	18 08	33	** **	**	34	44	
14	30	52.4		01.6	113	09.4 ¹⁰⁷	-13	13.0 ¹⁵³	20	30	17 53	20	** **	**	44	39	
15	45	52.4		02.2	127	39.0 ¹⁰⁶	-12	57.7 ¹⁵³	30	12	38	07	** **	**	12 56	33	
16	60	52.4		02.7	142	08.8 ¹⁰⁸		42.4 ¹⁵³	35	17 02	29	18 00	** **	**	13 03	30	
17	75	52.3	+20	03.2	156	38.6 ¹⁰⁸	-12	26.9 ¹⁵⁵	40	16 50	17 19	17 53	** **	**	13 11	26	
18	90	52.3	+20	03.7	171	08.4 ¹⁰⁸	-12	11.4 ¹⁵⁵	45	16 36	17 09	17 45	** **	**	13 20	21	
19	105	52.2		04.2	185	38.3 ¹⁰⁹	-11	55.8 ¹⁵⁶	50	19	16 56	36	23 57	84	31	16	
20	120	52.2		04.7	200	08.3 ¹¹⁰		40.2 ¹⁵⁶	52	12	50	32	53	86	36	13	
21	135	52.2		05.2	214	38.3 ¹¹⁰		24.5 ¹⁵⁷	54	16 03	44	28	48	90	42	10	
22	150	52.1		05.8	229	08.4 ¹¹¹	-11	08.7 ¹⁵⁸	56	15 53	36	23	43	93	48	7	
23	165	52.1		06.3	243	38.5 ¹¹¹	-10	52.9 ¹⁵⁸	58	42	29	18	37	97	13 54	4	
24	180	52.1	+20	06.8	258	08.6 ¹¹¹	-10	37.0 ¹⁵⁹	60 S	15 29	16 20	17 13	23 31	101	14 02	**	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 8 ^h 08 ^m 6		Mag: -4.0 PMG: 9 ^h 23 ^m		Mag: +1.6 PMG: 15 ^h 41 ^m		Mag: -2.5 PMG: 22 ^h 46 ^m		Mag: +0.3 PMG: 16 ^h 42 ^m	
	hG ♈	hG ♀	Dec		hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	237	30.7	219	18.3	+5	38.6	124	25.0	+23	14.6
1	252	33.2	234	18.1		39.6	139	25.9		14.4
2	267	35.6	249	17.8		40.6	154	26.7		14.1
3	282	38.1	264	17.6		41.7	169	27.6		13.9
4	297	40.5	279	17.3		42.7	184	28.5		13.6
5	312	43.0	294	17.1	+5	43.8	199	29.3	+23	13.4
6	327	45.5	309	16.9	+5	44.8	214	30.2	+23	13.1
7	342	47.9	324	16.6		45.9	229	31.1		12.9
8	357	50.4	339	16.4		46.9	244	31.9		12.6
9	12	52.9	354	16.1		48.0	259	32.8		12.4
10	27	55.3	9	15.9		49.0	274	33.7		12.1
11	42	57.8	24	15.7	+5	50.1	289	34.5	+23	11.9
12	58	00.3	39	15.4	+5	51.1	304	35.4	+23	11.6
13	73	02.7	54	15.2		52.2	319	36.2		11.4
14	88	05.2	69	14.9		53.2	334	37.1		11.1
15	103	07.7	84	14.7		54.2	349	38.0		10.9
16	118	10.1	99	14.4		55.3	4	38.8		10.6
17	133	12.6	114	14.2	+5	56.3	19	39.7	+23	10.4
18	148	15.0	129	14.0	+5	57.4	34	40.6	+23	10.1
19	163	17.5	144	13.7		58.4	49	41.4		09.9
20	178	20.0	159	13.5	+5	59.5	64	42.3		09.6
21	193	22.4	174	13.2	+6	00.5	79	43.2		09.4
22	208	24.9	189	13.0		01.6	94	44.0		09.1
23	223	27.4	204	12.7		02.6	109	44.9		08.9
24	238	29.8	219	12.5	+6	03.7	124	45.7	+23	08.6
Dif	—		-2	+10		+9	-2	+28		+1

0	2	4	6	8	10	12	14	16	18	20	22	24
20 43	21 52	** **	2 05	**	10 36	103	28	27	** **	1 55	4	45
15	21 08	22 36	46	8	10 53	94	21 08	22 36	46	8	10 53	94
20 04	20 52	22 03	38	11	11 00	91	20 04	20 52	22 03	38	11	11 00
19 55	38	21 40	31	14	06 88		19 55	38	21 40	31	14	06 88
19 46	20 27	21 22	1 24	17	11 12	85	19 46	20 27	21 22	1 24	17	11 12
19 28	20 03	20 48	1 10	23	11 24	79	19 28	20 03	20 48	1 10	23	11 24
13	19 44	23	0 59	27	34	74	13	19 44	23	0 59	27	34
19 00	29	20 04	49	31	42	70	19 00	29	20 04	49	31	42
18 49	19 16	19 48	40	35	11 50	66	18 49	19 16	19 48	40	35	11 50
31	18 55	23	25	40	12 02	60	31	18 55	23	25	40	12 02
18 15	18 37	19 04	0 12	45	12 13	55	18 15	18 37	19 04	0 12	45	12 13
18 00	18 22	18 48	** **	**	12 23	50	18 00	18 22	18 48	** **	**	12 23
17 45	18 08	33	** **	**	34	44	17 45	18 08	33	** **	**	34
30	17 53	20	** **	**	44	39	30	17 53	20	** **	**	44
12	38	07	** **	**	12 56	33	12	38	07	** **	**	12 56
17 02	29	18 00	** **	**	13 03	30	17 02	29	18 00	** **	**	13 03
16 50	17 19	17 53	** **	**	13 11	26	16 50	17 19	17 53	** **	**	13 11
16 36	17 09	17 45	** **	**	13 20	21	16 36	17 09	17 45	** **	**	13 20
19	16 56	36	23 57	84	31	16	19	16 56	36	23 57	84	31
12	50	32	53	86	36	13	12	50	32	53	86	36
16 03	44	28	48	90	42	10	16 03	44	28	48	90	42
15 53	36	23	43	93	48	7	15 53	36	23	43	93	48
42	29	18	37	97	13 54	4	42	29	18	37	97	13 54
15 29	16 20	17 13	23 31	101	14 02	**	15 29	16 20	17 13	23 31	101	14 02

UT	SOL				☾ LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 15/8 PMG: 11 ^h 56 ^m 6				Edad: 23 ^d 2 PHE { SD: 16/2 PMG: 7 ^h 01 ^m R°: 49 ^m 4 ^h : 59/4 12 ^h : 59/4 20 ^h : 59/5															
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°				
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m		
0	180	52.1	+20	06.8	258	08.6	-10	37.0	60 N	** **	2 00	3 09	2 04	0	12 19	101				
1	195	52.0		07.3	272	38.9 ¹¹³		21.0 ¹⁶⁰	58	** **	25	24	1 59	3	24 96					
2	210	52.0		07.8	287	09.1 ¹¹²	-10	05.0 ¹⁶⁰	56	1 17	2 45	37	54	6	27 93					
3	225	51.9		08.3	301	39.4 ¹¹³	-9	48.9 ¹⁶¹	54	1 49	3 01	48	49	9	31 89					
4	240	51.9		08.8	316	09.8 ¹¹⁴		32.8 ¹⁶¹	52	2 13	14	3 58	45	12	34 86					
5	255	51.9	+20	09.3	330	40.2 ¹¹⁴	-9	16.6 ¹⁶²	50	2 31	3 26	4 07	1 41	15	12 37	83				
6	270	51.8	+20	09.9	345	10.6 ¹¹⁴	-9	00.4 ¹⁶²	45	3 05	3 50	4 25	1 33	20	12 43	77				
7	285	51.8		10.4	359	41.1 ¹¹⁵	-8	44.1 ¹⁶³	40	30	4 09	40	26	25	48 72					
8	300	51.7		10.9	14	11.6 ¹¹⁵		27.8 ¹⁶³	35	3 49	24	4 52	20	29	52 69					
9	315	51.7		11.4	28	42.1 ¹¹⁵	-8	11.4 ¹⁶⁴	30	4 05	37	5 03	15	32	12 56	65				
10	330	51.6		11.9	43	12.7 ¹¹⁶	-7	55.0 ¹⁶⁴	20	30	4 58	22	1 05	39	13 02	59				
11	345	51.6	+20	12.4	57	43.3 ¹¹⁶	-7	38.6 ¹⁶⁴	10 N	4 49	5 16	5 38	0 57	44	13 08	53				
12	0	51.6	+20	12.9	72	14.0 ¹¹⁷	-7	22.1 ¹⁶⁵	0	5 05	5 31	5 53	0 50	48	13 13	48				
13	15	51.5		13.4	86	44.7 ¹¹⁷	-7	05.5 ¹⁶⁶	10 S	20	5 45	6 08	42	54	18 43					
14	30	51.5		13.9	101	15.4 ¹¹⁷	-6	48.9 ¹⁶⁶	20	33	6 00	23	34	59	23 38					
15	45	51.4		14.4	115	46.1 ¹¹⁷		32.3 ¹⁶⁶	30	47	16	41	24	66	29 32					
16	60	51.4		14.9	130	16.9 ¹¹⁸	-6	15.7 ¹⁶⁶	35	5 54	24	6 52	19	69	33 28					
17	75	51.4	+20	15.4	144	47.7 ¹¹⁸	-5	59.0 ¹⁶⁷	40	6 01	6 34	7 04	0 13	73	13 37	24				
18	90	51.3	+20	15.9	159	18.6 ¹¹⁹	-5	42.2 ¹⁶⁸	45	6 09	6 45	7 17	0 05	78	13 41	20				
19	105	51.3		16.4	173	49.4 ¹¹⁸		25.5 ¹⁶⁷	50	18	6 58	34	** **	**	47 14					
20	120	51.2		16.9	188	20.3 ¹¹⁹	-5	08.7 ¹⁶⁸	52	22	7 04	42	** **	**	49 12					
21	135	51.2		17.4	202	51.2 ¹¹⁹	-4	51.9 ¹⁶⁸	54	26	10	7 51	** **	**	52 9					
22	150	51.1		17.9	217	22.1 ¹¹⁹		35.0 ¹⁶⁹	56	31	17	8 01	** **	**	55 6					
23	165	51.1		18.4	231	53.1 ¹²⁰		18.2 ¹⁶⁸	58	36	25	13	** **	**	13 58	3				
24	180	51.0	+20	18.9	246	24.0 ¹¹⁹	-4	01.3 ¹⁶⁹	60 S	6 41	7 34	8 26	** **	**	14 01	0				
UT	ARIES				VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 8 ^h 04 ^m 7				Mag: -4.0 PMG: 9 ^h 23 ^m				Mag: +1.6 PMG: 15 ^h 40 ^m				Mag: -2.5 PMG: 22 ^h 42 ^m				Mag: +0.3 PMG: 16 ^h 38 ^m			
	hG ♈		Dec		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	238	29.8	219	12.5	+6	03.7	124	45.7	+23	08.6	18	33.5	-14	11.0	109	45.3	+19	27.6		
1	253	32.3	234	12.2		04.7	139	46.6		08.4	33	36.2		10.9	124	47.6		27.6		
2	268	34.8	249	12.0		05.7	154	47.5		08.1	48	39.0		10.8	139	49.8		27.5		
3	283	37.2	264	11.7		06.8	169	48.3		07.9	63	41.7		10.7	154	52.1		27.5		
4	298	39.7	279	11.5		07.8	184	49.2		07.6	78	44.5		10.6	169	54.4		27.5		
5	313	42.1	294	11.3	+6	08.9	199	50.1	+23	07.4	93	47.2	-14	10.6	184	56.6	+19	27.4		
6	328	44.6	309	11.0	+6	09.9	214	50.9	+23	07.1	108	50.0	-14	10.5	199	58.9	+19	27.4		
7	343	47.1	324	10.8		11.0	229	51.8		06.9	123	52.7		10.4	215	01.2		27.3		
8	358	49.5	339	10.5		12.0	244	52.7		06.6	138	55.5		10.3	230	03.5		27.3		
9	13	52.0	354	10.3		13.1	259	53.5		06.4	153	58.2		10.2	245	05.7		27.2		
10	28	54.5	9	10.0		14.1	274	54.4		06.1	169	01.0		10.1	260	08.0		27.2		
11	43	56.9	24	09.8	+6	15.1	289	55.3	+23	05.8	184	03.7	-14	10.1	275	10.3	+19	27.1		
12	58	59.4	39	09.5	+6	16.2	304	56.1	+23	05.6	199	06.5	-14	10.0	290	12.5	+19	27.1		
13	74	01.9	54	09.3		17.2	319	57.0		05.3	214	09.2		09.9	305	14.8		27.0		
14	89	04.3	69	09.0		18.3	334	57.9		05.1	229	12.0		09.8	320	17.1		27.0		
15	104	06.8	84	08.8		19.3	349	58.7		04.8	244	14.7		09.7	335	19.3		26.9		
16	119	09.3	99	08.5		20.4	4	59.6		04.6	259	17.5		09.7	350	21.6		26.9		
17	134	11.7	114	08.3	+6	21.4	20	00.5	+23	04.3	274	20.2	-14	09.6	5	23.9	+19	26.9		
18	149	14.2	129	08.0	+6	22.4	35	01.3	+23	04.1	289	23.0	-14	09.5	20	26.2	+19	26.8		
19	164	16.6	144	07.8		23.5	50	02.2		03.8	304	25.7		09.4	35	28.4		26.8		
20	179	19.1	159	07.5		24.5	65	03.0		03.5	319	28.5		09.3	50	30.7		26.7		
21	194	21.6	174	07.3		25.6	80	03.9		03.3	334	31.2		09.2	65	33.0		26.7		
22	209	24.0	189	07.0		26.6	95	04.8		03.0	349	34.0		09.2	80	35.2		26.6		
23	224	26.5	204	06.8		27.7	110	05.6		02.8	4	36.7		09.1	95	37.5		26.6		
24	239	29.0	219	06.5	+6	28.7	125	06.5	+23	02.5	19	39.5	-14	09.0	110	39.8	+19	26.5		
Dif	—				-2 +10				+9 -3				+28 +1				+23 0			

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna							
	SD: 15'8			Edad: 24 ^d 2 PHE { 4 ^h : 59'5 12 ^h : 59'5 20 ^h : 59'5																
	PMG: 11 ^h 56 ^m 6			SD: 16'2 PMG: 7 ^h 50 ^m R°: 47 ^m																
	hG ☉	Dec		hG ☾	Dif	Dec			Dif											
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	h	m	h	m
0	180	51.0	+20	18.9	246	24.0	-4	01.3	60 N	20 47	21 59	** **	2 04	**	14 00	100				
1	195	51.0		19.4	260	55.0 ¹²⁰	-3	44.4 ¹⁶⁹	58	32	33	** **	02	2	00	96				
2	210	51.0		19.9	275	26.0 ¹²⁰		27.4 ¹⁷⁰	56	19	21 12	22 45	2 00	6	00	93				
3	225	50.9		20.4	289	57.0 ¹²⁰	-3	10.5 ¹⁶⁹	54	20 08	20 56	22 09	1 58	9	00	89				
4	240	50.9		20.9	304	28.0 ¹²⁰	-2	53.5 ¹⁷⁰	52	19 58	42	21 45	57	11	00	87				
5	255	50.8	+20	21.4	318	59.1 ¹²¹	-2	36.5 ¹⁷⁰	50	19 49	20 30	21 26	1 56	14	14	00	84			
6	270	50.8	+20	21.9	333	30.1 ¹²⁰	-2	19.5 ¹⁷⁰	45	19 30	20 05	20 50	1 53	19	14	00	78			
7	285	50.7		22.4	348	01.2 ¹²¹	-2	02.5 ¹⁷⁰	40	15	19 46	25	51	23	00	73				
8	300	50.7		22.9	2	32.2 ¹²⁰	-1	45.5 ¹⁷⁰	35	19 02	30	20 05	49	27	01	68				
9	315	50.6		23.4	17	03.3 ¹²¹		28.4 ¹⁷¹	30	18 51	19 17	19 49	47	31	01	65				
10	330	50.6		23.9	31	34.4 ¹²¹	-1	11.4 ¹⁷⁰	20	32	18 56	24	44	37	01	58				
11	345	50.5	+20	24.4	46	05.5 ¹²¹	-0	54.3 ¹⁷¹	10 N	18 15	18 38	19 04	1 41	43	14	01	53			
12	0	50.5	+20	24.8	60	36.5 ¹²⁰	-0	37.3 ¹⁷⁰	0	18 00	18 22	18 48	1 38	48	14	01	48			
13	15	50.4		25.3	75	07.6 ¹²¹		20.2 ¹⁷¹	10 S	17 45	18 08	33	36	53	01	43				
14	30	50.4		25.8	89	38.7 ¹²¹	-0	03.1 ¹⁷¹	20	29	17 53	20	33	58	01	37				
15	45	50.3		26.3	104	09.8 ¹²¹	+0	14.0 ¹⁷¹	30	11	37	18 06	30	65	01	31				
16	60	50.3		26.8	118	40.8 ¹²⁰		31.0 ¹⁷⁰	35	17 01	28	17 59	28	68	01	28				
17	75	50.2	+20	27.3	133	11.9 ¹²¹	+0	48.1 ¹⁷¹	40	16 49	17 18	17 51	1 26	73	14	01	24			
18	90	50.2	+20	27.8	147	43.0 ¹²¹	+1	05.2 ¹⁷¹	45	16 34	17 07	17 43	1 23	78	14	01	19			
19	105	50.2		28.3	162	14.0 ¹²⁰		22.2 ¹⁷⁰	50	17	16 54	34	21	83	01	14				
20	120	50.1		28.8	176	45.1 ¹²¹		39.3 ¹⁷¹	52	09	48	30	19	86	01	11				
21	135	50.1		29.2	191	16.1 ¹²⁰	+1	56.3 ¹⁷⁰	54	16 00	41	25	18	89	01	9				
22	150	50.0		29.7	205	47.1 ¹²⁰	+2	13.4 ¹⁷¹	56	15 50	34	21	16	93	01	6				
23	165	50.0		30.2	220	18.1 ¹²⁰		30.4 ¹⁷⁰	58	38	26	16	14	96	01	2				
24	180	49.9	+20	30.7	234	49.1 ¹²⁰	+2	47.4 ¹⁷⁰	60 S	15 25	16 17	17 10	1 12	101	14	01	**			
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO											
	PMG: 8 ^h 00 ^m 8		Mag: -4.0 PMG: 9 ^h 24 ^m		Mag: +1.6 PMG: 15 ^h 39 ^m		Mag: -2.5 PMG: 22 ^h 37 ^m		Mag: +0.3 PMG: 16 ^h 35 ^m											
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec										
h	°	'	°	'	°	'	°	'	°	'										
0	239	29.0	219	06.5	125	06.5	19	39.5	110	39.8										
1	254	31.4	234	06.3	140	07.4	34	42.2	125	42.0										
2	269	33.9	249	06.0	155	08.2	49	45.0	140	44.3										
3	284	36.4	264	05.8	170	09.1	64	47.7	155	46.6										
4	299	38.8	279	05.5	185	10.0	79	50.5	170	48.8										
5	314	41.3	294	05.2	200	10.8	94	53.2	185	51.1										
6	329	43.7	309	05.0	215	11.7	109	56.0	200	53.4										
7	344	46.2	324	04.7	230	12.6	124	58.7	215	55.6										
8	359	48.7	339	04.5	245	13.4	140	01.5	230	57.9										
9	14	51.1	354	04.2	260	14.3	155	04.2	246	00.2										
10	29	53.6	9	04.0	275	15.2	170	07.0	261	02.4										
11	44	56.1	24	03.7	290	16.0	185	09.7	276	04.7										
12	59	58.5	39	03.5	305	16.9	200	12.5	291	07.0										
13	75	01.0	54	03.2	320	17.8	215	15.2	306	09.2										
14	90	03.5	69	03.0	335	18.6	230	17.9	321	11.5										
15	105	05.9	84	02.7	350	19.5	245	20.7	336	13.8										
16	120	08.4	99	02.4	5	20.4	260	23.4	351	16.0										
17	135	10.9	114	02.2	20	21.2	275	26.2	6	18.3										
18	150	13.3	129	01.9	35	22.1	290	28.9	21	20.6										
19	165	15.8	144	01.7	50	23.0	305	31.7	36	22.8										
20	180	18.2	159	01.4	65	23.8	320	34.4	51	25.1										
21	195	20.7	174	01.2	80	24.7	335	37.2	66	27.4										
22	210	23.2	189	00.9	95	25.6	350	39.9	81	29.6										
23	225	25.6	204	00.6	110	26.4	5	42.7	96	31.9										
24	240	28.1	219	00.4	125	27.3	20	45.4	111	34.1										
Dif	—		-3		+10		+27		+23											

UT	SOL				LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15/8 PMG: 11 ^h 56 ^m 7				Edad: 25 ^d 2 PHE { SD: 16/2 PMG: 8 ^h 37 ^m R°: 50 ^m 4 ^h : 59/5 12 ^h : 59/4 20 ^h : 59/4													
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m
0	180	49.9	+20	30.7	234	49.1	+2	47.4	60 N	** **	1 54	3 05	2 03	**	15 40	104		
1	195	49.9		31.2	249	20.1 ¹²⁰	+3	04.4 ¹⁷⁰	58	** **	2 20	21	04	3	36	99		
2	210	49.8		31.7	263	51.1 ¹²⁰		21.4 ¹⁷⁰	56	1 08	41	34	06	6	33	94		
3	225	49.7		32.1	278	22.0 ¹¹⁹		38.4 ¹⁷⁰	54	1 44	2 57	45	07	10	29	91		
4	240	49.7		32.6	292	53.0 ¹²⁰	+3	55.3 ¹⁶⁹	52	2 08	3 11	3 55	08	13	27	87		
5	255	49.6	+20	33.1	307	23.9 ¹¹⁹	+4	12.2 ¹⁶⁹	50	2 27	3 23	4 04	2 10	14	15	24	85	
6	270	49.6	+20	33.6	321	54.7 ¹¹⁸	+4	29.1 ¹⁶⁹	45	3 03	3 48	4 23	2 12	20	15	18	79	
7	285	49.5		34.1	336	25.6 ¹¹⁹	+4	46.0 ¹⁶⁹	40	28	4 07	38	14	25	13	74		
8	300	49.5		34.5	350	56.4 ¹¹⁸	+5	02.9 ¹⁶⁹	35	3 48	23	4 51	16	29	09	70		
9	315	49.4		35.0	5	27.3 ¹¹⁹		19.7 ¹⁶⁸	30	4 04	36	5 02	18	32	15	06	66	
10	330	49.4		35.5	19	58.0 ¹¹⁷		36.5 ¹⁶⁸	20	29	4 58	21	21	38	14	59	60	
11	345	49.3	+20	36.0	34	28.8 ¹¹⁸	+5	53.3 ¹⁶⁸	10 N	4 49	5 15	5 38	2 24	43	14	54	55	
12	0	49.3	+20	36.5	48	59.5 ¹¹⁷	+6	10.0 ¹⁶⁷	0	5 05	5 31	5 53	2 26	49	14	49	49	
13	15	49.2		36.9	63	30.2 ¹¹⁷		26.7 ¹⁶⁷	10 S	20	5 46	6 08	29	53	44	44		
14	30	49.2		37.4	78	00.9 ¹¹⁷	+6	43.4 ¹⁶⁷	20	34	6 01	24	31	60	38	40		
15	45	49.1		37.9	92	31.5 ¹¹⁶	+7	00.0 ¹⁶⁶	30	48	17	43	35	65	32	34		
16	60	49.1		38.4	107	02.1 ¹¹⁶	+7	16.6 ¹⁶⁶	35	5 55	26	6 53	36	70	29	30		
17	75	49.0	+20	38.8	121	32.7 ¹¹⁶	+7	33.2 ¹⁶⁶	40	6 02	6 36	7 05	2 39	73	14	25	26	
18	90	49.0	+20	39.3	136	03.2 ¹¹⁵	+7	49.7 ¹⁶⁵	45	6 11	6 47	7 19	2 41	78	14	20	21	
19	105	48.9		39.8	150	33.7 ¹¹⁵	+8	06.2 ¹⁶⁵	50	20	7 00	37	44	84	15	15		
20	120	48.8		40.2	165	04.1 ¹¹⁴		22.6 ¹⁶⁴	52	24	06	45	45	87	12	13		
21	135	48.8		40.7	179	34.5 ¹¹⁴		39.0 ¹⁶⁴	54	29	13	7 54	47	90	10	10		
22	150	48.7		41.2	194	04.9 ¹¹⁴	+8	55.4 ¹⁶⁴	56	33	20	8 04	49	93	07	7		
23	165	48.7		41.7	208	35.2 ¹¹³	+9	11.7 ¹⁶³	58	38	28	16	50	98	03	4		
24	180	48.6	+20	42.1	223	05.5 ¹¹³	+9	27.9 ¹⁶²	60 S	6 44	7 38	8 30	2 53	101	14	00	**	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 7 ^h 56 ^m 8		Mag: -4.0 PMG: 9 ^h 24 ^m			Mag: +1.6 PMG: 15 ^h 37 ^m			Mag: -2.5 PMG: 22 ^h 33 ^m			Mag: +0.3 PMG: 16 ^h 31 ^m						
	hG ♈		hG ♀			hG ♂			hG ♃			hG ♄						
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	240	28.1	219	00.4	+6	53.7	125	27.3	+22	56.2	20	45.4	-14	07.1	111	34.1	+19	25.4
1	255	30.6	234	00.1		54.7	140	28.2		56.0	35	48.1		07.0	126	36.4		25.3
2	270	33.0	248	59.9		55.8	155	29.0		55.7	50	50.9		06.9	141	38.7		25.3
3	285	35.5	263	59.6		56.8	170	29.9		55.4	65	53.6		06.8	156	40.9		25.2
4	300	38.0	278	59.4		57.8	185	30.8		55.2	80	56.4		06.7	171	43.2		25.2
5	315	40.4	293	59.1	+6	58.9	200	31.6	+22	54.9	95	59.1	-14	06.7	186	45.5	+19	25.1
6	330	42.9	308	58.8	+6	59.9	215	32.5	+22	54.6	111	01.9	-14	06.6	201	47.7	+19	25.1
7	345	45.4	323	58.6	+7	01.0	230	33.4		54.4	126	04.6		06.5	216	50.0		25.1
8	0	47.8	338	58.3		02.0	245	34.2		54.1	141	07.4		06.4	231	52.3		25.0
9	15	50.3	353	58.1		03.0	260	35.1		53.8	156	10.1		06.3	246	54.5		25.0
10	30	52.7	8	57.8		04.1	275	36.0		53.6	171	12.8		06.3	261	56.8		24.9
11	45	55.2	23	57.5	+7	05.1	290	36.8	+22	53.3	186	15.6	-14	06.2	276	59.1	+19	24.9
12	60	57.7	38	57.3	+7	06.2	305	37.7	+22	53.0	201	18.3	-14	06.1	292	01.3	+19	24.8
13	76	00.1	53	57.0		07.2	320	38.6		52.8	216	21.1		06.0	307	03.6		24.8
14	91	02.6	68	56.7		08.2	335	39.4		52.5	231	23.8		05.9	322	05.8		24.7
15	106	05.1	83	56.5		09.3	350	40.3		52.2	246	26.6		05.9	337	08.1		24.7
16	121	07.5	98	56.2		10.3	5	41.2		52.0	261	29.3		05.8	352	10.4		24.6
17	136	10.0	113	56.0	+7	11.3	20	42.0	+22	51.7	276	32.0	-14	05.7	7	12.6	+19	24.6
18	151	12.5	128	55.7	+7	12.4	35	42.9	+22	51.4	291	34.8	-14	05.6	22	14.9	+19	24.5
19	166	14.9	143	55.4		13.4	50	43.8		51.2	306	37.5		05.5	37	17.1		24.5
20	181	17.4	158	55.2		14.5	65	44.6		50.9	321	40.3		05.5	52	19.4		24.4
21	196	19.8	173	54.9		15.5	80	45.5		50.6	336	43.0		05.4	67	21.7		24.4
22	211	22.3	188	54.6		16.5	95	46.4		50.3	351	45.7		05.3	82	23.9		24.3
23	226	24.8	203	54.4		17.6	110	47.3		50.1	6	48.5		05.2	97	26.2		24.3
24	241	27.2	218	54.1	+7	18.6	125	48.1	+22	49.8	21	51.2	-14	05.1	112	28.5	+19	24.2
Dif	—		-3 +10			+9 -3			+27 -3			+1			+23 0			

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8			Edad: 26 ^d 2	PHE { 4 ^h : 59/3 12 ^h : 59/3 20 ^h : 59/2										
	PMG: 11 ^h 56 ^m 8					SD: 16 ^h 2			R°: 51 ^m						
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Civil	Náutico		Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m	m	h m	m
0	180	48.6	+20 42.1	223	05.5	+9 27.9	112	60 N	20 52	22 05	** **	2 02	0	17 24	107
1	195	48.6	42.6	237	35.7	+9 44.1	162	58	36	21 38	** **	07 5		15 102	
2	210	48.5	43.1	252	05.9	+10 00.2	161	56	22	21 17	22 55	12 8		07 97	
3	225	48.5	43.5	266	36.0		161	54	11	20 59	22 15	17 11		17 00	93
4	240	48.4	44.0	281	06.1		161	52	20 00	45	21 49	21 14		16 54	90
5	255	48.3	+20 44.5	295	36.2	+10 48.3	160	50	19 51	20 33	21 30	2 24	17	16 49	86
6	270	48.3	+20 44.9	310	06.2	+11 04.2	159	45	19 32	20 07	20 53	2 32	23	16 37	80
7	285	48.2	45.4	324	36.1		158	40	16	19 48	27	39 27		27 76	
8	300	48.2	45.9	339	06.0		158	35	19 03	32	20 07	45 31		19 71	
9	315	48.1	46.3	353	35.8	+11 51.5	157	30	18 52	19 19	19 51	50 35		16 12	68
10	330	48.1	46.8	8	05.6	+12 07.2	157	20	33	18 57	25	2 59	41	15 59	62
11	345	48.0	+20 47.2	22	35.3	+12 22.7	155	10 N	18 16	18 38	19 05	3 07	46	15 49	56
12	0	47.9	+20 47.7	37	05.0	+12 38.3	156	0	18 00	18 23	18 48	3 15	50	15 38	52
13	15	47.9	48.2	51	34.6	+12 53.7	154	10 S	17 45	18 07	33	22 56		28 48	
14	30	47.8	48.6	66	04.2	+13 09.0	153	20	29	17 52	19	31 60		18 42	
15	45	47.8	49.1	80	33.6		153	30	10	36	18 05	40 67		15 06	36
16	60	47.7	49.5	95	03.1		152	35	17 00	27	17 58	46 70		14 59	33
17	75	47.6	+20 50.0	109	32.5	+13 54.7	152	40	16 47	17 17	17 50	3 52	75	14 51	29
18	90	47.6	+20 50.5	124	01.8	+14 09.7	150	45	16 33	17 05	17 42	3 59	80	14 41	25
19	105	47.5	50.9	138	31.0		150	50	15	16 52	32	4 08	86	30	19
20	120	47.5	51.4	153	00.2		149	52	16 07	46	28	12 89		25 16	
21	135	47.4	51.8	167	29.3	+14 54.4	148	54	15 58	39	23	17 92		20 13	
22	150	47.3	52.3	181	58.4	+15 09.1	147	56	47	31	19	22 96		14 9	
23	165	47.3	52.7	196	27.4		147	58	35	23	13	28 100		14 07	5
24	180	47.2	+20 53.2	210	56.3	+15 38.3	145	60 S	15 21	16 14	17 07	4 34	106	13 59	0

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 7 ^h 52 ^m 9		Mag: -4.0 PMG: 9 ^h 25 ^m		Mag: +1.6 PMG: 15 ^h 36 ^m		Mag: -2.5 PMG: 22 ^h 28 ^m		Mag: +0.3 PMG: 16 ^h 28 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	241	27.2	218 54.1	+7 18.6	125 48.1	+22 49.8	21 51.2	-14 05.1	112 28.5	+19 24.2
1	256	29.7	233 53.8	19.6	140 49.0	49.5	36 54.0	05.1	127 30.7	24.2
2	271	32.2	248 53.6	20.7	155 49.9	49.3	51 56.7	05.0	142 33.0	24.1
3	286	34.6	263 53.3	21.7	170 50.7	49.0	66 59.5	04.9	157 35.2	24.1
4	301	37.1	278 53.0	22.7	185 51.6	48.7	82 02.2	04.8	172 37.5	24.0
5	316	39.6	293 52.8	+7 23.8	200 52.5	+22 48.4	97 04.9	-14 04.7	187 39.8	+19 24.0
6	331	42.0	308 52.5	+7 24.8	215 53.3	+22 48.2	112 07.7	-14 04.7	202 42.0	+19 23.9
7	346	44.5	323 52.2	25.8	230 54.2	47.9	127 10.4	04.6	217 44.3	23.9
8	1	47.0	338 52.0	26.9	245 55.1	47.6	142 13.2	04.5	232 46.5	23.8
9	16	49.4	353 51.7	27.9	260 55.9	47.4	157 15.9	04.4	247 48.8	23.8
10	31	51.9	8 51.4	29.0	275 56.8	47.1	172 18.6	04.3	262 51.1	23.7
11	46	54.3	23 51.2	+7 30.0	290 57.7	+22 46.8	187 21.4	-14 04.3	277 53.3	+19 23.7
12	61	56.8	38 50.9	+7 31.0	305 58.5	+22 46.5	202 24.1	-14 04.2	292 55.6	+19 23.6
13	76	59.3	53 50.6	32.1	320 59.4	46.3	217 26.8	04.1	307 57.8	23.6
14	92	01.7	68 50.4	33.1	336 00.3	46.0	232 29.6	04.0	323 00.1	23.5
15	107	04.2	83 50.1	34.1	351 01.1	45.7	247 32.3	04.0	338 02.4	23.5
16	122	06.7	98 49.8	35.2	6 02.0	45.4	262 35.1	03.9	353 04.6	23.4
17	137	09.1	113 49.6	+7 36.2	21 02.9	+22 45.2	277 37.8	-14 03.8	8 06.9	+19 23.4
18	152	11.6	128 49.3	+7 37.2	36 03.8	+22 44.9	292 40.5	-14 03.7	23 09.1	+19 23.3
19	167	14.1	143 49.0	38.3	51 04.6	44.6	307 43.3	03.6	38 11.4	23.3
20	182	16.5	158 48.7	39.3	66 05.5	44.3	322 46.0	03.6	53 13.7	23.2
21	197	19.0	173 48.5	40.3	81 06.4	44.1	337 48.8	03.5	68 15.9	23.2
22	212	21.5	188 48.2	41.4	96 07.2	43.8	352 51.5	03.4	83 18.2	23.1
23	227	23.9	203 47.9	42.4	111 08.1	43.5	7 54.2	03.3	98 20.4	23.1
24	242	26.4	218 47.7	+7 43.4	126 09.0	+22 43.2	22 57.0	-14 03.3	113 22.7	+19 23.0
Dif	—		-3	+10	+9	-3	+27	+1	+23	0

UT	SOL				● LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15 ^h 8 PMG: 11 ^h 56 ^m 9				Edad: 27 ^d 2 PHE { 4 ^h : 59 ^m 1 12 ^h : 58 ^m 9 20 ^h : 58 ^m 8 PMG: 10 ^h 18 ^m R°: 54 ^m													
	hG ☉	Dec			hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	m		
0	180	47.2	+20	53.2	210	56.3	+15	38.3	60 N	** **	1 48	3 01	2 02	1	19 11	111		
1	195	47.2		53.6	225	25.2	99	+15	52.7 ¹⁴⁴	58	** **	2 16	17	12	7	18 57	102	
2	210	47.1		54.1	239	54.0	98	+16	07.1 ¹⁴⁴	56	0 59	37	31	20	12	44	97	
3	225	47.0		54.6	254	22.7	97		21.4 ¹⁴³	54	1 38	2 54	43	28	15	33	93	
4	240	47.0		55.0	268	51.4	97		35.5 ¹⁴¹	52	2 04	3 08	3 53	35	19	24	89	
5	255	46.9	+20	55.5	283	20.0	96	+16	49.6 ¹⁴¹	50	2 24	3 21	4 02	2 41	22	18 15	86	
6	270	46.8	+20	55.9	297	48.5	95	+17	03.6 ¹⁴⁰	45	3 00	3 46	4 21	2 55	27	17 57	80	
7	285	46.8		56.4	312	17.0	95		17.4 ¹³⁸	40	26	4 06	37	3 06	32	43	75	
8	300	46.7		56.8	326	45.4	94		31.2 ¹³⁸	35	3 46	21	4 50	16	36	30	72	
9	315	46.7		57.3	341	13.7	93		44.9 ¹³⁷	30	4 03	35	5 02	25	39	20	68	
10	330	46.6		57.7	355	41.9	92	+17	58.4 ¹³⁵	20	29	4 57	21	40	44	17 01	63	
11	345	46.5	+20	58.1	10	10.1	92	+18	11.9 ¹³⁵	10 N	4 49	5 15	5 38	3 53	49	16 45	59	
12	0	46.5	+20	58.6	24	38.2	91	+18	25.2 ¹³³	0	5 05	5 31	5 53	4 05	54	16 30	56	
13	15	46.4		59.0	39	06.2	90		38.4 ¹³²	10 S	20	5 46	6 09	18	58	16	51	
14	30	46.3		59.5	53	34.2	90	+18	51.6 ¹³²	20	34	6 01	25	31	63	16 00	47	
15	45	46.3	+20	59.9	68	02.1	89	+19	04.6 ¹³⁰	30	49	18	44	47	68	15 42	42	
16	60	46.2	+21	00.4	82	29.9	88		17.5 ¹²⁹	35	5 56	27	6 55	4 56	72	32	38	
17	75	46.1	+21	00.8	96	57.7	88	+19	30.2 ¹²⁷	40	6 04	6 37	7 07	5 07	75	15 20	35	
18	90	46.1	+21	01.3	111	25.3	86	+19	42.9 ¹²⁷	45	6 12	6 49	7 21	5 19	80	15 06	31	
19	105	46.0		01.7	125	52.9	86	+19	55.4 ¹²⁵	50	22	7 02	39	34	87	14 49	25	
20	120	45.9		02.1	140	20.5	86	+20	07.8 ¹²⁴	52	26	09	48	41	90	41	22	
21	135	45.9		02.6	154	47.9	84		20.1 ¹²³	54	31	15	7 57	49	94	33	18	
22	150	45.8		03.0	169	15.3	84		32.3 ¹²²	56	36	23	8 08	5 58	98	23	14	
23	165	45.7		03.5	183	42.6	83		44.4 ¹²¹	58	41	32	20	6 08	104	14 12	9	
24	180	45.7	+21	03.9	198	09.9	83	+20	56.3 ¹¹⁹	60 S	6 47	7 41	8 34	6 20	110	13 59	2	
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO					
	PMG 7 ^h 49 ^m 0			Mag: -4.0 PMG: 9 ^h 25 ^m			Mag: +1.7 PMG: 15 ^h 34 ^m			Mag: -2.5 PMG: 22 ^h 24 ^m			Mag: +0.3 PMG: 16 ^h 24 ^m					
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	242	26.4	218	47.7	+7	43.4	126	09.0	+22	43.2	22	57.0	-14	03.3	113	22.7	+19	23.0
1	257	28.8	233	47.4		44.5	141	09.8		43.0	37	59.7		03.2	128	24.9		23.0
2	272	31.3	248	47.1		45.5	156	10.7		42.7	53	02.4		03.1	143	27.2		22.9
3	287	33.8	263	46.8		46.5	171	11.6		42.4	68	05.2		03.0	158	29.5		22.9
4	302	36.2	278	46.6		47.5	186	12.4		42.1	83	07.9		02.9	173	31.7		22.8
5	317	38.7	293	46.3	+7	48.6	201	13.3	+22	41.8	98	10.6	-14	02.9	188	34.0	+19	22.8
6	332	41.2	308	46.0	+7	49.6	216	14.2	+22	41.6	113	13.4	-14	02.8	203	36.2	+19	22.7
7	347	43.6	323	45.7		50.6	231	15.1		41.3	128	16.1		02.7	218	38.5		22.7
8	2	46.1	338	45.5		51.7	246	15.9		41.0	143	18.9		02.6	233	40.7		22.6
9	17	48.6	353	45.2		52.7	261	16.8		40.7	158	21.6		02.6	248	43.0		22.6
10	32	51.0	8	44.9		53.7	276	17.7		40.4	173	24.3		02.5	263	45.3		22.5
11	47	53.5	23	44.6	+7	54.8	291	18.5	+22	40.2	188	27.1	-14	02.4	278	47.5	+19	22.5
12	62	55.9	38	44.4	+7	55.8	306	19.4	+22	39.9	203	29.8	-14	02.3	293	49.8	+19	22.4
13	77	58.4	53	44.1		56.8	321	20.3		39.6	218	32.5		02.2	308	52.0		22.4
14	93	00.9	68	43.8		57.9	336	21.1		39.3	233	35.3		02.2	323	54.3		22.3
15	108	03.3	83	43.5		58.9	351	22.0		39.0	248	38.0		02.1	338	56.5		22.3
16	123	05.8	98	43.3	+7	59.9	6	22.9		38.8	263	40.7		02.0	353	58.8		22.2
17	138	08.3	113	43.0	+8	00.9	21	23.8	+22	38.5	278	43.5	-14	01.9	9	01.0	+19	22.2
18	153	10.7	128	42.7	+8	02.0	36	24.6	+22	38.2	293	46.2	-14	01.9	24	03.3	+19	22.1
19	168	13.2	143	42.4		03.0	51	25.5		37.9	308	48.9		01.8	39	05.6		22.1
20	183	15.7	158	42.1		04.0	66	26.4		37.6	323	51.7		01.7	54	07.8		22.0
21	198	18.1	173	41.9		05.1	81	27.2		37.4	338	54.4		01.6	69	10.1		22.0
22	213	20.6	188	41.6		06.1	96	28.1		37.1	353	57.1		01.6	84	12.3		21.9
23	228	23.1	203	41.3		07.1	111	29.0		36.8	8	59.9		01.5	99	14.6		21.9
24	243	25.5	218	41.0	+8	08.1	126	29.8	+22	36.5	24	02.6	-14	01.4	114	16.8	+19	21.8
Dif	—			-3 +10			+9 -3			+27 +1			+23 -1					

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8			Edad: 28 ^d 2 PHE { 4 ^h : 58 ^m /6 12 ^h : 58 ^m /5 20 ^h : 58 ^m /3 R°: 57 ^m										
	PMG: 11 ^h 57 ^m 0			SD: 16 ^h 0 PMG: 11 ^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	h m m
0	180	45.7	+21 03.9	198	09.9	+20 56.3	81	60 N	20 56	22 12	** **	2 03 5	21 02 107	
1	195	45.6	04.3	212	37.0	+21 08.1	118	58	39	21 43	** **	19 12	20 39 97	
2	210	45.5	04.8	227	04.1	19.7	116	56	25	21	23 06	32 18	21 90	
3	225	45.5	05.2	241	31.2	31.2	115	54	13	21 03	22 21	43 23	20 06 86	
4	240	45.4	05.7	255	58.1	42.6	114	52	20 03	20 48	21 54	2 54 26	19 53 82	
5	255	45.3	+21 06.1	270	25.0	+21 53.9	113	50	19 54	20 35	21 33	3 03 29	19 41 80	
6	270	45.3	+21 06.5	284	51.9	+22 05.0	111	45	19 34	20 10	20 56	3 22 35	19 17 75	
7	285	45.2	07.0	299	18.6	16.0	110	40	18	19 50	29	38 39	18 58 72	
8	300	45.1	07.4	313	45.3	26.9	109	35	19 05	34	20 09	3 52 42	42 69	
9	315	45.1	07.8	328	11.9	37.6	107	30	18 53	19 20	19 52	4 04 44	28 67	
10	330	45.0	08.3	342	38.5	48.2	106	20	33	18 57	26	24 49	18 04 64	
11	345	44.9	+21 08.7	357	04.9	+22 58.6	104	10 N	18 16	18 39	19 06	4 42 53	17 44 61	
12	0	44.9	+21 09.1	11	31.3	+23 08.9	103	0	18 01	18 23	18 49	4 59 56	17 26 57	
13	15	44.8	09.6	25	57.7	19.0	101	10 S	17 45	18 07	33	5 16 60	17 07 55	
14	30	44.7	10.0	40	24.0	29.0	100	20	28	17 52	19	34 64	16 47 51	
15	45	44.7	10.4	54	50.2	38.8	98	30	17 10	35	18 05	5 55 68	24 48	
16	60	44.6	10.8	69	16.4	48.5	97	35	16 59	26	17 57	6 08 70	16 10 46	
17	75	44.5	+21 11.3	83	42.5	+23 58.1	96	40	16 46	17 16	17 49	6 22 74	15 55 43	
18	90	44.4	+21 11.7	98	08.5	+24 07.5	94	45	16 31	17 04	17 40	6 39 78	15 37 39	
19	105	44.4	12.1	112	34.5	16.7	92	50	13	16 50	31	7 01 83	14 34	
20	120	44.3	12.6	127	00.4	25.8	91	52	16 05	44	26	11 87	15 03 31	
21	135	44.2	13.0	141	26.2	34.8	90	54	15 55	37	22	23 90	14 51 28	
22	150	44.2	13.4	155	52.0	43.6	88	56	45	29	16	36 95	37 23	
23	165	44.1	13.8	170	17.8	+24 52.2	86	58	32	21	11	7 52 101	21 17	
24	180	44.0	+21 14.3	184	43.4	+25 00.7	85	60 S	15 18	16 11	17 05	8 10 112	14 01 8	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 7 ^h 45 ^m 0		Mag: -4.0 PMG: 9 ^h 25 ^m			Mag: +1.7 PMG: 15 ^h 33 ^m			Mag: -2.5 PMG: 22 ^h 20 ^m			Mag: +0.3 PMG: 16 ^h 20 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	243	25.5	218	41.0	+8 08.1	126	29.8	+22 36.5	24	02.6	-14 01.4	114	16.8	+19 21.8
1	258	28.0	233	40.8	09.2	141	30.7	36.2	39	05.3	01.3	129	19.1	21.8
2	273	30.4	248	40.5	10.2	156	31.6	35.9	54	08.1	01.2	144	21.3	21.7
3	288	32.9	263	40.2	11.2	171	32.5	35.7	69	10.8	01.2	159	23.6	21.7
4	303	35.4	278	39.9	12.3	186	33.3	35.4	84	13.5	01.1	174	25.9	21.6
5	318	37.8	293	39.6	+8 13.3	201	34.2	+22 35.1	99	16.3	-14 01.0	189	28.1	+19 21.6
6	333	40.3	308	39.3	+8 14.3	216	35.1	+22 34.8	114	19.0	-14 00.9	204	30.4	+19 21.5
7	348	42.8	323	39.1	15.3	231	35.9	34.5	129	21.7	00.9	219	32.6	21.5
8	3	45.2	338	38.8	16.4	246	36.8	34.2	144	24.5	00.8	234	34.9	21.4
9	18	47.7	353	38.5	17.4	261	37.7	33.9	159	27.2	00.7	249	37.1	21.4
10	33	50.2	8	38.2	18.4	276	38.6	33.7	174	29.9	00.6	264	39.4	21.3
11	48	52.6	23	37.9	+8 19.4	291	39.4	+22 33.4	189	32.7	-14 00.6	279	41.6	+19 21.3
12	63	55.1	38	37.7	+8 20.5	306	40.3	+22 33.1	204	35.4	-14 00.5	294	43.9	+19 21.2
13	78	57.6	53	37.4	21.5	321	41.2	32.8	219	38.1	00.4	309	46.1	21.2
14	94	00.0	68	37.1	22.5	336	42.0	32.5	234	40.8	00.3	324	48.4	21.1
15	109	02.5	83	36.8	23.5	351	42.9	32.2	249	43.6	00.3	339	50.6	21.1
16	124	04.9	98	36.5	24.6	6	43.8	31.9	264	46.3	00.2	354	52.9	21.0
17	139	07.4	113	36.2	+8 25.6	21	44.7	+22 31.6	279	49.0	-14 00.1	9	55.1	+19 21.0
18	154	09.9	128	36.0	+8 26.6	36	45.5	+22 31.4	294	51.8	-14 00.0	24	57.4	+19 20.9
19	169	12.3	143	35.7	27.6	51	46.4	31.1	309	54.5	-14 00.0	39	59.6	20.9
20	184	14.8	158	35.4	28.7	66	47.3	30.8	324	57.2	-13 59.9	55	01.9	20.8
21	199	17.3	173	35.1	29.7	81	48.1	30.5	339	59.9	59.8	70	04.2	20.8
22	214	19.7	188	34.8	30.7	96	49.0	30.2	355	02.7	59.7	85	06.4	20.7
23	229	22.2	203	34.5	31.7	111	49.9	29.9	10	05.4	59.7	100	08.7	20.7
24	244	24.7	218	34.2	+8 32.8	126	50.8	+22 29.6	25	08.1	-13 59.6	115	10.9	+19 20.6
Dif	—		-3		+10	+9		-3	+27		+1	+23		-1

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: 29 ^d 2 SD: 15'8 PMG: 12 ^h 09 ^m	PHE { 4 ^h : 58'1 12 ^h : 57'9 20 ^h : 57'7 R°: 59 ^m	Dif			Civil			Hora	R°	Hora	R°			
	hG ☉	Dec	hG ☾	Dif			Náutico	Civil											
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m		
0	180	44.0	+21	14.3	184	43.4	+25	00.7	60 N	** **	1 42	2 58	2 08	15	22 49	81			
1	195	43.9		14.7	199	09.1		09.0	58	** **	2 11	3 14		31 25	22 16	75			
2	210	43.9		15.1	213	34.7		17.1	56	0 48	33		2 50	31	21 51	72			
3	225	43.8		15.5	228	00.2		25.1	54	1 32	2 51	40	3 06	35		32 70			
4	240	43.7		15.9	242	25.7		33.0	52	2 00	3 06	3 51		20 37	15	69			
5	255	43.7	+21	16.4	256	51.1	+25	40.6	50	2 20	3 18	4 00	3 32	40	21 01	68			
6	270	43.6	+21	16.8	271	16.5	+25	48.1	45	2 58	3 44	4 20	3 57	44	20 32	66			
7	285	43.5		17.2	285	41.8	+25	55.5	40	3 24	4 04		36	4 17	20 10	64			
8	300	43.4		17.6	300	07.1	+26	02.7	35	3 45	20	4 49		34 49	19 51	63			
9	315	43.4		18.0	314	32.4		09.7	30	4 02	34	5 01	4 48	52		35 62			
10	330	43.3		18.5	328	57.6		16.5	20	28	4 57	21	5 13	54	19 08	61			
11	345	43.2	+21	18.9	343	22.8	+26	23.2	10 N	4 48	5 15	5 38	5 35	56	18 45	59			
12	0	43.1	+21	19.3	357	47.9	+26	29.7	0	5 06	5 31	5 54	5 55	59	18 23	59			
13	15	43.1		19.7	12	13.0		36.1	10 S	21	5 47	6 09	6 16	60	18 02	57			
14	30	43.0		20.1	26	38.0		42.2	20	35	6 02	26	6 38	62	17 38	56			
15	45	42.9		20.5	41	03.1		48.2	30	50	19	45	7 03	65	17 12	54			
16	60	42.8		21.0	55	28.1		54.1	35	5 57	28	6 56		18 67	16 56	53			
17	75	42.8	+21	21.4	69	53.1	+26	59.7	40	6 05	6 39	7 09	7 36	69	16 38	51			
18	90	42.7	+21	21.8	84	18.0	+27	05.2	45	6 14	6 51	7 23	7 57	72	16 16	49			
19	105	42.6		22.2	98	42.9		10.6	50	24	7 04	42	8 24	75	15 48	46			
20	120	42.5		22.6	113	07.8		15.7	52	28	11	7 50		38 76		34 45			
21	135	42.5		23.0	127	32.7		20.7	54	33	18	8 00	8 53	79		19 42			
22	150	42.4		23.4	141	57.6		25.5	56	38	26	11	9 11	83	15 00	39			
23	165	42.3		23.8	156	22.4		30.1	58	44	34	23	9 33	88	14 38	34			
24	180	42.2	+21	24.2	170	47.2	+27	34.6	60 S	6 50	7 44	8 37	10 02	99	14 09	23			
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO							
	PMG 7 ^h 41 ^m 1		Mag: -4.0 PMG: 9 ^h 26 ^m			Mag: +1.7 PMG: 15 ^h 32 ^m			Mag: -2.5 PMG: 22 ^h 15 ^m			Mag: +0.4 PMG: 16 ^h 17 ^m							
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec							
h	°	'	°	'	°	'	°	'	°	'	°	'							
0	244	24.7	218	34.2	+8	32.8	126	50.8	+22	29.6	25	08.1	-13	59.6	115	10.9	+19	20.6	
1	259	27.1	233	33.9		33.8	141	51.6		29.3	40	10.9		59.5	130	13.2		20.6	
2	274	29.6	248	33.7		34.8	156	52.5		29.0	55	13.6		59.4	145	15.4		20.5	
3	289	32.1	263	33.4		35.8	171	53.4		28.8	70	16.3		59.4	160	17.7		20.5	
4	304	34.5	278	33.1		36.8	186	54.2		28.5	85	19.0		59.3	175	19.9		20.4	
5	319	37.0	293	32.8	+8	37.9	201	55.1	+22	28.2	100	21.8	-13	59.2	190	22.2	+19	20.4	
6	334	39.4	308	32.5	+8	38.9	216	56.0	+22	27.9	115	24.5	-13	59.1	205	24.4	+19	20.3	
7	349	41.9	323	32.2		39.9	231	56.9		27.6	130	27.2		59.1	220	26.7		20.3	
8	4	44.4	338	31.9		40.9	246	57.7		27.3	145	30.0		59.0	235	28.9		20.2	
9	19	46.8	353	31.6		41.9	261	58.6		27.0	160	32.7		58.9	250	31.2		20.2	
10	34	49.3	8	31.3		43.0	276	59.5		26.7	175	35.4		58.8	265	33.4		20.1	
11	49	51.8	23	31.1	+8	44.0	292	00.4	+22	26.4	190	38.1	-13	58.8	280	35.7	+19	20.0	
12	64	54.2	38	30.8	+8	45.0	307	01.2	+22	26.1	205	40.9	-13	58.7	295	37.9	+19	20.0	
13	79	56.7	53	30.5		46.0	322	02.1		25.8	220	43.6		58.6	310	40.2		19.9	
14	94	59.2	68	30.2		47.1	337	03.0		25.6	235	46.3		58.5	325	42.4		19.9	
15	110	01.6	83	29.9		48.1	352	03.8		25.3	250	49.0		58.5	340	44.7		19.8	
16	125	04.1	98	29.6		49.1	7	04.7		25.0	265	51.8		58.4	355	46.9		19.8	
17	140	06.6	113	29.3	+8	50.1	22	05.6	+22	24.7	280	54.5	-13	58.3	10	49.2	+19	19.7	
18	155	09.0	128	29.0	+8	51.1	37	06.5	+22	24.4	295	57.2	-13	58.2	25	51.4	+19	19.7	
19	170	11.5	143	28.7		52.1	52	07.3		24.1	310	59.9		58.2	40	53.7		19.6	
20	185	13.9	158	28.4		53.2	67	08.2		23.8	326	02.7		58.1	55	55.9		19.6	
21	200	16.4	173	28.1		54.2	82	09.1		23.5	341	05.4		58.0	70	58.2		19.5	
22	215	18.9	188	27.8		55.2	97	10.0		23.2	356	08.1		57.9	86	00.4		19.5	
23	230	21.3	203	27.5		56.2	112	10.8		22.9	11	10.8		57.9	101	02.7		19.4	
24	245	23.8	218	27.3	+8	57.2	127	11.7	+22	22.6	26	13.6	-13	57.8	116	04.9	+19	19.4	
Dif	—		-3			+10	+9			-3	+27		+1		+22			-1	

UT	SOL				● LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8 PMG: 11 ^h 57 ^m 2				Edad: 30 ^d 2 PHE { 4 ^h : 57 ⁵ / ₂ 12 ^h : 57 ² / ₂ 20 ^h : 57 ⁰ / ₀ R°: 58 ^m												
	hG ☉		Dec		hG ☾		Dif							Civil	Náutico	Hora	R°
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m	
0	180	42.2	+21	24.2	170	47.2	+27	34.6	60 N	21 00	22 19	** **	2 23 40	** **	** **	**	
1	195	42.2		24.6	185	12.0	58	38.9	58	20 43	21 48	** **	2 56 47	23 31	45		
2	210	42.1		25.1	199	36.8	58	43.0	56	29	25	23 18	3 21 49	23 03	49		
3	225	42.0		25.5	214	01.6	58	46.9	54	16	21 06	22 27	41 51	22 42	50		
4	240	41.9		25.9	228	26.4	58	50.7	52	20 05	20 51	21 58	3 57 53	24 51			
5	255	41.9	+21	26.3	242	51.2	58	+27 54.3	50	19 56	20 38	21 37	4 12 53	22 09	52		
6	270	41.8	+21	26.7	257	16.0	58	+27 57.7	45	19 36	20 12	20 59	4 41 55	21 38	53		
7	285	41.7		27.1	271	40.7	57	+28 00.9	40	20	19 51	31	5 04 56	21 14	54		
8	300	41.6		27.5	286	05.5	58	04.0	35	19 06	35	20 11	23 56	20 54	55		
9	315	41.5		27.9	300	30.3	58	06.9	30	18 54	19 21	19 54	5 40 56	37 56			
10	330	41.5		28.3	314	55.1	58	09.6	20	34	18 58	27	6 07 58	20 09	56		
11	345	41.4	+21	28.7	329	19.9	58	+28 12.1	10 N	18 17	18 40	19 06	6 31 58	19 44	57		
12	0	41.3	+21	29.1	343	44.7	58	+28 14.5	0	18 01	18 23	18 49	6 54 58	19 22	57		
13	15	41.2		29.5	358	09.5	58	16.7	10 S	17 45	18 07	34	7 16 59	18 59	58		
14	30	41.1		29.9	12	34.3	58	18.7	20	28	17 52	19	7 40 59	34 59			
15	45	41.1		30.3	26	59.1	58	20.5	30	17 09	35	18 04	8 08 60	18 06	59		
16	60	41.0		30.7	41	24.0	59	22.2	35	16 58	25	17 57	25 60	17 49	59		
17	75	40.9	+21	31.1	55	48.9	59	+28 23.7	40	16 45	17 15	17 48	8 45 59	17 29	59		
18	90	40.8	+21	31.5	70	13.8	59	+28 25.0	45	16 30	17 03	17 39	9 09 59	17 05	60		
19	105	40.7		31.9	84	38.7	59	26.1	50	11	16 49	29	39 60	16 34	60		
20	120	40.7		32.3	99	03.7	60	27.1	52	16 03	42	25	9 54 60	19 60			
21	135	40.6		32.7	113	28.7	60	27.9	54	15 53	35	20	10 12 60	16 01	60		
22	150	40.5		33.1	127	53.7	60	28.5	56	42	27	15	10 34 60	15 39	61		
23	165	40.4		33.5	142	18.7	60	29.0	58	29	18	09	11 01 60	15 12	60		
24	180	40.3	+21	33.8	156	43.8	61	+28 29.3	60 S	15 15	16 08	17 03	11 41 60	14 32	61		

UT	ARIES		VENUS		MARTE		JÚPITER			SATURNO										
	PMG: 7 ^h 37 ^m 2		Mag: -4.0 PMG: 9 ^h 26 ^m		Mag: +1.7 PMG: 15 ^h 30 ^m		Mag: -2.5 PMG: 22 ^h 11 ^m			Mag: +0.4 PMG: 16 ^h 13 ^m										
	hG ♈		hG ♀		hG ♂		hG ♃			hG ♄										
h	°	'	°	'	°	'	°	'	°	'	°	'								
0	245	23.8	218	27.3	+8	57.2	127	11.7	+22	22.6	26	13.6	-13	57.8	116	04.9	+19	19.4		
1	260	26.3	233	27.0		58.3	142	12.6		22.3	41	16.3		57.7	131	07.1		19.3		
2	275	28.7	248	26.7	+8	59.3	157	13.4		22.0	56	19.0		57.6	146	09.4		19.3		
3	290	31.2	263	26.4	+9	00.3	172	14.3		21.7	71	21.7		57.6	161	11.6		19.2		
4	305	33.7	278	26.1		01.3	187	15.2		21.4	86	24.5		57.5	176	13.9		19.2		
5	320	36.1	293	25.8	+9	02.3	202	16.1	+22	21.1	101	27.2	-13	57.4	191	16.1	+19	19.1		
6	335	38.6	308	25.5	+9	03.3	217	16.9	+22	20.8	116	29.9	-13	57.4	206	18.4	+19	19.1		
7	350	41.0	323	25.2		04.4	232	17.8		20.5	131	32.6		57.3	221	20.6		19.0		
8	5	43.5	338	24.9		05.4	247	18.7		20.2	146	35.3		57.2	236	22.9		19.0		
9	20	46.0	353	24.6		06.4	262	19.6		19.9	161	38.1		57.1	251	25.1		18.9		
10	35	48.4	8	24.3		07.4	277	20.4		19.6	176	40.8		57.1	266	27.4		18.8		
11	50	50.9	23	24.0	+9	08.4	292	21.3	+22	19.3	191	43.5	-13	57.0	281	29.6	+19	18.8		
12	65	53.4	38	23.7	+9	09.4	307	22.2	+22	19.0	206	46.2	-13	56.9	296	31.9	+19	18.7		
13	80	55.8	53	23.4		10.4	322	23.1		18.7	221	49.0		56.8	311	34.1		18.7		
14	95	58.3	68	23.1		11.5	337	23.9		18.4	236	51.7		56.8	326	36.4		18.6		
15	111	00.8	83	22.8		12.5	352	24.8		18.1	251	54.4		56.7	341	38.6		18.6		
16	126	03.2	98	22.5		13.5	7	25.7		17.8	266	57.1		56.6	356	40.9		18.5		
17	141	05.7	113	22.2	+9	14.5	22	26.6	+22	17.5	281	59.8	-13	56.5	11	43.1	+19	18.5		
18	156	08.2	128	21.9	+9	15.5	37	27.4	+22	17.2	297	02.6	-13	56.5	26	45.3	+19	18.4		
19	171	10.6	143	21.6		16.5	52	28.3		16.9	312	05.3		56.4	41	47.6		18.4		
20	186	13.1	158	21.3		17.5	67	29.2		16.6	327	08.0		56.3	56	49.8		18.3		
21	201	15.5	173	21.0		18.6	82	30.1		16.3	342	10.7		56.3	71	52.1		18.3		
22	216	18.0	188	20.7		19.6	97	30.9		16.0	357	13.4		56.2	86	54.3		18.2		
23	231	20.5	203	20.4		20.6	112	31.8		15.7	12	16.2		56.1	101	56.6		18.2		
24	246	22.9	218	20.1	+9	21.6	127	32.7	+22	15.4	27	18.9	-13	56.0	116	58.8	+19	18.1		
Dif	—		-3		+10		+9		-3		+27			+1		+22			-	

ALMANAQUE NÁUTICO PERSEIS

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15°8 PMG: 11 ^h 57 ^m 5			Edad: 2 ^d 8 PHE { 4 ^h : 56/1 12 ^h : 55/9 20 ^h : 55/7 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	180	38.3	+21 43.1	143	01.4	+27 46.4	38	60 N	21 04	22 25	** **	4 23 97	0 49 14	
1	195	38.3	43.5	157	28.0	42.6	38	58	20 46	21 52	** **	4 56 87	0 16 23	
2	210	38.2	43.8	171	54.6	38.7	39	56	32	29	23 36	5 20 82	** **	**
3	225	38.1	44.2	186	21.3	34.7	40	54	19	21 10	22 33	40 78	** **	**
4	240	38.0	44.6	200	48.2	30.4	43	52	20 08	20 54	22 03	5 56 75	23 50 24	
5	255	37.9	+21 45.0	215	15.0	+27 26.1	43	50	19 58	20 41	21 40	6 10 73	23 38 26	
6	270	37.8	+21 45.3	229	42.0	+27 21.6	45	45	19 38	20 14	21 01	6 39 68	23 12 32	
7	285	37.7	45.7	244	09.1	16.9	47	40	21	19 53	20 33	7 02 65	22 52 35	
8	300	37.6	46.1	258	36.3	12.1	48	35	19 07	36	20 12	20 63	35 38	
9	315	37.6	46.5	273	03.5	07.2	49	30	18 55	19 22	19 55	7 36 61	22 21 40	
10	330	37.5	46.8	287	30.8	+27 02.1	51	20	35	18 59	28	8 03 58	21 56 44	
11	345	37.4	+21 47.2	301	58.2	+26 56.9	52	10 N	18 17	18 40	19 07	8 26 55	21 34 47	
12	0	37.3	+21 47.6	316	25.8	+26 51.5	54	0	18 01	18 23	18 49	8 48 52	21 13 51	
13	15	37.2	47.9	330	53.4	46.0	55	10 S	17 45	18 08	34	9 09 50	20 53 53	
14	30	37.1	48.3	345	21.1	40.4	56	20	28	17 52	19	32 47	31 57	
15	45	37.0	48.7	359	48.9	34.6	58	30	17 08	34	18 04	9 59 44	20 05 61	
16	60	36.9	49.0	14	16.7	28.7	59	35	16 57	25	17 56	10 15 41	19 50 63	
17	75	36.9	+21 49.4	28	44.7	+26 22.7	60	40	16 44	17 14	17 48	10 33 39	19 33 65	
18	90	36.8	+21 49.8	43	12.8	+26 16.5	62	45	16 29	17 02	17 38	10 55 36	19 11 69	
19	105	36.7	50.1	57	41.0	10.2	63	50	10	16 47	28	11 23 31	18 44 74	
20	120	36.6	50.5	72	09.2	+26 03.8	64	52	16 01	41	23	36 29	31 77	
21	135	36.5	50.9	86	37.6	+25 57.2	66	54	15 51	33	18	11 52 25	18 16 80	
22	150	36.4	51.2	101	06.0	50.6	66	56	40	25	13	12 10 22	17 58 84	
23	165	36.3	51.6	115	34.6	43.8	68	58	27	16	07	12 33 16	35 91	
24	180	36.2	+21 51.9	130	03.3	+25 36.8	70	60 S	15 12	16 06	17 01	13 02 7	17 07 99	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO		
	PMG: 7 ^h 29 ^m 3		Mag: -4.0 PMG: 9 ^h 27 ^m		Mag: +1.7 PMG: 15 ^h 28 ^m		Mag: -2.5 PMG: 22 ^h 02 ^m		Mag: +0.4 PMG: 16 ^h 06 ^m		
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	
0	247	22.1	218	12.7	+9 45.8	127 53.7	+22 08.1	28 24.1	-13 54.3	117 52.7	+19 16.8
1	262	24.5	233	12.4	46.8	142 54.6	07.8	43 26.8	54.3	132 54.9	16.8
2	277	27.0	248	12.1	47.8	157 55.5	07.5	58 29.5	54.2	147 57.1	16.7
3	292	29.5	263	11.8	48.8	172 56.3	07.2	73 32.2	54.1	162 59.4	16.7
4	307	31.9	278	11.5	49.8	187 57.2	06.9	88 34.9	54.0	178 01.6	16.6
5	322	34.4	293	11.2	+9 50.8	202 58.1	+22 06.6	103 37.7	-13 54.0	193 03.9	+19 16.5
6	337	36.9	308	10.9	+9 51.8	217 59.0	+22 06.3	118 40.4	-13 53.9	208 06.1	+19 16.5
7	352	39.3	323	10.5	52.8	232 59.8	06.0	133 43.1	53.8	223 08.4	16.4
8	7	41.8	338	10.2	53.8	248 00.7	05.7	148 45.8	53.8	238 10.6	16.4
9	22	44.3	353	09.9	54.8	263 01.6	05.4	163 48.5	53.7	253 12.8	16.3
10	37	46.7	8	09.6	55.8	278 02.5	05.0	178 51.2	53.6	268 15.1	16.3
11	52	49.2	23	09.3	+9 56.8	293 03.3	+22 04.7	193 53.9	-13 53.6	283 17.3	+19 16.2
12	67	51.7	38	09.0	+9 57.8	308 04.2	+22 04.4	208 56.6	-13 53.5	298 19.6	+19 16.2
13	82	54.1	53	08.7	58.9	323 05.1	04.1	223 59.4	53.4	313 21.8	16.1
14	97	56.6	68	08.3	+9 59.9	338 06.0	03.8	239 02.1	53.3	328 24.0	16.1
15	112	59.0	83	08.0	+10 00.9	353 06.9	03.5	254 04.8	53.3	343 26.3	16.0
16	128	01.5	98	07.7	01.9	8 07.7	03.2	269 07.5	53.2	358 28.5	16.0
17	143	04.0	113	07.4	+10 02.9	23 08.6	+22 02.9	284 10.2	-13 53.1	13 30.8	+19 15.9
18	158	06.4	128	07.1	+10 03.9	38 09.5	+22 02.6	299 12.9	-13 53.1	28 33.0	+19 15.8
19	173	08.9	143	06.8	04.9	53 10.4	02.2	314 15.6	53.0	43 35.2	15.8
20	188	11.4	158	06.4	05.9	68 11.2	01.9	329 18.3	52.9	58 37.5	15.7
21	203	13.8	173	06.1	06.9	83 12.1	01.6	344 21.0	52.9	73 39.7	15.7
22	218	16.3	188	05.8	07.9	98 13.0	01.3	359 23.7	52.8	88 42.0	15.6
23	233	18.8	203	05.5	08.9	113 13.9	01.0	14 26.5	52.7	103 44.2	15.6
24	248	21.2	218	05.2	+10 09.9	128 14.8	+22 00.7	29 29.2	-13 52.7	118 46.4	+19 15.5
Dif	—		-3	+10		+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 8			Edad: 3 ^d 8	PHE { 4 ^h : 55 ^h 5 12 ^h : 55 ^h 3 20 ^h : 55 ^h 1										
	PMG: 11 ^h 57 ^m 7					SD: 15 ^h 1		PMG: 15 ^h 52 ^m			R ^o : 47 ^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	180	36.2	+21 51.9	130	03.3	+25 36.8	70	60 N	** **	1 29	2 51	6 00	97	1 03	5
1	195	36.1		144	32.0	29.8	70	58	** **	2 02	3 09	23	90	0 39	12
2	210	36.0		159	00.9	22.6	72	56	0 19	26	23	42	84	20	17
3	225	36.0		173	29.8	15.3	73	54	1 21	2 45	36	6 58	80	0 04	21
4	240	35.9		187	58.9	07.9	74	52	1 52	3 01	47	7 11	77	** **	**
5	255	35.8	+21 53.7	202	28.0	+25 00.4	75	50	2 14	3 14	3 57	7 23	74	** *	**
6	270	35.7	+21 54.1	216	57.3	+24 52.7	77	45	2 54	3 41	4 17	7 47	69	23 44	24
7	285	35.6		231	26.6	45.0	77	40	3 22	4 02	34	8 07	65	27	28
8	300	35.5		245	56.1	37.1	79	35	3 43	19	4 48	23	62	13	31
9	315	35.4		260	25.7	29.1	80	30	4 00	33	5 00	8 37	59	23 01	34
10	330	35.3		274	55.3	21.0	81	20	27	4 56	20	9 01	55	22 40	38
11	345	35.2	+21 55.9	289	25.1	+24 12.8	82	10 N	4 48	5 15	5 38	9 21	52	22 21	43
12	0	35.1	+21 56.2	303	54.9	+24 04.5	83	0	5 06	5 32	5 54	9 40	48	22 04	46
13	15	35.0		318	24.9	+23 56.0	85	10 S	22	5 48	6 10	9 59	45	21 46	50
14	30	34.9		332	54.9	47.5	85	20	36	6 04	27	10 19	41	28	53
15	45	34.9		347	25.1	38.9	86	30	52	21	47	43	36	21 06	58
16	60	34.8		1	55.4	30.1	88	35	5 59	31	6 58	10 56	34	20 53	61
17	75	34.7	+21 58.0	16	25.7	+23 21.3	88	40	6 08	6 42	7 12	11 12	31	20 38	65
18	90	34.6	+21 58.3	30	56.2	+23 12.3	90	45	6 17	6 54	7 27	11 31	27	20 20	69
19	105	34.5		45	26.7	+23 03.3	90	50	28	7 08	46	11 54	22	19 58	74
20	120	34.4		59	57.4	+22 54.2	91	52	32	15	7 55	12 05	19	48	76
21	135	34.3		74	28.1	44.9	93	54	37	22	8 05	17	17	36	80
22	150	34.2	+21 59.7	88	59.0	35.6	93	56	43	31	16	32	12	22	84
23	165	34.1	+22 00.1	103	29.9	26.1	95	58	49	40	29	12 49	8	19 06	88
24	180	34.0	+22 00.4	118	01.0	+22 16.6	95	60 S	6 55	7 50	8 45	13 09	2	18 46	95

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG: 7 ^h 25 ^m 4		Mag: -4.0 PMG: 9 ^h 28 ^m		Mag: +1.7 PMG: 15 ^h 26 ^m		Mag: -2.5 PMG: 21 ^h 58 ^m		Mag: +0.4 PMG: 16 ^h 03 ^m						
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'					
0	248	21.2	218	05.2	+10 09.9	128	14.8	+22 00.7	29	29.2	-13 52.7	118	46.4	+19 15.5	
1	263	23.7	233	04.8		143	15.6	+22 00.4	44	31.9	52.6	133	48.7	15.5	
2	278	26.2	248	04.5		158	16.5	+22 00.0	59	34.6	52.5	148	50.9	15.4	
3	293	28.6	263	04.2		173	17.4	+21 59.7	74	37.3	52.5	163	53.1	15.3	
4	308	31.1	278	03.9		188	18.3	59.4	89	40.0	52.4	178	55.4	15.3	
5	323	33.5	293	03.6	+10 14.8	203	19.2	+21 59.1	104	42.7	-13 52.3	193	57.6	+19 15.2	
6	338	36.0	308	03.2	+10 15.8	218	20.0	+21 58.8	119	45.4	-13 52.2	208	59.9	+19 15.2	
7	353	38.5	323	02.9		233	20.9	58.5	134	48.1	52.2	224	02.1	15.1	
8	8	40.9	338	02.6		248	21.8	58.2	149	50.8	52.1	239	04.3	15.1	
9	23	43.4	353	02.3		263	22.7	57.8	164	53.5	52.0	254	06.6	15.0	
10	38	45.9	8	02.0		278	23.5	57.5	179	56.3	52.0	269	08.8	15.0	
11	53	48.3	23	01.6	+10 20.8	293	24.4	+21 57.2	194	59.0	-13 51.9	284	11.1	+19 14.9	
12	68	50.8	38	01.3	+10 21.8	308	25.3	+21 56.9	210	01.7	-13 51.8	299	13.3	+19 14.9	
13	83	53.3	53	01.0		323	26.2	56.6	225	04.4	51.8	314	15.5	14.8	
14	98	55.7	68	00.7		338	27.1	56.3	240	07.1	51.7	329	17.8	14.7	
15	113	58.2	83	00.3		353	27.9	55.9	255	09.8	51.6	344	20.0	14.7	
16	129	00.6	98	00.0		8	28.8	55.6	270	12.5	51.6	359	22.2	14.6	
17	144	03.1	112	59.7	+10 26.8	23	29.7	+21 55.3	285	15.2	-13 51.5	14	24.5	+19 14.6	
18	159	05.6	127	59.4	+10 27.8	38	30.6	+21 55.0	300	17.9	-13 51.4	29	26.7	+19 14.5	
19	174	08.0	142	59.0		53	31.5	54.7	315	20.6	51.4	44	29.0	14.5	
20	189	10.5	157	58.7		68	32.3	54.4	330	23.3	51.3	59	31.2	14.4	
21	204	13.0	172	58.4		83	33.2	54.0	345	26.0	51.2	74	33.4	14.4	
22	219	15.4	187	58.1		98	34.1	53.7	0	28.7	51.2	89	35.7	14.3	
23	234	17.9	202	57.7		113	35.0	53.4	15	31.4	51.1	104	37.9	14.2	
24	249	20.4	217	57.4	+10 33.7	128	35.9	+21 53.1	30	34.1	-13 51.0	119	40.1	+19 14.2	
Dif	—		-3	+10		+9	-3		+27	+1		+22		-1	

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna					
	SD: 15 ^h 8 PMG: 11 ^h 57 ^m 8			Edad: 4 ^d 8 PHE { 4 ^h : 55 ^o 0 12 ^h : 54 ^h : 8 20 ^h : 54 ^h : 7 R°: 44 ^m															
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico		Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m				
0	180	34.0	+22	00.4	118	01.0	+22	16.6	60 N	21 07	22 32	** **	7 37	91	1 08	1			
1	195	33.9		00.8	132	32.1 ¹²¹	+22	07.0 ⁹⁶	58	20 49	21 57	** **	7 53	86	0 51	6			
2	210	33.8		01.1	147	03.3 ¹²²	+21	57.3 ⁹⁷	56	34	32	** **	8 06	82	37	10			
3	225	33.7		01.5	161	34.7 ¹²⁴		47.5 ⁹⁸	54	21	21 13	22 39	18	78	25	14			
4	240	33.6		01.8	176	06.1 ¹²⁴		37.6 ⁹⁹	52	10	20 57	22 07	28	75	14	17			
5	255	33.5	+22	02.1	190	37.6 ¹²⁵	+21	27.6 ¹⁰⁰	50	20 00	20 43	21 44	8 37	73	0 04	19			
6	270	33.4	+22	02.5	205	09.3 ¹²⁷	+21	17.5 ¹⁰¹	45	19 39	20 16	21 03	8 56	68	** **	**			
7	285	33.4		02.8	219	41.0 ¹²⁷	+21	07.4 ¹⁰¹	40	23	19 55	20 35	9 12	63	23 55	24			
8	300	33.3		03.2	234	12.8 ¹²⁸	+20	57.2 ¹⁰²	35	19 09	38	20 14	25	60	44	27			
9	315	33.2		03.5	248	44.7 ¹²⁹		46.8 ¹⁰⁴	30	18 56	23	19 56	36	57	35	30			
10	330	33.1		03.8	263	16.7 ¹³⁰		36.4 ¹⁰⁴	20	36	19 00	29	9 56	52	18	35			
11	345	33.0	+22	04.2	277	48.8 ¹³¹	+20	25.9 ¹⁰⁵	10 N	18 18	18 41	19 08	10 13	48	23 04	38			
12	0	32.9	+22	04.5	292	20.9 ¹³¹	+20	15.4 ¹⁰⁵	0	18 01	18 24	18 50	10 28	44	22 50	43			
13	15	32.8		04.9	306	53.2 ¹³³	+20	04.7 ¹⁰⁷	10 S	17 45	18 08	34	10 44	40	36	47			
14	30	32.7		05.2	321	25.6 ¹³⁴	+19	54.0 ¹⁰⁷	20	28	17 51	19	11 00	37	21	51			
15	45	32.6		05.5	335	58.0 ¹³⁴		43.2 ¹⁰⁸	30	17 08	34	18 03	19 32	22 04	56				
16	60	32.5		05.9	350	30.5 ¹³⁵		32.3 ¹⁰⁹	35	16 56	24	17 55	30	29	21 54	59			
17	75	32.4	+22	06.2	5	03.2 ¹³⁷	+19	21.4 ¹⁰⁹	40	16 43	17 13	17 47	11 43	26	21 43	62			
18	90	32.3	+22	06.5	19	35.9 ¹³⁷	+19	10.4 ¹¹⁰	45	16 28	17 01	17 37	11 58	21	21 29	66			
19	105	32.2		06.9	34	08.6 ¹³⁷	+18	59.3 ¹¹¹	50	16 08	16 46	27	12 16	17	12	72			
20	120	32.1		07.2	48	41.5 ¹³⁹		48.1 ¹¹²	52	15 59	39	22	24 15	21	04	75			
21	135	32.0		07.5	63	14.5 ¹⁴⁰		36.9 ¹¹²	54	49	32	17	34 11	20	56	77			
22	150	31.9		07.9	77	47.5 ¹⁴⁰		25.6 ¹¹³	56	38	23	12	44 9	46	80				
23	165	31.8		08.2	92	20.7 ¹⁴²		14.2 ¹¹⁴	58	25	14	17 05	12 57	4	34	85			
24	180	31.7	+22	08.5	106	53.9 ¹⁴²	+18	02.7 ¹¹⁵	60 S	15 09	16 04	16 59	13 11	0	20 21	89			
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 7 ^h 21 ^m 4			Mag: -4.0 PMG: 9 ^h 28 ^m			Mag: +1.7 PMG: 15 ^h 25 ^m			Mag: -2.5 PMG: 21 ^h 54 ^m			Mag: +0.4 PMG: 15 ^h 59 ^m						
	hG ♈		Dec	hG ♀		Dec	hG ♂		Dec	hG ♃		Dec	hG ♄		Dec				
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'			
0	249	20.4	217	57.4	+10	33.7	128	35.9	+21	53.1	30	34.1	-13	51.0	119	40.1	+19	14.2	
1	264	22.8	232	57.1		34.7	143	36.7		52.8	45	36.8		51.0	134	42.4		14.1	
2	279	25.3	247	56.7		35.7	158	37.6		52.4	60	39.5		50.9	149	44.6		14.1	
3	294	27.8	262	56.4		36.7	173	38.5		52.1	75	42.2		50.8	164	46.8		14.0	
4	309	30.2	277	56.1		37.7	188	39.4		51.8	90	44.9		50.8	179	49.1		14.0	
5	324	32.7	292	55.8	+10	38.7	203	40.3	+21	51.5	105	47.6	-13	50.7	194	51.3	+19	13.9	
6	339	35.1	307	55.4	+10	39.7	218	41.1	+21	51.2	120	50.4	-13	50.6	209	53.5	+19	13.9	
7	354	37.6	322	55.1		40.7	233	42.0		50.8	135	53.1		50.6	224	55.8		13.8	
8	9	40.1	337	54.8		41.7	248	42.9		50.5	150	55.8		50.5	239	58.0		13.7	
9	24	42.5	352	54.4		42.6	263	43.8		50.2	165	58.5		50.4	255	00.3		13.7	
10	39	45.0	7	54.1		43.6	278	44.7		49.9	181	01.2		50.4	270	02.5		13.6	
11	54	47.5	22	53.8	+10	44.6	293	45.5	+21	49.5	196	03.9	-13	50.3	285	04.7	+19	13.6	
12	69	49.9	37	53.4	+10	45.6	308	46.4	+21	49.2	211	06.6	-13	50.2	300	07.0	+19	13.5	
13	84	52.4	52	53.1		46.6	323	47.3		48.9	226	09.3		50.2	315	09.2		13.5	
14	99	54.9	67	52.8		47.6	338	48.2		48.6	241	12.0		50.1	330	11.4		13.4	
15	114	57.3	82	52.4		48.6	353	49.1		48.3	256	14.7		50.0	345	13.7		13.3	
16	129	59.8	97	52.1		49.6	8	49.9		47.9	271	17.4		50.0	0	15.9		13.3	
17	145	02.3	112	51.8	+10	50.5	23	50.8	+21	47.6	286	20.1	-13	49.9	15	18.1	+19	13.2	
18	160	04.7	127	51.4	+10	51.5	38	51.7	+21	47.3	301	22.8	-13	49.8	30	20.4	+19	13.2	
19	175	07.2	142	51.1		52.5	53	52.6		47.0	316	25.5		49.8	45	22.6		13.1	
20	190	09.6	157	50.8		53.5	68	53.5		46.6	331	28.2		49.7	60	24.8		13.1	
21	205	12.1	172	50.4		54.5	83	54.4		46.3	346	30.9		49.6	75	27.1		13.0	
22	220	14.6	187	50.1		55.5	98	55.2		46.0	1	33.6		49.6	90	29.3		13.0	
23	235	17.0	202	49.8		56.5	113	56.1		45.7	16	36.3		49.5	105	31.5		12.9	
24	250	19.5	217	49.4	+10	57.4	128	57.0	+21	45.3	31	39.0	-13	49.4	120	33.8	+19	12.8	
Dif	—			-3	+10		+9			-3	+27			+1		+22			-1

UT	SOL			 LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15/8 PMG: 11 ^h 58 ^m 0			Edad: 5 ^d 8 PHE { 4 ^h : 54/6 12 ^h : 54/5 20 ^h : 54/4 Rº: 40 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	Rº	Hora	Rº	
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m
0	180	31.7	+22	08.5	106	53.9	+18	02.7	60 N	** **	1 24	2 48	9 08	86	1 09	0
1	195	31.6		08.8	121	27.2 ¹⁴³	+17	51.2 ¹¹⁵	58	** **	1 59	3 06	19 82		0 57	4
2	210	31.5		09.2	136	00.5 ¹⁴³		39.6 ¹¹⁶	56	** **	2 23	21	28 78		47	8
3	225	31.4		09.5	150	34.0 ¹⁴⁵		28.0 ¹¹⁶	54	1 16	43	34	36 75		39	10
4	240	31.3		09.8	165	07.5 ¹⁴⁵		16.3 ¹¹⁷	52	1 49	2 59	45	43 73		31	12
5	255	31.2	+22	10.2	179	41.1 ¹⁴⁶	+17	04.5 ¹¹⁸	50	2 12	3 12	3 55	9 50	70	0 23	15
6	270	31.1	+22	10.5	194	14.8 ¹⁴⁷	+16	52.7 ¹¹⁸	45	2 52	3 40	4 16	10 04	65	0 08	20
7	285	31.0		10.8	208	48.5 ¹⁴⁷		40.8 ¹¹⁹	40	3 20	4 01	33	15 61		** **	**
8	300	30.9		11.1	223	22.3 ¹⁴⁸		28.9 ¹¹⁹	35	42	18	47	25 58		** **	**
9	315	30.8		11.4	237	56.2 ¹⁴⁹		16.9 ¹²⁰	30	3 59	32	4 59	33 55		** **	**
10	330	30.7		11.8	252	30.2 ¹⁵⁰	+16	04.8 ¹²¹	20	4 27	4 56	5 20	10 48	50	23 53	32
11	345	30.6	+22	12.1	267	04.3 ¹⁵¹	+15	52.7 ¹²¹	10 N	4 48	5 15	5 38	11 01	45	23 42	37
12	0	30.5	+22	12.4	281	38.4 ¹⁵¹	+15	40.5 ¹²²	0	5 06	5 32	5 54	11 12	42	23 33	40
13	15	30.4		12.7	296	12.6 ¹⁵²		28.2 ¹²³	10 S	22	5 48	6 11	24 38		23	44
14	30	30.3		13.1	310	46.8 ¹⁵²		16.0 ¹²²	20	37	6 04	28	37 33		12	49
15	45	30.2		13.4	325	21.1 ¹⁵³	+15	03.6 ¹²⁴	30	5 52	22	6 48	51 28		23 00	54
16	60	30.1		13.7	339	55.5 ¹⁵⁴	+14	51.2 ¹²⁴	35	6 01	32	7 00	11 59	25	22 53	57
17	75	30.0	+22	14.0	354	30.0 ¹⁵⁵	+14	38.8 ¹²⁴	40	6 09	6 43	7 13	12 09	22	22 45	60
18	90	29.9	+22	14.3	9	04.5 ¹⁵⁵	+14	26.3 ¹²⁵	45	6 19	6 55	7 29	12 19	19	22 35	65
19	105	29.8		14.6	23	39.1 ¹⁵⁶		13.7 ¹²⁶	50	29	7 10	48	33 13	24	69	69
20	120	29.7		15.0	38	13.7 ¹⁵⁶	+14	01.1 ¹²⁶	52	34	17	7 57	39 11		19	71
21	135	29.6		15.3	52	48.4 ¹⁵⁷	+13	48.5 ¹²⁶	54	39	25	8 07	45 9		13	74
22	150	29.5		15.6	67	23.2 ¹⁵⁸		35.8 ¹²⁷	56	45	33	19	12 53	6	22 06	77
23	165	29.4		15.9	81	58.0 ¹⁵⁸		23.0 ¹²⁸	58	51	42	32	13 01	3	21 59	80
24	180	29.3	+22	16.2	96	32.9 ¹⁵⁹	+13	10.3 ¹²⁷	60 S	6 58	7 53	8 48	13 11	**	21 50	84
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO			
	PMG 7 ^h 17 ^m 5			Mag: -4.0 PMG: 9 ^h 29 ^m			Mag: +1.7 PMG: 15 ^h 23 ^m			Mag: -2.5 PMG: 21 ^h 49 ^m			Mag: +0.4 PMG: 15 ^h 55 ^m			
	hG ♈	hG ♀		Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	250	19.5	217	49.4	+10	57.4	128	57.0	+21	45.3	31	39.0	-13	49.4	120	33.8
1	265	22.0	232	49.1		58.4	143	57.9		45.0	46	41.7		49.4	135	36.0
2	280	24.4	247	48.8	+10	59.4	158	58.8		44.7	61	44.4		49.3	150	38.2
3	295	26.9	262	48.4	+11	00.4	173	59.6		44.4	76	47.1		49.2	165	40.5
4	310	29.4	277	48.1		01.4	189	00.5		44.0	91	49.8		49.2	180	42.7
5	325	31.8	292	47.7	+11	02.4	204	01.4	+21	43.7	106	52.5	-13	49.1	195	44.9
6	340	34.3	307	47.4	+11	03.3	219	02.3	+21	43.4	121	55.2	-13	49.0	210	47.2
7	355	36.8	322	47.1		04.3	234	03.2		43.1	136	57.9		49.0	225	49.4
8	10	39.2	337	46.7		05.3	249	04.1		42.7	152	00.6		48.9	240	51.6
9	25	41.7	352	46.4		06.3	264	04.9		42.4	167	03.3		48.8	255	53.9
10	40	44.1	7	46.0		07.3	279	05.8		42.1	182	05.9		48.8	270	56.1
11	55	46.6	22	45.7	+11	08.2	294	06.7	+21	41.7	197	08.6	-13	48.7	285	58.3
12	70	49.1	37	45.4	+11	09.2	309	07.6	+21	41.4	212	11.3	-13	48.6	301	00.5
13	85	51.5	52	45.0		10.2	324	08.5		41.1	227	14.0		48.6	316	02.8
14	100	54.0	67	44.7		11.2	339	09.3		40.8	242	16.7		48.5	331	05.0
15	115	56.5	82	44.3		12.2	354	10.2		40.4	257	19.4		48.5	346	07.2
16	130	58.9	97	44.0		13.1	9	11.1		40.1	272	22.1		48.4	1	09.5
17	146	01.4	112	43.7	+11	14.1	24	12.0	+21	39.8	287	24.8	-13	48.3	16	11.7
18	161	03.9	127	43.3	+11	15.1	39	12.9	+21	39.4	302	27.5	-13	48.3	31	13.9
19	176	06.3	142	43.0		16.1	54	13.8		39.1	317	30.2		48.2	46	16.2
20	191	08.8	157	42.6		17.0	69	14.6		38.8	332	32.9		48.1	61	18.4
21	206	11.2	172	42.3		18.0	84	15.5		38.4	347	35.6		48.1	76	20.6
22	221	13.7	187	41.9		19.0	99	16.4		38.1	2	38.3		48.0	91	22.9
23	236	16.2	202	41.6		20.0	114	17.3		37.8	17	41.0		47.9	106	25.1
24	251	18.6	217	41.2	+11	21.0	129	18.2	+21	37.5	32	43.7	-13	47.9	121	27.3
Dif	—		-3		+10		+9		-3		+27		+1		+22	

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 15 ^h 8			Edad: 6 ^d 8	PHE	SD: 14 ^h 8									R°: 40 ^m
	hG ☉	Dec							hG ☾	Dif	Dec	Dif			
h	°	'	°	°	'	°	'	h	m	h	m	h	m	h	m
0	180	29.3	+22 16.2	96	32.9	+13 10.3	60 N	21 11	22 38	** **		10 34 83	1 09 **		
1	195	29.2	16.5	111	07.8 ¹⁵⁹	+12 57.4 ¹²⁹	58	20 52	22 01	** **		41 79	1 01 2		
2	210	29.1	16.8	125	42.8 ¹⁶⁰	44.6 ¹²⁸	56	37	21 36	** **		46 77	0 55 5		
3	225	29.0	17.2	140	17.8 ¹⁶⁰	31.6 ¹³⁰	54	24	21 16	22 45		51 74	49 8		
4	240	28.9	17.5	154	52.9 ¹⁶¹	18.7 ¹²⁹	52	12	20 59	22 11		10 56 71	43 10		
5	255	28.8	+22 17.8	169	28.1 ¹⁶²	+12 05.7 ¹³⁰	50	20 02	20 45	21 47		11 00 69	0 38 13		
6	270	28.7	+22 18.1	184	03.3 ¹⁶²	+11 52.6 ¹³¹	45	19 41	20 18	21 06		11 09 64	0 28 17		
7	285	28.6	18.4	198	38.5 ¹⁶²	39.5 ¹³¹	40	24	19 56	20 37		16 60	19 21		
8	300	28.5	18.7	213	13.8 ¹⁶³	26.4 ¹³¹	35	19 10	39	20 15		23 56	11 24		
9	315	28.4	19.0	227	49.2 ¹⁶⁴	+11 13.2 ¹³²	30	18 57	25	19 57		28 54	0 05 26		
10	330	28.3	19.3	242	24.6 ¹⁶⁴	+11 00.0 ¹³²	20	37	19 01	30		38 48	** ** *		
11	345	28.2	+22 19.6	257	00.0 ¹⁶⁴	+10 46.8 ¹³²	10 N	18 18	18 41	19 08		11 46 44	** ** *		
12	0	28.1	+22 19.9	271	35.5 ¹⁶⁵	+10 33.5 ¹³³	0	18 02	18 24	18 50		11 54 39	** ** *		
13	15	28.0	20.2	286	11.0 ¹⁶⁵	20.2 ¹³³	10 S	17 45	18 08	34		12 02 35	** ** *		
14	30	27.9	20.5	300	46.6 ¹⁶⁶	+10 06.9 ¹³³	20	28	17 51	19		10 31	** ** *		
15	45	27.8	20.8	315	22.2 ¹⁶⁶	+9 53.5 ¹³⁴	30	17 07	34	18 03		19 26	23 54 53		
16	60	27.7	21.1	329	57.8 ¹⁶⁶	40.1 ¹³⁴	35	16 56	24	17 55		24 24	50 56		
17	75	27.6	+22 21.4	344	33.5 ¹⁶⁷	+9 26.6 ¹³⁵	40	16 42	17 13	17 46		12 31 19	23 45 60		
18	90	27.4	+22 21.7	359	09.3 ¹⁶⁸	+9 13.1 ¹³⁵	45	16 27	17 00	17 37		12 38 16	23 40 63		
19	105	27.3	22.0	13	45.0 ¹⁶⁷	+8 59.6 ¹³⁵	50	16 07	16 45	26		46 12	33 69		
20	120	27.2	22.3	28	20.8 ¹⁶⁸	46.1 ¹³⁵	52	15 58	38	21		50 9	30 71		
21	135	27.1	22.6	42	56.7 ¹⁶⁹	32.5 ¹³⁶	54	48	30	16		54 7	27 73		
22	150	27.0	22.9	57	32.5 ¹⁶⁸	18.9 ¹³⁶	56	36	22	10		12 59 4	23 76		
23	165	26.9	23.2	72	08.4 ¹⁶⁹	+8 05.3 ¹³⁶	58	22	13	17 04		13 04 2	19 79		
24	180	26.8	+22 23.5	86	44.3 ¹⁶⁹	+7 51.6 ¹³⁷	60 S	15 07	16 02	16 57		13 10 **	23 14 83		
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG 7 ^h 13 ^m 6		Mag: -4.0 PMG: 9 ^h 29 ^m		Mag: +1.7 PMG: 15 ^h 22 ^m		Mag: -2.4 PMG: 21 ^h 45 ^m		Mag: +0.4 PMG: 15 ^h 52 ^m						
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'					
0	251	18.6	217	41.2	+11 21.0	129	18.2	+21 37.5	32 43.7	-13 47.9					
1	266	21.1	232	40.9	21.9	144	19.1	37.1	47 46.4	47.8					
2	281	23.6	247	40.5	22.9	159	19.9	36.8	62 49.1	47.8					
3	296	26.0	262	40.2	23.9	174	20.8	36.5	77 51.8	47.7					
4	311	28.5	277	39.9	24.9	189	21.7	36.1	92 54.5	47.6					
5	326	31.0	292	39.5	+11 25.8	204	22.6	+21 35.8	107 57.1	-13 47.6					
6	341	33.4	307	39.2	+11 26.8	219	23.5	+21 35.5	122 59.8	-13 47.5					
7	356	35.9	322	38.8	27.8	234	24.4	35.1	138 02.5	47.4					
8	11	38.4	337	38.5	28.7	249	25.3	34.8	153 05.2	47.4					
9	26	40.8	352	38.1	29.7	264	26.1	34.5	168 07.9	47.3					
10	41	43.3	7	37.8	30.7	279	27.0	34.1	183 10.6	47.2					
11	56	45.7	22	37.4	+11 31.7	294	27.9	+21 33.8	198 13.3	-13 47.2					
12	71	48.2	37	37.1	+11 32.6	309	28.8	+21 33.5	213 16.0	-13 47.1					
13	86	50.7	52	36.7	33.6	324	29.7	33.1	228 18.7	47.1					
14	101	53.1	67	36.4	34.6	339	30.6	32.8	243 21.4	47.0					
15	116	55.6	82	36.0	35.5	354	31.4	32.5	258 24.1	46.9					
16	131	58.1	97	35.7	36.5	9	32.3	32.1	273 26.7	46.9					
17	147	00.5	112	35.3	+11 37.5	24	33.2	+21 31.8	288 29.4	-13 46.8					
18	162	03.0	127	35.0	+11 38.5	39	34.1	+21 31.4	303 32.1	-13 46.7					
19	177	05.5	142	34.6	39.4	54	35.0	31.1	318 34.8	46.7					
20	192	07.9	157	34.2	40.4	69	35.9	30.8	333 37.5	46.6					
21	207	10.4	172	33.9	41.4	84	36.8	30.4	348 40.2	46.6					
22	222	12.9	187	33.5	42.3	99	37.6	30.1	3 42.9	46.5					
23	237	15.3	202	33.2	43.3	114	38.5	29.8	18 45.6	46.4					
24	252	17.8	217	32.8	+11 44.3	129	39.4	+21 29.4	33 48.3	-13 46.4					
Dif	—		-4	+10		+9	-3		+27	+1		+22		-1	

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna				
	SD: 15'8 PMG: 11 ^h 58 ^m 3			Edad: 7 ^d 8	PHE { 4 ^h : 54'3 12 ^h : 54'3 20 ^h : 54'3 R°: 39 ^m												
	hG ☉	Dec		hG ☾		Dif		Dec	Dif		Náutico	Civil	Hora	R°	Hora	R°	
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m	
0	180	26.8	+22	23.5	86	44.3	+7	51.6	60 N	** **	1 18	2 45	11 57	82	1 08	**	
1	195	26.7		23.8	101	20.3 ¹⁷⁰		37.9 ¹³⁷	58	** **	1 55	3 04	12 00	78	03	2	
2	210	26.6		24.1	115	56.3 ¹⁷⁰		24.2 ¹³⁷	56	** **	2 21	19	03	75	1 00	4	
3	225	26.5		24.4	130	32.3 ¹⁷⁰	+7	10.5 ¹³⁷	54	1 11	40	32	05	73	0 57	6	
4	240	26.4		24.7	145	08.3 ¹⁷⁰	+6	56.7 ¹³⁸	52	1 45	2 57	44	07	70	53	10	
5	255	26.3	+22	25.0	159	44.4 ¹⁷¹	+6	42.9 ¹³⁸	50	2 09	3 11	3 54	12 09	68	0 51	11	
6	270	26.2	+22	25.3	174	20.5 ¹⁷¹	+6	29.1 ¹³⁸	45	2 51	3 39	4 15	12 13	63	0 45	15	
7	285	26.1		25.6	188	56.6 ¹⁷¹		15.3 ¹³⁸	40	3 19	4 00	32	16	59	40	19	
8	300	26.0		25.9	203	32.7 ¹⁷¹	+6	01.4 ¹³⁹	35	41	17	46	19	56	35	23	
9	315	25.9		26.2	218	08.9 ¹⁷²	+5	47.5 ¹³⁹	30	3 59	32	4 59	22	52	31	26	
10	330	25.8		26.5	232	45.1 ¹⁷²		33.6 ¹³⁹	20	4 27	4 55	5 20	26	48	25	30	
11	345	25.6	+22	26.8	247	21.3 ¹⁷²	+5	19.7 ¹³⁹	10 N	4 48	5 15	5 38	12 30	43	0 19	35	
12	0	25.5	+22	27.0	261	57.5 ¹⁷²	+5	05.7 ¹⁴⁰	0	5 06	5 32	5 55	12 33	39	0 13	39	
13	15	25.4		27.3	276	33.7 ¹⁷²	+4	51.8 ¹³⁹	10 S	22	5 49	6 11	37	35	07	44	
14	30	25.3		27.6	291	09.9 ¹⁷²		37.8 ¹⁴⁰	20	38	6 05	29	41	30	0 01	48	
15	45	25.2		27.9	305	46.2 ¹⁷³		23.8 ¹⁴⁰	30	5 53	23	6 49	45	25	** **	**	
16	60	25.1		28.2	320	22.4 ¹⁷²	+4	09.8 ¹⁴⁰	35	6 02	33	7 01	48	22	** **	**	
17	75	25.0	+22	28.5	334	58.7 ¹⁷³	+3	55.7 ¹⁴¹	40	6 10	6 44	7 14	12 50	20	** **	**	
18	90	24.9	+22	28.8	349	35.0 ¹⁷³	+3	41.7 ¹⁴⁰	45	6 20	6 57	7 30	12 54	15	** **	**	
19	105	24.8		29.0	4	11.3 ¹⁷³		27.6 ¹⁴¹	50	31	7 12	50	58	11	** **	**	
20	120	24.7		29.3	18	47.6 ¹⁷³	+3	13.5 ¹⁴¹	52	36	19	7 59	12 59	9	** **	**	
21	135	24.6		29.6	33	23.9 ¹⁷³	+2	59.4 ¹⁴¹	54	41	27	8 09	13 01	7	** **	**	
22	150	24.5		29.9	48	00.2 ¹⁷³		45.3 ¹⁴¹	56	47	35	21	03	5	** **	**	
23	165	24.4		30.2	62	36.5 ¹⁷³		31.2 ¹⁴¹	58	6 53	45	35	06	1	** **	**	
24	180	24.2	+22	30.5	77	12.8 ¹⁷³	+2	17.1 ¹⁴¹	60 S	7 00	7 55	8 51	13 08	**	** **	**	
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO				
	PMG: 7 ^h 09 ^m 6			Mag: -4.0 PMG: 9 ^h 30 ^m			Mag: +1.7 PMG: 15 ^h 20 ^m			Mag: -2.4 PMG: 21 ^h 41 ^m			Mag: +0.4 PMG: 15 ^h 48 ^m				
	hG ♈			hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec			
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°	°	
0	252	17.8		217	32.8	+11	129	39.4	+21	33	48.3	-13	46.4	122	20.8	+19	10.1
1	267	20.2		232	32.5		144	40.3		48	50.9		46.3	137	23.0		10.0
2	282	22.7		247	32.1		159	41.2		63	53.6		46.2	152	25.3		10.0
3	297	25.2		262	31.8		174	42.1		78	56.3		46.2	167	27.5		09.9
4	312	27.6		277	31.4		189	43.0		93	59.0		46.1	182	29.7		09.9
5	327	30.1		292	31.0	+11	204	43.8	+21	109	01.7	-13	46.1	197	31.9	+19	09.8
6	342	32.6		307	30.7	+11	219	44.7	+21	124	04.4	-13	46.0	212	34.2	+19	09.7
7	357	35.0		322	30.3		234	45.6		139	07.1		45.9	227	36.4		09.7
8	12	37.5		337	30.0		249	46.5		154	09.8		45.9	242	38.6		09.6
9	27	40.0		352	29.6		264	47.4		169	12.4		45.8	257	40.9		09.6
10	42	42.4		7	29.3		279	48.3		184	15.1		45.8	272	43.1		09.5
11	57	44.9		22	28.9	+11	294	49.2	+21	199	17.8	-13	45.7	287	45.3	+19	09.5
12	72	47.3		37	28.5	+11	309	50.0	+21	214	20.5	-13	45.6	302	47.5	+19	09.4
13	87	49.8		52	28.2		324	50.9		229	23.2		45.6	317	49.8		09.3
14	102	52.3		67	27.8		339	51.8		244	25.9		45.5	332	52.0		09.3
15	117	54.7		82	27.5		354	52.7		259	28.5		45.4	347	54.2		09.2
16	132	57.2		97	27.1	+11	9	53.6		274	31.2		45.4	2	56.4		09.2
17	147	59.7		112	26.7	+12	24	54.5	+21	289	33.9	-13	45.3	17	58.7	+19	09.1
18	163	02.1		127	26.4	+12	39	55.4	+21	304	36.6	-13	45.3	33	00.9	+19	09.0
19	178	04.6		142	26.0		54	56.2		319	39.3		45.2	48	03.1		09.0
20	193	07.1		157	25.6		69	57.1		334	42.0		45.1	63	05.3		08.9
21	208	09.5		172	25.3		84	58.0		349	44.7		45.1	78	07.6		08.9
22	223	12.0		187	24.9		99	58.9		4	47.3		45.0	93	09.8		08.8
23	238	14.5		202	24.6		114	59.8		19	50.0		45.0	108	12.0		08.7
24	253	16.9		217	24.2	+12	130	00.7	+21	34	52.7	-13	44.9	123	14.2	+19	08.7
Dif	—			-4 +10			+9 -3			+27 +1			+22 -1				

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15'8 PMG: 11 ^h 58 ^m 5			Edad: 8 ^d 8 SD: 14'8 PMG: 19 ^h 22 ^m	PHE { 4 ^h : 54'4 12 ^h : 54'4 20 ^h : 54'5 R°: 40 ^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	24.2	+22 30.5	77	12.8	+2 17.1		60 N	21 14	22 44	** **	13 19 83	1 06 **	
1	195	24.1	30.7	91	49.1 ¹⁷³	+2 02.9 ¹⁴²		58	20 55	22 05	** **	18 80	05 2	
2	210	24.0	31.0	106	25.5 ¹⁷⁴	+1 48.8 ¹⁴¹		56	39	21 39	** **	18 76	04 4	
3	225	23.9	31.3	121	01.8 ¹⁷³	34.6 ¹⁴²		54	26	18	22 51	18 73	03	
4	240	23.8	31.6	135	38.1 ¹⁷³	20.4 ¹⁴²		52	14	21 02	22 15	17 71	03 9	
5	255	23.7	+22 31.8	150	14.4 ¹⁷³	+1 06.2 ¹⁴²		50	20 04	20 48	21 50	13 17 69	1 02 11	
6	270	23.6	+22 32.1	164	50.7 ¹⁷³	+0 52.0 ¹⁴²		45	19 43	20 19	21 08	13 16 64	1 00 16	
7	285	23.5	32.4	179	27.0 ¹⁷³	37.8 ¹⁴²		40	25	19 58	20 39	15 61	0 59 19	
8	300	23.4	32.7	194	03.3 ¹⁷³	23.6 ¹⁴²		35	19 11	40	20 17	15 57	58 22	
9	315	23.3	32.9	208	39.6 ¹⁷³	+0 09.4 ¹⁴²		30	18 58	26	19 59	14 54	57 25	
10	330	23.2	33.2	223	15.8 ¹⁷²	-0 04.9 ¹⁴³		20	37	19 02	31	14 48	55 31	
11	345	23.0	+22 33.5	237	52.1 ¹⁷³	-0 19.1 ¹⁴²		10 N	18 19	18 42	19 09	13 13 44	0 54 35	
12	0	22.9	+22 33.8	252	28.4 ¹⁷³	-0 33.3 ¹⁴²		0	18 02	18 25	18 51	13 12 40	0 52 39	
13	15	22.8	34.0	267	04.6 ¹⁷²	-0 47.6 ¹⁴³		10 S	17 45	18 08	34	12 35	51 43	
14	30	22.7	34.3	281	40.8 ¹⁷²	-1 01.8 ¹⁴²		20	28	17 51	19	11 31	49 48	
15	45	22.6	34.6	296	17.0 ¹⁷²	16.0 ¹⁴²		30	17 07	33	18 03	10 26	47 53	
16	60	22.5	34.9	310	53.2 ¹⁷²	30.3 ¹⁴³		35	16 55	23	17 55	10 23	46 56	
17	75	22.4	+22 35.1	325	29.4 ¹⁷²	-1 44.5 ¹⁴²		40	16 42	17 12	17 46	13 10 19	0 45 59	
18	90	22.3	+22 35.4	340	05.6 ¹⁷²	-1 58.8 ¹⁴³		45	16 26	16 59	17 36	13 09 16	0 43 64	
19	105	22.2	35.7	354	41.7 ¹⁷¹	-2 13.0 ¹⁴²		50	16 06	44	25	09 11	42 68	
20	120	22.0	35.9	9	17.8 ¹⁷¹	27.3 ¹⁴³		52	15 57	37	20	08 10	41 70	
21	135	21.9	36.2	23	53.9 ¹⁷¹	41.5 ¹⁴²		54	46	29	15	08 7	40 73	
22	150	21.8	36.5	38	30.0 ¹⁷¹	-2 55.8 ¹⁴³		56	34	21	09	08 4	39 76	
23	165	21.7	36.7	53	06.0 ¹⁷⁰	-3 10.0 ¹⁴²		58	21	11	17 03	07 2	38 78	
24	180	21.6	+22 37.0	67	42.0 ¹⁷⁰	-3 24.3 ¹⁴³		60 S	15 04	16 00	16 56	13 07 **	0 37 82	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 7 ^h 05 ^m 7		Mag: -3.9 PMG: 9 ^h 31 ^m		Mag: +1.7 PMG: 15 ^h 19 ^m		Mag: -2.4 PMG: 21 ^h 37 ^m		Mag: +0.4 PMG: 15 ^h 45 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	253	16.9	217	24.2	+12 07.4		130	00.7	+21 21.3		34 52.7	-13 44.9	123 14.2	+19 08.7
1	268	19.4	232	23.8	08.3		145	01.6	20.9		49 55.4	44.8	138 16.5	08.6
2	283	21.8	247	23.5	09.3		160	02.5	20.6		64 58.1	44.8	153 18.7	08.6
3	298	24.3	262	23.1	10.2		175	03.3	20.2		80 00.7	44.7	168 20.9	08.5
4	313	26.8	277	22.7	11.2		190	04.2	19.9		95 03.4	44.7	183 23.1	08.5
5	328	29.2	292	22.4	+12 12.1		205	05.1	+21 19.6		110 06.1	-13 44.6	198 25.4	+19 08.4
6	343	31.7	307	22.0	+12 13.1		220	06.0	+21 19.2		125 08.8	-13 44.5	213 27.6	+19 08.3
7	358	34.2	322	21.6	14.0		235	06.9	18.9		140 11.5	44.5	228 29.8	08.3
8	13	36.6	337	21.3	15.0		250	07.8	18.5		155 14.1	44.4	243 32.0	08.2
9	28	39.1	352	20.9	16.0		265	08.7	18.2		170 16.8	44.4	258 34.3	08.2
10	43	41.6	7	20.5	16.9		280	09.6	17.8		185 19.5	44.3	273 36.5	08.1
11	58	44.0	22	20.1	+12 17.9		295	10.4	+21 17.5		200 22.2	-13 44.2	288 38.7	+19 08.0
12	73	46.5	37	19.8	+12 18.8		310	11.3	+21 17.1		215 24.9	-13 44.2	303 40.9	+19 08.0
13	88	49.0	52	19.4	19.8		325	12.2	16.8		230 27.5	44.1	318 43.1	07.9
14	103	51.4	67	19.0	20.7		340	13.1	16.4		245 30.2	44.1	333 45.4	07.9
15	118	53.9	82	18.7	21.7		355	14.0	16.1		260 32.9	44.0	348 47.6	07.8
16	133	56.3	97	18.3	22.6		10	14.9	15.8		275 35.6	44.0	3 49.8	07.7
17	148	58.8	112	17.9	+12 23.6		25	15.8	+21 15.4		290 38.3	-13 43.9	18 52.0	+19 07.7
18	164	01.3	127	17.6	+12 24.5		40	16.7	+21 15.1		305 40.9	-13 43.8	33 54.3	+19 07.6
19	179	03.7	142	17.2	25.5		55	17.6	14.7		320 43.6	43.8	48 56.5	07.6
20	194	06.2	157	16.8	26.4		70	18.4	14.4		335 46.3	43.7	63 58.7	07.5
21	209	08.7	172	16.4	27.4		85	19.3	14.0		350 49.0	43.7	79 00.9	07.4
22	224	11.1	187	16.1	28.3		100	20.2	13.7		5 51.7	43.6	94 03.2	07.4
23	239	13.6	202	15.7	29.3		115	21.1	13.3		20 54.3	43.5	109 05.4	07.3
24	254	16.1	217	15.3	+12 30.2		130	22.0	+21 13.0		35 57.0	-13 43.5	124 07.6	+19 07.3
Dif	—		-4	+10		+9	-3		+27	+1		+22	-1	

UT	SOL			LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna				
	SD: 15/8 PMG: 11 ^h 58 ^m 7			Edad: 9 ^d 8 PHE SD: 14/9 PMG: 20 ^h 02 ^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
0	180	21.6	+22	37.0	67	42.0	-3	24.3	60 N	** **	1 13	2 43	14 42	87	1 05	**		
1	195	21.5		37.2	82	18.0 ¹⁷⁰		38.5 ¹⁴²	58	** **	1 52	3 02	38 83		07	2		
2	210	21.4		37.5	96	54.0 ¹⁷⁰	-3	52.7 ¹⁴²	56	** **	2 18	18	34 80		08	5		
3	225	21.3		37.8	111	29.9 ¹⁶⁹	-4	06.9 ¹⁴²	54	1 06	38	31	31 77		10	7		
4	240	21.1		38.0	126	05.8 ¹⁶⁹		21.1 ¹⁴²	52	1 42	2 55	43	28 74		12	9		
5	255	21.0	+22	38.3	140	41.7 ¹⁶⁹	-4	35.4 ¹⁴³	50	2 07	3 09	3 53	14 26	71	1 13	12		
6	270	20.9	+22	38.6	155	17.5 ¹⁶⁸	-4	49.6 ¹⁴²	45	2 49	3 38	4 14	14 20	67	1 16	16		
7	285	20.8		38.8	169	53.3 ¹⁶⁸	-5	03.7 ¹⁴¹	40	3 18	3 59	32	16 62		18	20		
8	300	20.7		39.1	184	29.0 ¹⁶⁷		17.9 ¹⁴²	35	40	4 17	46	12 58		20	24		
9	315	20.6		39.3	199	04.8 ¹⁶⁸		32.1 ¹⁴²	30	3 58	31	4 59	08 56		22	27		
10	330	20.5		39.6	213	40.4 ¹⁶⁶	-5	46.3 ¹⁴²	20	4 26	4 55	5 20	14 02	50	26	31		
11	345	20.4	+22	39.8	228	16.1 ¹⁶⁷	-6	00.4 ¹⁴¹	10 N	4 48	5 15	5 38	13 57	46	1 29	36		
12	0	20.2	+22	40.1	242	51.7 ¹⁶⁶	-6	14.5 ¹⁴¹	0	5 07	5 33	5 55	13 52	41	1 31	41		
13	15	20.1		40.4	257	27.3 ¹⁶⁶		28.7 ¹⁴²	10 S	23	5 49	6 12	47 37		34	45		
14	30	20.0		40.6	272	02.8 ¹⁶⁵		42.8 ¹⁴¹	20	38	6 06	30	42 33		37	49		
15	45	19.9		40.9	286	38.2 ¹⁶⁴	-6	56.9 ¹⁴¹	30	5 54	24	6 50	36 28		40	55		
16	60	19.8		41.1	301	13.7 ¹⁶⁵	-7	10.9 ¹⁴⁰	35	6 03	34	7 02	33 25		42	58		
17	75	19.7	+22	41.4	315	49.0 ¹⁶³	-7	25.0 ¹⁴¹	40	6 11	6 45	7 16	13 29	21	1 44	61		
18	90	19.6	+22	41.6	330	24.4 ¹⁶⁴	-7	39.0 ¹⁴⁰	45	6 21	6 58	7 32	13 25	17	1 47	65		
19	105	19.4		41.9	344	59.7 ¹⁶³	-7	53.1 ¹⁴¹	50	32	7 14	7 51	20 13		50	70		
20	120	19.3		42.1	359	34.9 ¹⁶²	-8	07.1 ¹⁴⁰	52	37	21	8 01	18 10		51	73		
21	135	19.2		42.4	14	10.1 ¹⁶²		21.1 ¹⁴⁰	54	43	28	11	15 8		53	75		
22	150	19.1		42.6	28	45.2 ¹⁶¹		35.0 ¹³⁹	56	48	37	23	12 6		55	77		
23	165	19.0		42.9	43	20.3 ¹⁶¹	-8	49.0 ¹⁴⁰	58	6 55	47	37	09 2		56	81		
24	180	18.9	+22	43.1	57	55.3 ¹⁶⁰	-9	02.9 ¹³⁹	60 S	7 02	7 58	8 54	13 06	**	1 59	84		
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 7 ^h 01 ^m 8		Mag: -3.9 PMG: 9 ^h 31 ^m				Mag: +1.7 PMG: 15 ^h 18 ^m				Mag: -2.4 PMG: 21 ^h 32 ^m				Mag: +0.4 PMG: 15 ^h 41 ^m			
	hG ♈		hG ♀	Dec			hG ♂	Dec			hG ♃	Dec			hG ♄	Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	254	16.1	217	15.3	+12	30.2	130	22.0	+21	13.0	35	57.0	-13	43.5	124	07.6	+19	07.3
1	269	18.5	232	14.9		31.2	145	22.9		12.6	50	59.7		43.4	139	09.8		07.2
2	284	21.0	247	14.6		32.1	160	23.8		12.3	66	02.4		43.4	154	12.0		07.1
3	299	23.4	262	14.2		33.1	175	24.7		11.9	81	05.0		43.3	169	14.3		07.1
4	314	25.9	277	13.8		34.0	190	25.6		11.6	96	07.7		43.3	184	16.5		07.0
5	329	28.4	292	13.4	+12	35.0	205	26.4	+21	11.2	111	10.4	-13	43.2	199	18.7	+19	07.0
6	344	30.8	307	13.1	+12	35.9	220	27.3	+21	10.9	126	13.1	-13	43.1	214	20.9	+19	06.9
7	359	33.3	322	12.7		36.9	235	28.2		10.5	141	15.7		43.1	229	23.1		06.8
8	14	35.8	337	12.3		37.8	250	29.1		10.2	156	18.4		43.0	244	25.4		06.8
9	29	38.2	352	11.9		38.7	265	30.0		09.8	171	21.1		43.0	259	27.6		06.7
10	44	40.7	7	11.5		39.7	280	30.9		09.5	186	23.8		42.9	274	29.8		06.7
11	59	43.2	22	11.2	+12	40.6	295	31.8	+21	09.1	201	26.4	-13	42.8	289	32.0	+19	06.6
12	74	45.6	37	10.8	+12	41.6	310	32.7	+21	08.8	216	29.1	-13	42.8	304	34.3	+19	06.5
13	89	48.1	52	10.4		42.5	325	33.6		08.4	231	31.8		42.7	319	36.5		06.5
14	104	50.6	67	10.0		43.5	340	34.5		08.1	246	34.5		42.7	334	38.7		06.4
15	119	53.0	82	09.6		44.4	355	35.3		07.7	261	37.1		42.6	349	40.9		06.4
16	134	55.5	97	09.3		45.3	10	36.2		07.4	276	39.8		42.6	4	43.1		06.3
17	149	57.9	112	08.9	+12	46.3	25	37.1	+21	07.0	291	42.5	-13	42.5	19	45.4	+19	06.2
18	165	00.4	127	08.5	+12	47.2	40	38.0	+21	06.7	306	45.1	-13	42.5	34	47.6	+19	06.2
19	180	02.9	142	08.1		48.2	55	38.9		06.3	321	47.8		42.4	49	49.8		06.1
20	195	05.3	157	07.7		49.1	70	39.8		05.9	336	50.5		42.3	64	52.0		06.1
21	210	07.8	172	07.4		50.0	85	40.7		05.6	351	53.2		42.3	79	54.2		06.0
22	225	10.3	187	07.0		51.0	100	41.6		05.2	6	55.8		42.2	94	56.5		05.9
23	240	12.7	202	06.6		51.9	115	42.5		04.9	21	58.5		42.2	109	58.7		05.9
24	255	15.2	217	06.2	+12	52.9	130	43.4	+21	04.5	37	01.2	-13	42.1	125	00.9	+19	05.8
Dif	—		-4		+9		+9		-4		+27		+1		+22		-1	

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8			Edad: 10 ^d 8 PHE	4 ^h : 55 ^m /12 ^h : 55 ^m /20 ^h : 55 ^m /4				Final del crepúsculo		Salida de Luna		Puesta de Luna	
	PMG: 11 ^h 58 ^m 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	h m
0	180	18.9	+22 43.1	57	55.3	-9 02.9		60 N	21 17	22 50	** **	16 09 93	1 03 **	
1	195	18.8	43.4	72	30.2 ¹⁵⁹	16.8 ¹³⁹		58	20 57	22 09	** **	16 01 88	09 2	
2	210	18.6	43.6	87	05.1 ¹⁵⁹	30.6 ¹³⁸		56	42	21 42	** **	15 54 84	13 6	
3	225	18.5	43.9	101	40.0 ¹⁵⁹	44.5 ¹³⁹		54	28	21	22 56	48 81	17 9	
4	240	18.4	44.1	116	14.8 ¹⁵⁸	-9 58.3 ¹³⁸		52	16	21 04	22 18	42 78	21 12	
5	255	18.3	+22 44.3	130	49.5 ¹⁵⁷	-10 12.1 ¹³⁸		50	20 06	20 49	21 53	15 37 75	1 25 13	
6	270	18.2	+22 44.6	145	24.1 ¹⁵⁶	-10 25.9 ¹³⁸		45	19 44	20 21	21 10	15 27 69	1 32 19	
7	285	18.1	44.8	159	58.7 ¹⁵⁶	39.6 ¹³⁷		40	27	19 59	20 40	18 65	38 23	
8	300	17.9	45.1	174	33.3 ¹⁵⁶	-10 53.3 ¹³⁷		35	19 12	41	18	10 62	44 26	
9	315	17.8	45.3	189	07.7 ¹⁵⁴	-11 07.0 ¹³⁷		30	18 59	27	20 00	15 04 58	49 29	
10	330	17.7	45.5	203	42.1 ¹⁵⁴	20.6 ¹³⁶		20	38	19 02	19 31	14 52 54	1 57 34	
11	345	17.6	+22 45.8	218	16.4 ¹⁵³	-11 34.2 ¹³⁶		10 N	18 20	18 43	19 09	14 43 48	2 05 38	
12	0	17.5	+22 46.0	232	50.7 ¹⁵³	-11 47.8 ¹³⁶		0	18 02	18 25	18 51	14 33 45	2 12 42	
13	15	17.4	46.3	247	24.9 ¹⁵²	-12 01.4 ¹³⁶		10 S	17 46	18 08	35	24 41	19 47	
14	30	17.3	46.5	261	59.0 ¹⁵¹	14.9 ¹³⁵		20	28	17 51	19	15 36	26 52	
15	45	17.1	46.7	276	33.0 ¹⁵⁰	28.3 ¹³⁴		30	17 07	33	18 03	14 04 31	35 57	
16	60	17.0	47.0	291	07.0 ¹⁵⁰	41.8 ¹³⁵		35	16 55	23	17 55	13 58 27	40 60	
17	75	16.9	+22 47.2	305	40.9 ¹⁴⁹	-12 55.1 ¹³³		40	16 41	17 12	17 46	13 50 25	2 45 64	
18	90	16.8	+22 47.4	320	14.7 ¹⁴⁸	-13 08.5 ¹³⁴		45	16 25	16 59	17 36	13 42 21	2 52 68	
19	105	16.7	47.7	334	48.4 ¹⁴⁷	21.8 ¹³³		50	16 05	43	24	33 15	3 00 73	
20	120	16.5	47.9	349	22.1 ¹⁴⁷	35.1 ¹³³		52	15 56	36	19	28 13	04 75	
21	135	16.4	48.2	3	55.7 ¹⁴⁶	-13 48.3 ¹³²		54	45	28	14	23 10	08 78	
22	150	16.3	48.4	18	29.2 ¹⁴⁵	-14 01.5 ¹³²		56	33	20	08	18 7	12 82	
23	165	16.2	48.6	33	02.6 ¹⁴⁴	14.6 ¹³¹		58	19	16 10	17 02	11 4	17 85	
24	180	16.1	+22 48.8	47	35.9 ¹⁴³	-14 27.7 ¹³¹		60 S	15 02	15 59	16 55	13 05 **	3 23 89	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 6 ^h 57 ^m 8		Mag: -3.9 PMG: 9 ^h 32 ^m		Mag: +1.7 PMG: 15 ^h 16 ^m		Mag: -2.4 PMG: 21 ^h 28 ^m		Mag: +0.4 PMG: 15 ^h 38 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	255	15.2	217	06.2	+12	52.9	130	43.4	+21	04.5
1	270	17.7	232	05.8		53.8	145	44.3		04.2
2	285	20.1	247	05.4		54.7	160	45.2		03.8
3	300	22.6	262	05.0		55.7	175	46.0		03.5
4	315	25.0	277	04.7		56.6	190	46.9		03.1
5	330	27.5	292	04.3	+12	57.5	205	47.8	+21	02.8
6	345	30.0	307	03.9	+12	58.5	220	48.7	+21	02.4
7	0	32.4	322	03.5	+12	59.4	235	49.6		02.0
8	15	34.9	337	03.1	+13	00.4	250	50.5		01.7
9	30	37.4	352	02.7		01.3	265	51.4		01.3
10	45	39.8	7	02.3		02.2	280	52.3		01.0
11	60	42.3	22	01.9	+13	03.2	295	53.2	+21	00.6
12	75	44.8	37	01.5	+13	04.1	310	54.1	+21	00.3
13	90	47.2	52	01.2		05.0	325	55.0	+20	59.9
14	105	49.7	67	00.8		05.9	340	55.9		59.5
15	120	52.2	82	00.4		06.9	355	56.7		59.2
16	135	54.6	97	00.0		07.8	10	57.6		58.8
17	150	57.1	111	59.6	+13	08.7	25	58.5	+20	58.5
18	165	59.5	126	59.2	+13	09.7	40	59.4	+20	58.1
19	181	02.0	141	58.8		10.6	56	00.3		57.8
20	196	04.5	156	58.4		11.5	71	01.2		57.4
21	211	06.9	171	58.0		12.5	86	02.1		57.0
22	226	09.4	186	57.6		13.4	101	03.0		56.7
23	241	11.9	201	57.2		14.3	116	03.9		56.3
24	256	14.3	216	56.8	+13	15.2	131	04.8	+20	56.0
Dif	—	—	-4	+9		+9	+9	-4	+27	+1

UT	SOL				LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15 ^h 8 PMG: 11 ^h 59 ^m 0				Edad: 11 ^d 8 PHE SD: 15 ^h 1 PMG: 21 ^h 29 ^m												
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	180	16.1	+22	48.8	47	35.9	-14	27.7	60 N	** **	1 08	2 41	17 42	100	1 02	0	
1	195	16.0		49.1	62	09.1 ¹⁴²		40.7 ¹³⁰	58	** **	1 49	3 00	29 94		11	5	
2	210	15.8		49.3	76	42.3 ¹⁴²	-14	53.7 ¹³⁰	56	** **	2 16	16	18 89		19	0	
3	225	15.7		49.5	91	15.4 ¹⁴¹	-15	06.7 ¹³⁰	54	1 02	37	30	09 84		26	12	
4	240	15.6		49.8	105	48.3 ¹³⁹		19.6 ¹²⁹	52	1 40	2 54	42	17 00	81	33	14	
5	255	15.5	+22	50.0	120	21.2 ¹³⁹	-15	32.4 ¹²⁸	50	2 05	3 08	3 52	16 52	79	1 38	18	
6	270	15.4	+22	50.2	134	54.0 ¹³⁸	-15	45.2 ¹²⁸	45	2 48	3 37	4 14	16 36	73	1 51	22	
7	285	15.3		50.4	149	26.7 ¹³⁷	-15	57.9 ¹²⁷	40	3 17	3 59	31	23 69		2 01	27	
8	300	15.1		50.7	163	59.4 ¹³⁷	-16	10.6 ¹²⁷	35	40	4 16	46	12 65		10	30	
9	315	15.0		50.9	178	31.9 ¹³⁵		23.2 ¹²⁶	30	3 58	31	4 58	16 02	62	18	33	
10	330	14.9		51.1	193	04.3 ¹³⁴		35.7 ¹²⁵	20	4 26	4 55	5 20	15 46	57	31	38	
11	345	14.8	+22	51.3	207	36.7 ¹³⁴	-16	48.2 ¹²⁵	10 N	4 48	5 15	5 38	15 31	53	2 43	43	
12	0	14.7	+22	51.6	222	08.9 ¹³²	-17	00.7 ¹²⁵	0	5 07	5 33	5 55	15 18	49	2 54	47	
13	15	14.5		51.8	236	41.0 ¹³¹		13.0 ¹²³	10 S	23	5 50	6 12	15 05	45	3 06	50	
14	30	14.4		52.0	251	13.1 ¹³¹		25.3 ¹²³	20	39	6 06	30	14 51	40	18	55	
15	45	14.3		52.2	265	45.0 ¹²⁹		37.6 ¹²³	30	5 55	25	6 51	35	36	32	60	
16	60	14.2		52.4	280	16.9 ¹²⁹	-17	49.8 ¹²²	35	6 03	35	7 03	25	33	40	63	
17	75	14.1	+22	52.7	294	48.6 ¹²⁷	-18	01.9 ¹²¹	40	6 12	6 46	7 17	14 15	30	3 49	67	
18	90	13.9	+22	52.9	309	20.3 ¹²⁷	-18	13.9 ¹²⁰	45	6 22	6 59	7 33	14 03	25	4 00	71	
19	105	13.8		53.1	323	51.8 ¹²⁵		25.9 ¹²⁰	50	34	7 15	7 53	13 48	20	13	77	
20	120	13.7		53.3	338	23.2 ¹²⁴		37.8 ¹¹⁹	52	39	22	8 03	41	18	19	79	
21	135	13.6		53.5	352	54.6 ¹²⁴	-18	49.6 ¹¹⁸	54	44	30	13	33	15	26	82	
22	150	13.5		53.7	7	25.8 ¹²²	-19	01.3 ¹¹⁷	56	50	39	25	25	11	34	86	
23	165	13.3		54.0	21	56.9 ¹²¹		13.0 ¹¹⁷	58	6 56	7 49	40	15	7	42	91	
24	180	13.2	+22	54.2	36	27.9 ¹²⁰	-19	24.6 ¹¹⁶	60 S	7 04	8 00	8 56	13 04	2	4 52	96	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 6 ^h 53 ^m 9		Mag: -3.9 PMG: 9 ^h 32 ^m		Mag: +1.7 PMG: 15 ^h 15 ^m		Mag: -2.4 PMG: 21 ^h 24 ^m		Mag: +0.4 PMG: 15 ^h 34 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	256	14.3	216	56.8	+13	15.2	131	04.8	+20	56.0	38	05.2	-13	40.8	125	54.1	+19	04.4
1	271	16.8	231	56.4		16.2	146	05.7		55.6	53	07.9		40.7	140	56.3		04.3
2	286	19.3	246	56.0		17.1	161	06.6		55.2	68	10.5		40.7	155	58.6		04.2
3	301	21.7	261	55.7		18.0	176	07.5		54.9	83	13.2		40.6	171	00.8		04.2
4	316	24.2	276	55.3		19.0	191	08.4		54.5	98	15.8		40.6	186	03.0		04.1
5	331	26.7	291	54.9	+13	19.9	206	09.3	+20	54.2	113	18.5	-13	40.5	201	05.2	+19	04.1
6	346	29.1	306	54.5	+13	20.8	221	10.1	+20	53.8	128	21.2	-13	40.5	216	07.4	+19	04.0
7	1	31.6	321	54.1		21.7	236	11.0		53.4	143	23.8		40.4	231	09.6		03.9
8	16	34.0	336	53.7		22.7	251	11.9		53.1	158	26.5		40.4	246	11.9		03.9
9	31	36.5	351	53.3		23.6	266	12.8		52.7	173	29.2		40.3	261	14.1		03.8
10	46	39.0	6	52.9		24.5	281	13.7		52.3	188	31.8		40.2	276	16.3		03.7
11	61	41.4	21	52.5	+13	25.4	296	14.6	+20	52.0	203	34.5	-13	40.2	291	18.5	+19	03.7
12	76	43.9	36	52.1	+13	26.3	311	15.5	+20	51.6	218	37.1	-13	40.1	306	20.7	+19	03.6
13	91	46.4	51	51.7		27.3	326	16.4		51.3	233	39.8		40.1	321	22.9		03.6
14	106	48.8	66	51.3		28.2	341	17.3		50.9	248	42.5		40.0	336	25.1		03.5
15	121	51.3	81	50.9		29.1	356	18.2		50.5	263	45.1		40.0	351	27.4		03.4
16	136	53.8	96	50.5		30.0	11	19.1		50.2	278	47.8		39.9	6	29.6		03.4
17	151	56.2	111	50.1	+13	30.9	26	20.0	+20	49.8	293	50.5	-13	39.9	21	31.8	+19	03.3
18	166	58.7	126	49.7	+13	31.9	41	20.9	+20	49.4	308	53.1	-13	39.8	36	34.0	+19	03.3
19	182	01.1	141	49.3		32.8	56	21.8		49.1	323	55.8		39.8	51	36.2		03.2
20	197	03.6	156	48.9		33.7	71	22.7		48.7	338	58.4		39.7	66	38.4		03.1
21	212	06.1	171	48.4		34.6	86	23.6		48.3	354	01.1		39.7	81	40.6		03.1
22	227	08.5	186	48.0		35.5	101	24.5		48.0	9	03.8		39.6	96	42.9		03.0
23	242	11.0	201	47.6		36.5	116	25.4		47.6	24	06.4		39.6	111	45.1		02.9
24	257	13.5	216	47.2	+13	37.4	131	26.2	+20	47.2	39	09.1	-13	39.5	126	47.3	+19	02.9
Dif	—		-4		+9		+9		-4		+27		+1		+22		-1	

UT	SOL			☉ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15/8 PMG: 11 ^h 59 ^m 2			Edad: 12 ^d 8 PHE SD: 15/3 PMG: 22 ^h 19 ^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	13.2	+22 54.2	36	27.9	-19 24.6	60 N	21 19	22 56	** **	19 22 106	1 02	3	
1	195	13.1	54.4	50	58.8 ¹¹⁹	36.1 ¹¹⁵	58	21 00	22 12	** **	19 03 96	16	9	
2	210	13.0	54.6	65	29.6 ¹¹⁸	47.6 ¹¹⁵	56	20 44	21 44	** **	18 47 90	28	13	
3	225	12.9	54.8	80	00.3 ¹¹⁷	-19 58.9 ¹¹³	54	30	23	23 01	33 86	38	17	
4	240	12.7	55.0	94	30.9 ¹¹⁶	-20 10.2 ¹¹³	52	18	21 06	22 21	21 82	47	21	
5	255	12.6	+22 55.2	109	01.4 ¹¹⁵	-20 21.4 ¹¹²	50	20 07	20 51	21 55	18 11 79	1 56	23	
6	270	12.5	+22 55.4	123	31.8 ¹¹⁴	-20 32.5 ¹¹¹	45	19 45	20 22	21 11	17 49 74	2 13	29	
7	285	12.4	55.7	138	02.0 ¹¹²	43.5 ¹¹⁰	40	28	20 00	20 42	32 70	28	32	
8	300	12.3	55.9	152	32.2 ¹¹²	-20 54.4 ¹⁰⁹	35	13	19 43	19	17 67	40	36	
9	315	12.1	56.1	167	02.2 ¹¹⁰	-21 05.2 ¹⁰⁸	30	19 00	28	20 01	17 04 65	2 51	39	
10	330	12.0	56.3	181	32.1 ¹⁰⁹	16.0 ¹⁰⁸	20	18 39	19 03	19 32	16 43 60	3 09	44	
11	345	11.9	+22 56.5	196	01.9 ¹⁰⁸	-21 26.6 ¹⁰⁶	10 N	18 20	18 43	19 10	16 24 57	3 26	47	
12	0	11.8	+22 56.7	210	31.6 ¹⁰⁷	-21 37.2 ¹⁰⁶	0	18 03	18 25	18 51	16 07 53	3 41	51	
13	15	11.6	56.9	225	01.2 ¹⁰⁶	47.6 ¹⁰⁴	10 S	17 46	18 09	35	15 50 50	3 56	55	
14	30	11.5	57.1	239	30.6 ¹⁰⁴	-21 58.0 ¹⁰⁴	20	28	17 52	19	31 47	4 13	58	
15	45	11.4	57.3	254	00.0 ¹⁰⁴	-22 08.2 ¹⁰²	30	17 07	33	18 03	15 11 42	32	63	
16	60	11.3	57.5	268	29.2 ¹⁰²	18.4 ¹⁰²	35	16 55	23	17 54	14 58 41	43	66	
17	75	11.2	+22 57.7	282	58.3 ¹⁰¹	-22 28.4 ¹⁰⁰	40	16 41	17 11	17 45	14 45 37	4 56	69	
18	90	11.0	+22 57.9	297	27.3 ¹⁰⁰	-22 38.4 ¹⁰⁰	45	16 25	16 58	17 35	14 28 33	5 11	73	
19	105	10.9	58.1	311	56.2 ⁹⁹	48.2 ⁹⁸	50	16 04	43	24	14 08 28	30	79	
20	120	10.8	58.3	326	25.0 ⁹⁸	-22 57.9 ⁹⁷	52	15 55	35	19	13 59 25	38	82	
21	135	10.7	58.5	340	53.6 ⁹⁶	-23 07.6 ⁹⁷	54	44	27	13	48 22	5 48	86	
22	150	10.5	58.7	355	22.2 ⁹⁶	17.1 ⁹⁵	56	32	19	07	36 18	6 00	89	
23	165	10.4	58.9	9	50.6 ⁹⁴	26.5 ⁹⁴	58	18	16 09	17 01	22 13	13	95	
24	180	10.3	+22 59.1	24	18.9 ⁹³	-23 35.8 ⁹³	60 S	15 01	15 57	16 54	13 06 5	6 28	103	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 6 ^h 50 ^m 0		Mag: -3.9 PMG: 9 ^h 33 ^m		Mag: +1.7 PMG: 15 ^h 13 ^m		Mag: -2.4 PMG: 21 ^h 20 ^m		Mag: +0.4 PMG: 15 ^h 31 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	257	13.5	216 47.2	+13 37.4	131 26.2	+20 47.2	39 09.1	-13 39.5	126 47.3	+19 02.9
1	272	15.9	231 46.8	38.3	146 27.1	46.9	54 11.7	39.5	141 49.5	02.8
2	287	18.4	246 46.4	39.2	161 28.0	46.5	69 14.4	39.4	156 51.7	02.8
3	302	20.9	261 46.0	40.1	176 28.9	46.2	84 17.0	39.3	171 53.9	02.7
4	317	23.3	276 45.6	41.0	191 29.8	45.8	99 19.7	39.3	186 56.1	02.6
5	332	25.8	291 45.2	+13 42.0	206 30.7	+20 45.4	114 22.4	-13 39.2	201 58.4	+19 02.6
6	347	28.3	306 44.8	+13 42.9	221 31.6	+20 45.1	129 25.0	-13 39.2	217 00.6	+19 02.5
7	2	30.7	321 44.4	43.8	236 32.5	44.7	144 27.7	39.1	232 02.8	02.4
8	17	33.2	336 44.0	44.7	251 33.4	44.3	159 30.3	39.1	247 05.0	02.4
9	32	35.6	351 43.6	45.6	266 34.3	43.9	174 33.0	39.0	262 07.2	02.3
10	47	38.1	6 43.2	46.5	281 35.2	43.6	189 35.6	39.0	277 09.4	02.3
11	62	40.6	21 42.7	+13 47.4	296 36.1	+20 43.2	204 38.3	-13 38.9	292 11.6	+19 02.2
12	77	43.0	36 42.3	+13 48.3	311 37.0	+20 42.8	219 41.0	-13 38.9	307 13.9	+19 02.1
13	92	45.5	51 41.9	49.2	326 37.9	42.5	234 43.6	38.8	322 16.1	02.1
14	107	48.0	66 41.5	50.2	341 38.8	42.1	249 46.3	38.8	337 18.3	02.0
15	122	50.4	81 41.1	51.1	356 39.7	41.7	264 48.9	38.7	352 20.5	01.9
16	137	52.9	96 40.7	52.0	11 40.6	41.4	279 51.6	38.7	7 22.7	01.9
17	152	55.4	111 40.3	+13 52.9	26 41.5	+20 41.0	294 54.2	-13 38.6	22 24.9	+19 01.8
18	167	57.8	126 39.9	+13 53.8	41 42.4	+20 40.6	309 56.9	-13 38.6	37 27.1	+19 01.8
19	183	00.3	141 39.4	54.7	56 43.3	40.3	324 59.5	38.5	52 29.3	01.7
20	198	02.8	156 39.0	55.6	71 44.2	39.9	340 02.2	38.5	67 31.6	01.6
21	213	05.2	171 38.6	56.5	86 45.1	39.5	355 04.8	38.4	82 33.8	01.6
22	228	07.7	186 38.2	57.4	101 46.0	39.1	10 07.5	38.4	97 36.0	01.5
23	243	10.1	201 37.8	58.3	116 46.9	38.8	25 10.1	38.3	112 38.2	01.4
24	258	12.6	216 37.4	+13 59.2	131 47.8	+20 38.4	40 12.8	-13 38.3	127 40.4	+19 01.4
Dif	—		-4	+9	+9	-4	+27	+1	+22	-1

UT	SOL			LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15/8 PMG: 11 ^h 59 ^m 4			Edad: 13 ^d 8 PHE { 4 ^h : 56/9 12 ^h : 57/1 20 ^h : 57/3 R°: 59 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m
0	180	10.3	+22	59.1	24	18.9	−23	35.8	60 N	** **	1 03	2 39	21 08	99	1 05	7
1	195	10.2		59.3	38	47.1	92	44.9	58	** **	1 46	2 59	20 39	88	25	16
2	210	10.1		59.5	53	15.2	91	−23 54.0	56	** **	2 14	3 15	20 17	82	41	23
3	225	09.9		59.7	67	43.1	89	−24 02.9	54	0 57	35	29	19 59	78	1 55	28
4	240	09.8	+22	59.9	82	11.0	89	11.7	52	1 37	2 53	41	43	77	2 08	30
5	255	09.7	+23	00.1	96	38.7	87	−24 20.4	50	2 03	3 07	3 51	19 30	74	2 19	33
6	270	09.6	+23	00.3	111	06.3	86	−24 29.0	45	2 47	3 36	4 13	19 03	71	2 42	38
7	285	09.4		00.5	125	33.8	85	37.4	40	3 17	3 58	31	18 42	68	3 00	42
8	300	09.3		00.7	140	01.2	84	45.7	35	40	4 16	46	24	66	16	44
9	315	09.2		00.8	154	28.5	83	−24 53.9	30	3 58	31	4 58	18 09	64	30	46
10	330	09.1		01.0	168	55.6	81	−25 02.0	20	4 26	4 55	5 20	17 43	62	3 53	50
11	345	08.9	+23	01.2	183	22.7	81	−25 09.9	10 N	4 49	5 16	5 38	17 21	60	4 13	53
12	0	08.8	+23	01.4	197	49.6	79	−25 17.7	0	5 07	5 33	5 56	17 00	59	4 32	56
13	15	08.7		01.6	212	16.5	79	25.3	10 S	24	5 50	6 13	16 40	56	4 51	58
14	30	08.6		01.8	226	43.2	77	32.9	20	40	6 07	31	16 18	54	5 11	62
15	45	08.4		02.0	241	09.8	76	40.2	30	5 56	26	6 52	15 53	51	35	65
16	60	08.3		02.2	255	36.3	75	47.5	35	6 04	36	7 04	39	49	5 49	67
17	75	08.2	+23	02.4	270	02.6	73	−25 54.6	40	6 13	6 47	7 18	15 22	47	6 05	69
18	90	08.1	+23	02.5	284	28.9	73	−26 01.5	45	6 24	7 01	7 34	15 01	45	6 24	73
19	105	07.9		02.7	298	55.1	72	08.4	50	35	16	7 55	14 36	40	6 49	77
20	120	07.8		02.9	313	21.1	70	15.0	52	40	24	8 04	24	38	7 00	80
21	135	07.7		03.1	327	47.1	70	21.5	54	46	32	15	14 10	35	14	83
22	150	07.6		03.3	342	13.0	69	27.9	56	52	40	27	13 54	31	29	87
23	165	07.5		03.4	356	38.7	67	34.1	58	6 58	7 50	42	35	25	7 48	93
24	180	07.3	+23	03.6	11	04.4	67	−26 40.2	60 S	7 05	8 02	8 58	13 11	16	8 11	103

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 6 ^h 46 ^m 0		Mag: −3.9 PMG: 9 ^h 34 ^m		Mag: +1.7 PMG: 15 ^h 12 ^m		Mag: −2.4 PMG: 21 ^h 15 ^m		Mag: +0.4 PMG: 15 ^h 27 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	258	12.6	216	37.4	+13	59.2	131	47.8	+20	38.4	40	12.8	−13	38.3	127	40.4	+19	01.4
1	273	15.1	231	37.0	+14	00.1	146	48.7		38.0	55	15.5		38.2	142	42.6		01.3
2	288	17.5	246	36.5		01.0	161	49.6		37.7	70	18.1		38.2	157	44.8		01.3
3	303	20.0	261	36.1		01.9	176	50.5		37.3	85	20.8		38.1	172	47.0		01.2
4	318	22.5	276	35.7		02.8	191	51.4		36.9	100	23.4		38.1	187	49.2		01.1
5	333	24.9	291	35.3	+14	03.8	206	52.2	+20	36.5	115	26.1	−13	38.0	202	51.5	+19	01.1
6	348	27.4	306	34.9	+14	04.7	221	53.1	+20	36.2	130	28.7	−13	38.0	217	53.7	+19	01.0
7	3	29.9	321	34.4		05.6	236	54.0		35.8	145	31.4		37.9	232	55.9		00.9
8	18	32.3	336	34.0		06.5	251	54.9		35.4	160	34.0		37.9	247	58.1		00.9
9	33	34.8	351	33.6		07.4	266	55.8		35.1	175	36.7		37.8	263	00.3		00.8
10	48	37.3	6	33.2		08.3	281	56.7		34.7	190	39.3		37.8	278	02.5		00.8
11	63	39.7	21	32.8	+14	09.2	296	57.6	+20	34.3	205	42.0	−13	37.7	293	04.7	+19	00.7
12	78	42.2	36	32.3	+14	10.1	311	58.5	+20	33.9	220	44.6	−13	37.7	308	06.9	+19	00.6
13	93	44.6	51	31.9		11.0	326	59.4		33.6	235	47.3		37.6	323	09.1		00.6
14	108	47.1	66	31.5		11.9	342	00.3		33.2	250	49.9		37.6	338	11.3		00.5
15	123	49.6	81	31.1		12.8	357	01.2		32.8	265	52.6		37.5	353	13.6		00.4
16	138	52.0	96	30.7		13.6	12	02.1		32.4	280	55.2		37.5	8	15.8		00.4
17	153	54.5	111	30.2	+14	14.5	27	03.0	+20	32.1	295	57.9	−13	37.4	23	18.0	+19	00.3
18	168	57.0	126	29.8	+14	15.4	42	03.9	+20	31.7	311	00.5	−13	37.4	38	20.2	+19	00.2
19	183	59.4	141	29.4		16.3	57	04.8		31.3	326	03.1		37.3	53	22.4		00.2
20	199	01.9	156	29.0		17.2	72	05.7		30.9	341	05.8		37.3	68	24.6		00.1
21	214	04.4	171	28.5		18.1	87	06.6		30.6	356	08.4		37.2	83	26.8	+19	00.1
22	229	06.8	186	28.1		19.0	102	07.5		30.2	11	11.1		37.2	98	29.0	+19	00.0
23	244	09.3	201	27.7		19.9	117	08.4		29.8	26	13.7		37.1	113	31.2	+18	59.9
24	259	11.8	216	27.2	+14	20.8	132	09.3	+20	29.4	41	16.4	−13	37.1	128	33.4	+18	59.9
Dif	—		−4		+9		+9		−4		+26		0		+22		−1	

UT	SOL			☉ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15/8			Edad: 14 ^d 8 PHE { 4 ^h : 57/5 12 ^h : 57/7 20 ^h : 57/9					Civil		Náutico		Hora R°	
	PMG: 11 ^h 59 ^m 6	hG ☉	Dec	hG ☾	Dif	Dec			Dif					
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m
0	180	07.3	+23 03.6	11	04.4	-26 40.2	59	60 N	21 22	23 01	** **	22 47 60	1 12 25	
1	195	07.2	03.8	25	29.9	46.1	59	58	21 02	22 15	** **	22 07 61	1 41 36	
2	210	07.1	04.0	39	55.4	51.9	58	56	20 45	21 47	** **	21 39 62	2 04 41	
3	225	06.9	04.2	54	20.7	-26 57.5	56	54	31	25	23 06	17 62	23 43	
4	240	06.8	04.3	68	46.0	-27 02.9	54	52	19	21 08	22 24	21 00 62	38 46	
5	255	06.7	+23 04.5	83	11.1	-27 08.2	53	50	20 09	20 53	21 57	20 44 62	2 52 48	
6	270	06.6	+23 04.7	97	36.2	-27 13.4	52	45	19 46	20 24	21 13	20 14 62	3 20 51	
7	285	06.4	04.9	112	01.2	18.3	49	40	29	20 01	20 43	19 50 62	3 42 53	
8	300	06.3	05.0	126	26.1	23.1	48	35	14	19 43	20	30 62	4 00 55	
9	315	06.2	05.2	140	50.9	27.8	47	30	19 01	28	20 02	19 13 62	16 55	
10	330	06.1	05.4	155	15.6	32.2	44	20	18 39	19 04	19 33	18 45 62	4 43 57	
11	345	05.9	+23 05.6	169	40.2	-27 36.6	44	10 N	18 21	18 44	19 11	18 21 61	5 06 59	
12	0	05.8	+23 05.7	184	04.8	-27 40.7	41	0	18 03	18 26	18 52	17 59 61	5 28 60	
13	15	05.7	05.9	198	29.2	44.7	40	10 S	17 46	18 09	35	36 61	5 49 61	
14	30	05.6	06.1	212	53.6	48.5	38	20	28	17 52	19	17 12 60	6 13 62	
15	45	05.4	06.3	227	17.9	52.1	36	30	17 07	33	18 03	16 44 60	40 63	
16	60	05.3	06.4	241	42.2	55.5	34	35	16 55	23	17 54	28 59	6 56 64	
17	75	05.2	+23 06.6	256	06.3	-27 58.8	33	40	16 41	17 11	17 45	16 09 58	7 14 66	
18	90	05.1	+23 06.8	270	30.4	-28 01.9	31	45	16 24	16 58	17 35	15 46 58	7 37 67	
19	105	04.9	06.9	284	54.4	04.9	30	50	16 04	42	24	16 57	8 06 69	
20	120	04.8	07.1	299	18.4	07.6	27	52	15 54	35	18	15 02 56	20 70	
21	135	04.7	07.3	313	42.3	10.2	26	54	43	27	13	14 45 55	37 71	
22	150	04.6	07.4	328	06.1	12.6	24	56	31	18	07	25 53	8 56 73	
23	165	04.4	07.6	342	29.8	14.8	22	58	17	16 08	17 00	14 00 51	9 21 75	
24	180	04.3	+23 07.7	356	53.6	-28 16.9	21	60 S	15 00	15 57	16 53	13 27 45	9 54 81	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 6 ^h 42 ^m 1	Mag: -3.9	PMG: 9 ^h 34 ^m	Mag: +1.7	PMG: 15 ^h 10 ^m	Mag: -2.4	PMG: 21 ^h 11 ^m	Mag: +0.4	PMG: 15 ^h 24 ^m	
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'
0	259	11.8	216 27.2	+14 20.8	132 09.3	+20 29.4	41 16.4	-13 37.1	128 33.4	+18 59.9
1	274	14.2	231 26.8	21.7	147 10.2	29.1	56 19.0	37.0	143 35.7	59.8
2	289	16.7	246 26.4	22.6	162 11.1	28.7	71 21.7	37.0	158 37.9	59.7
3	304	19.1	261 26.0	23.5	177 12.0	28.3	86 24.3	36.9	173 40.1	59.7
4	319	21.6	276 25.5	24.4	192 12.9	27.9	101 27.0	36.9	188 42.3	59.6
5	334	24.1	291 25.1	+14 25.3	207 13.8	+20 27.5	116 29.6	-13 36.8	203 44.5	+18 59.5
6	349	26.5	306 24.7	+14 26.2	222 14.7	+20 27.2	131 32.3	-13 36.8	218 46.7	+18 59.5
7	4	29.0	321 24.2	27.0	237 15.6	26.8	146 34.9	36.8	233 48.9	59.4
8	19	31.5	336 23.8	27.9	252 16.5	26.4	161 37.5	36.7	248 51.1	59.4
9	34	33.9	351 23.4	28.8	267 17.4	26.0	176 40.2	36.7	263 53.3	59.3
10	49	36.4	6 23.0	29.7	282 18.3	25.7	191 42.8	36.6	278 55.5	59.2
11	64	38.9	21 22.5	+14 30.6	297 19.2	+20 25.3	206 45.5	-13 36.6	293 57.7	+18 59.2
12	79	41.3	36 22.1	+14 31.5	312 20.1	+20 24.9	221 48.1	-13 36.5	308 59.9	+18 59.1
13	94	43.8	51 21.7	32.4	327 21.0	24.5	236 50.8	36.5	324 02.2	59.0
14	109	46.3	66 21.2	33.3	342 21.9	24.1	251 53.4	36.4	339 04.4	59.0
15	124	48.7	81 20.8	34.1	357 22.8	23.8	266 56.0	36.4	354 06.6	58.9
16	139	51.2	96 20.4	35.0	12 23.7	23.4	281 58.7	36.3	9 08.8	58.8
17	154	53.6	111 19.9	+14 35.9	27 24.6	+20 23.0	297 01.3	-13 36.3	24 11.0	+18 58.8
18	169	56.1	126 19.5	+14 36.8	42 25.5	+20 22.6	312 04.0	-13 36.2	39 13.2	+18 58.7
19	184	58.6	141 19.0	37.7	57 26.4	22.2	327 06.6	36.2	54 15.4	58.7
20	200	01.0	156 18.6	38.6	72 27.3	21.8	342 09.2	36.1	69 17.6	58.6
21	215	03.5	171 18.2	39.4	87 28.2	21.5	357 11.9	36.1	84 19.8	58.5
22	230	06.0	186 17.7	40.3	102 29.1	21.1	12 14.5	36.0	99 22.0	58.5
23	245	08.4	201 17.3	41.2	117 30.0	20.7	27 17.2	36.0	114 24.2	58.4
24	260	10.9	216 16.9	+14 42.1	132 30.9	+20 20.3	42 19.8	-13 36.0	129 26.4	+18 58.3
Dif	—	-4	+9	+9	-4	+26	0	+22	-1	

UT	SOL				LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna			Puesta de Luna		
	SD: 15 ^d 8				Edad: 15 ^d 8													
	PMG: 11 ^h 59 ^m 8				SD: 15 ^d 8													
	hG ☉ Dec				hG ☾ Dif Dec Dif					Náutico	Civil		Hora R°			Hora R°		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m
0	180	04.3	+23	07.7	356	53.6	-28	16.9	60 N	** **	0 59	2 38	23 47	20	1 37	68		
1	195	04.2		07.9	11	17.2	46	18.7	58	** **	1 44	2 58	23 08	32	2 17	67		
2	210	04.0		08.1	25	40.8	46	20.4	56	** **	2 13	3 14	22 41	38	2 45	66		
3	225	03.9		08.2	40	04.4	46	21.9	54	0 53	34	28	19 42		3 06	66		
4	240	03.8		08.4	54	27.8	44	23.2	52	1 35	2 52	40	22 02	44	24	66		
5	255	03.7	+23	08.6	68	51.3	45	-28 24.3	50	2 02	3 06	3 51	21 46	47	3 40	65		
6	270	03.5	+23	08.7	83	14.7	44	-28 25.2	45	2 46	3 36	4 13	21 16	50	4 11	64		
7	285	03.4		08.9	97	38.1	44	26.0	40	3 16	3 58	31	20 52	52	35	64		
8	300	03.3		09.0	112	01.4	43	26.6	35	39	4 16	45	32 54		4 55	63		
9	315	03.2		09.2	126	24.7	43	26.9	30	3 58	31	4 58	20 15	56	5 11	64		
10	330	03.0		09.3	140	48.0	43	27.1	20	4 26	4 56	5 20	19 47	58	5 40	63		
11	345	02.9	+23	09.5	155	11.2	42	-28 27.1	10 N	4 49	5 16	5 39	19 22	60	6 05	62		
12	0	02.8	+23	09.7	169	34.4	42	-28 27.0	0	5 07	5 34	5 56	19 00	61	6 28	61		
13	15	02.6		09.8	183	57.6	42	26.6	10 S	24	5 51	6 13	18 37	63	6 50	61		
14	30	02.5		10.0	198	20.7	41	26.0	20	40	6 08	32	18 12	65	7 15	60		
15	45	02.4		10.1	212	43.9	42	25.3	30	5 56	26	6 53	17 44	66	7 43	59		
16	60	02.3		10.3	227	07.0	41	24.3	35	6 05	37	7 05	27 68		8 00	59		
17	75	02.1	+23	10.4	241	30.1	41	-28 23.2	40	6 14	6 48	7 19	17 07	69	8 20	57		
18	90	02.0	+23	10.6	255	53.2	41	-28 21.9	45	6 25	7 02	7 35	16 44	70	8 44	56		
19	105	01.9		10.7	270	16.2	40	20.4	50	36	17	7 56	16 13	73	9 15	54		
20	120	01.7		10.9	284	39.3	41	18.7	52	41	25	8 06	15 58	74	30	53		
21	135	01.6		11.0	299	02.4	41	16.8	54	47	33	16	40 76		9 48	51		
22	150	01.5		11.2	313	25.5	41	14.7	56	53	42	29	15 18	79	10 09	50		
23	165	01.4		11.3	327	48.5	40	12.4	58	6 59	7 52	8 43	14 51	83	10 36	46		
24	180	01.2	+23	11.5	342	11.6	41	-28 10.0	60 S	7 07	8 03	9 00	14 12	91	11 15	39		

UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO				
	PMG: 6 ^h 38 ^m 2			Mag: -3.9 PMG: 9 ^h 35 ^m			Mag: +1.7 PMG: 15 ^h 09 ^m			Mag: -2.4 PMG: 21 ^h 07 ^m			Mag: +0.4 PMG: 15 ^h 20 ^m				
	hG ♈			hG ♀ Dec			hG ♂ Dec			hG ♃ Dec			hG ♄ Dec				
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	260	10.9		216	16.9	+14	132	30.9	+20	42	19.8	-13	36.0	129	26.4	+18	58.3
1	275	13.4		231	16.4		147	31.8		57	22.4		35.9	144	28.6		58.3
2	290	15.8		246	16.0		162	32.7		72	25.1		35.9	159	30.8		58.2
3	305	18.3		261	15.5		177	33.6		87	27.7		35.8	174	33.1		58.1
4	320	20.7		276	15.1		192	34.5		102	30.4		35.8	189	35.3		58.1
5	335	23.2		291	14.7	+14	207	35.4	+20	117	33.0	-13	35.7	204	37.5	+18	58.0
6	350	25.7		306	14.2	+14	222	36.3	+20	132	35.6	-13	35.7	219	39.7	+18	57.9
7	5	28.1		321	13.8		237	37.2		147	38.3		35.6	234	41.9		57.9
8	20	30.6		336	13.3		252	38.2		162	40.9		35.6	249	44.1		57.8
9	35	33.1		351	12.9		267	39.1		177	43.6		35.5	264	46.3		57.8
10	50	35.5		6	12.5		282	40.0		192	46.2		35.5	279	48.5		57.7
11	65	38.0		21	12.0	+14	297	40.9	+20	207	48.8	-13	35.5	294	50.7	+18	57.6
12	80	40.5		36	11.6	+14	312	41.8	+20	222	51.5	-13	35.4	309	52.9	+18	57.6
13	95	42.9		51	11.1		327	42.7		237	54.1		35.4	324	55.1		57.5
14	110	45.4		66	10.7		342	43.6		252	56.7		35.3	339	57.3		57.4
15	125	47.9		81	10.2		357	44.5		267	59.4		35.3	354	59.5		57.4
16	140	50.3		96	09.8		12	45.4		283	02.0		35.2	10	01.7		57.3
17	155	52.8		111	09.3	+14	27	46.3	+20	298	04.6	-13	35.2	25	03.9	+18	57.2
18	170	55.2		126	08.9	+14	42	47.2	+20	313	07.3	-13	35.1	40	06.1	+18	57.2
19	185	57.7		141	08.5		57	48.1		328	09.9		35.1	55	08.3		57.1
20	201	00.2		156	08.0	+14	72	49.0		343	12.6		35.1	70	10.5		57.0
21	216	02.6		171	07.6	+15	87	49.9		358	15.2		35.0	85	12.7		57.0
22	231	05.1		186	07.1		102	50.8		13	17.8		35.0	100	15.0		56.9
23	246	07.6		201	06.7		117	51.7		28	20.5		34.9	115	17.2		56.8
24	261	10.0		216	06.2	+15	132	52.6	+20	43	23.1	-13	34.9	130	19.4	+18	56.8
Dif	—			-4 +9			+9 -4			+26 0			+22 -1				

UT	SOL				☾ LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna			Puesta de Luna				
	SD: 15 ^h 7				Edad: 16 ^d 8 PHE { 4 ^h : 58 ^m /7 12 ^h : 58 ^m /8 20 ^h : 58 ^m /9																
	PMG: 12 ^h 00 ^m 0				SD: 16 ^h 0 PMG: 1 ^h 14 ^m R°: 61 ^m																
	hG ☉		Dec		hG ☾		Dif		Dec		Dif			Civil	Náutico	Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	'	°	'	h m	h m	h m	h m m		h m m			
0	180	01.2	+23	11.5	342	11.6		–28	10.0		27	60 N	21 23	23 05	** **	** ** *		2 45	108		
1	195	01.1		11.6	356	34.7	41		07.3		27	58	21 03	22 18	** **		23 40	16	3 24	95	
2	210	01.0		11.8	10	57.8	41		04.5		28	56	20 47	21 49	** **		19 21		3 51	89	
3	225	00.8		11.9	25	20.9	41	–28	01.5		30	54		33	27	23 10	23 01	26		4 12	85
4	240	00.7		12.0	39	44.0	41	–27	58.2		33	52	21	21 09	22 26	22 46	30		30	82	
5	255	00.6	+23	12.2	54	07.1	41	–27	54.8		34	50	20 10	20 54	21 59	22 33	33		4 45	80	
6	270	00.4	+23	12.3	68	30.3	42	–27	51.2		36	45	19 48	20 25	21 14	22 06	38		5 15	76	
7	285	00.3		12.5	82	53.4	41		47.5		37	40	30	20 02	20 44	21 44	43		39	72	
8	300	00.2		12.6	97	16.6	42		43.5		40	35	15	19 44	21	26	46		5 58	71	
9	315	00.1		12.7	111	39.8	42		39.3		42	30	19 02	29	20 03	21 11	48		6 15	68	
10	329	59.9		12.9	126	03.1	43		35.0		43	20	18 40	19 04	19 34	20 45	52		6 43	65	
11	344	59.8	+23	13.0	140	26.4	43	–27	30.5		45	10 N	18 21	18 44	19 11	20 22	56		7 07	63	
12	359	59.7	+23	13.2	154	49.7	43	–27	25.7		48	0	18 04	18 26	18 52	20 01	59		7 29	60	
13	14	59.5		13.3	169	13.0	43		20.8		49	10 S	17 46	18 09	36	19 40	62		7 51	58	
14	29	59.4		13.4	183	36.4	44		15.7		51	20	28	17 52	19	19 17	65		8 15	55	
15	44	59.3		13.6	197	59.9	45		10.5		52	30	17 07	33	18 03	18 50	70		42	52	
16	59	59.1		13.7	212	23.3	44	–27	05.0		55	35	16 55	23	17 54	35	72		8 59	49	
17	74	59.0	+23	13.8	226	46.8	45	–26	59.4		56	40	16 41	17 11	17 45	18 16	75		9 17	48	
18	89	58.9	+23	14.0	241	10.4	46	–26	53.6		58	45	16 24	16 58	17 35	17 54	79		9 40	44	
19	104	58.8		14.1	255	34.0	46		47.6		60	50	16 04	42	23	26	84		10 09	39	
20	119	58.6		14.2	269	57.7	47		41.4		62	52	15 54	35	18	17 12	87		23	37	
21	134	58.5		14.4	284	21.4	47		35.0		64	54	43	26	13	16 56	91		39	34	
22	149	58.4		14.5	298	45.2	48		28.5		65	56	30	17	06	37	95		10 59	29	
23	164	58.2		14.6	313	09.0	48		21.8		67	58	15 16	16 07	17 00	16 14	101		11 22	23	
24	179	58.1	+23	14.8	327	32.9	49	–26	14.9		69	60 S	14 59	15 56	16 52	15 43	112		11 54	13	
UT	ARIES				VENUS				MARTE				JÚPITER				SATURNO				
	PMG: 6 ^h 34 ^m 3				Mag: –3.9 PMG: 9 ^h 36 ^m				Mag: +1.7 PMG: 15 ^h 08 ^m				Mag: –2.4 PMG: 21 ^h 03 ^m				Mag: +0.4 PMG: 15 ^h 16 ^m				
	hG ♈		hG ♀		hG ♂		hG ♈		hG ♈		hG ♈		hG ♈		hG ♈		hG ♈				
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	261	10.0	216	06.2	+15	03.1	132	52.6	+20	11.1	43	23.1	–13	34.9	130	19.4	+18	56.8			
1	276	12.5	231	05.8		03.9	147	53.5		10.7	58	25.7		34.8	145	21.6		56.7			
2	291	15.0	246	05.3		04.8	162	54.4		10.3	73	28.4		34.8	160	23.8		56.6			
3	306	17.4	261	04.9		05.7	177	55.3		09.9	88	31.0		34.7	175	26.0		56.6			
4	321	19.9	276	04.4		06.5	192	56.2		09.5	103	33.6		34.7	190	28.2		56.5			
5	336	22.4	291	04.0	+15	07.4	207	57.1	+20	09.1	118	36.2	–13	34.7	205	30.4	+18	56.5			
6	351	24.8	306	03.5	+15	08.3	222	58.0	+20	08.8	133	38.9	–13	34.6	220	32.6	+18	56.4			
7	6	27.3	321	03.1		09.1	237	58.9		08.4	148	41.5		34.6	235	34.8		56.3			
8	21	29.7	336	02.6		10.0	252	59.8		08.0	163	44.1		34.5	250	37.0		56.3			
9	36	32.2	351	02.1		10.9	268	00.7		07.6	178	46.8		34.5	265	39.2		56.2			
10	51	34.7	6	01.7		11.7	283	01.6		07.2	193	49.4		34.4	280	41.4		56.1			
11	66	37.1	21	01.2	+15	12.6	298	02.5	+20	06.8	208	52.0	–13	34.4	295	43.6	+18	56.1			
12	81	39.6	36	00.8	+15	13.4	313	03.4	+20	06.4	223	54.7	–13	34.4	310	45.8	+18	56.0			
13	96	42.1	51	00.3		14.3	328	04.4		06.0	238	57.3		34.3	325	48.0		55.9			
14	111	44.5	65	59.9		15.2	343	05.3		05.6	253	59.9		34.3	340	50.2		55.9			
15	126	47.0	80	59.4		16.0	358	06.2		05.2	269	02.6		34.2	355	52.4		55.8			
16	141	49.5	95	59.0		16.9	373	07.1		04.9	284	05.2		34.2	370	54.6		55.7			
17	156	51.9	110	58.5	+15	17.7	388	08.0	+20	04.5	299	07.8	–13	34.1	385	56.8	+18	55.7			
18	171	54.4	125	58.0	+15	18.6	403	08.9	+20	04.1	314	10.4	–13	34.1	400	59.0	+18	55.6			
19	186	56.9	140	57.6		19.5	418	09.8		03.7	329	13.1		34.1	415	01.2		55.5			
20	201	59.3	155	57.1		20.3	433	10.7		03.3	344	15.7		34.0	430	03.4		55.5			
21	217	01.8	170	56.7		21.2	448	11.6		02.9	359	18.3		34.0	445	05.6		55.4			
22	232	04.2	185	56.2		22.0	463	12.5		02.5	374	21.0		33.9	460	07.8		55.3			
23	247	06.7	200	55.7		22.9	478	13.4		02.1	389	23.6		33.9	483	10.0		55.3			
24	262	09.2	215	55.3	+15	23.7	493	14.3	+20	01.7	408	26.2	–13	33.8	498	12.2	+18	55.2			
Dif	—		–5		+9		+9		–4		+26		0		+22		–1				

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15 ^h 7			Edad: 17 ^d 8 PHE { 4 ^h : 59 ^h 0 12 ^h : 59 ^h 1 20 ^h : 59 ^h 2													
	PMG: 12 ^h 00 ^m 2			SD: 16 ^h 1 PMG: 2 ^h 15 ^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	179	58.1	+23 14.8	327	32.9	-26	14.9	71	60 N	** **	0 55	2 37	0 07	6	4 33	114	
1	194	58.0	14.9	341	56.9	50	07.8	71	58	** **	1 42	2 57	23 56	8	4 59	105	
2	209	57.8	15.0	356	20.9	50	-26 00.6	72	56	** **	2 11	3 13	40 14		5 20	99	
3	224	57.7	15.2	10	44.9	50	-25 53.2	74	54	0 50	33	27	27 18		37	94	
4	239	57.6	15.3	25	09.1	52	45.6	76	52	1 34	2 51	40	16 21		5 52	90	
5	254	57.5	+23 15.4	39	33.3	52	-25 37.9	77	50	2 01	3 06	3 50	23 06	23	6 05	87	
6	269	57.3	+23 15.5	53	57.6	53	-25 30.0	79	45	2 46	3 35	4 13	22 44	30	6 31	81	
7	284	57.2	15.7	68	21.9	53	21.9	81	40	3 16	3 58	31	27 34		6 51	77	
8	299	57.1	15.8	82	46.3	54	13.6	83	35	39	4 16	45	22 12	38	7 09	73	
9	314	56.9	15.9	97	10.8	55	-25 05.2	84	30	3 58	31	4 58	21 59	41	23	70	
10	329	56.8	16.0	111	35.4	56	-24 56.6	86	20	4 27	4 56	5 20	37 47		7 48	65	
11	344	56.7	+23 16.1	126	00.1	57	-24 47.9	87	10 N	4 49	5 16	5 39	21 18	51	8 10	61	
12	359	56.5	+23 16.3	140	24.8	57	-24 39.0	89	0	5 08	5 34	5 57	21 00	55	8 29	58	
13	14	56.4	16.4	154	49.6	58	29.9	91	10 S	25	5 51	6 14	20 42	60	8 49	54	
14	29	56.3	16.5	169	14.5	59	20.7	92	20	41	6 08	32	22 05		9 10	50	
15	44	56.1	16.6	183	39.4	59	11.3	94	30	5 57	27	6 53	20 00	70	34	45	
16	59	56.0	16.7	198	04.5	61	-24 01.7	96	35	6 06	37	7 06	19 47	73	9 48	42	
17	74	55.9	+23 16.9	212	29.6	61	-23 52.1	96	40	6 15	6 49	7 20	19 31	77	10 05	38	
18	89	55.7	+23 17.0	226	54.8	62	-23 42.2	99	45	6 25	7 03	7 36	19 13	82	10 24	34	
19	104	55.6	17.1	241	20.1	63	32.2	100	50	37	19	7 57	18 50	88	10 48	28	
20	119	55.5	17.2	255	45.5	64	22.1	101	52	42	26	8 07	39 91		11 00	25	
21	134	55.3	17.3	270	10.9	64	11.8	103	54	48	34	18	27 94		13	21	
22	149	55.2	17.4	284	36.5	66	-23 01.3	105	56	6 54	43	30	18 12	99	28	17	
23	164	55.1	17.6	299	02.1	66	-22 50.7	106	58	7 01	7 53	8 45	17 55	105	11 45	12	
24	179	54.9	+23 17.7	313	27.8	67	-22 40.0	107	60 S	7 08	8 05	9 02	17 35	112	12 07	4	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO					
	PMG 6 ^h 30 ^m 3		Mag: -3.9 PMG: 9 ^h 37 ^m			Mag: +1.7 PMG: 15 ^h 06 ^m			Mag: -2.4 PMG: 20 ^h 59 ^m			Mag: +0.4 PMG: 15 ^h 13 ^m					
	hG ♈		hG ♀ Dec			hG ♂ Dec			hG ♃ Dec			hG ♄ Dec					
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°	°	'
0	262	09.2	215	55.3	+15 23.7	133	14.3	+20 01.7	44	26.2	-13 33.8	131	12.2	+18 55.2			
1	277	11.6	230	54.8	24.6	148	15.2	01.3	59	28.8	33.8	146	14.4	55.1			
2	292	14.1	245	54.4	25.4	163	16.1	00.9	74	31.5	33.8	161	16.6	55.1			
3	307	16.6	260	53.9	26.3	178	17.0	00.5	89	34.1	33.7	176	18.8	55.0			
4	322	19.0	275	53.4	27.2	193	17.9	+20 00.1	104	36.7	33.7	191	21.0	54.9			
5	337	21.5	290	53.0	+15 28.0	208	18.8	+19 59.7	119	39.3	-13 33.6	206	23.2	+18 54.9			
6	352	24.0	305	52.5	+15 28.9	223	19.7	+19 59.4	134	42.0	-13 33.6	221	25.4	+18 54.8			
7	7	26.4	320	52.0	29.7	238	20.7	59.0	149	44.6	33.6	236	27.6	54.7			
8	22	28.9	335	51.6	30.6	253	21.6	58.6	164	47.2	33.5	251	29.8	54.7			
9	37	31.4	350	51.1	31.4	268	22.5	58.2	179	49.8	33.5	266	32.0	54.6			
10	52	33.8	5	50.6	32.3	283	23.4	57.8	194	52.5	33.4	281	34.2	54.5			
11	67	36.3	20	50.2	+15 33.1	298	24.3	+19 57.4	209	55.1	-13 33.4	296	36.5	+18 54.5			
12	82	38.7	35	49.7	+15 34.0	313	25.2	+19 57.0	224	57.7	-13 33.3	311	38.7	+18 54.4			
13	97	41.2	50	49.3	34.8	328	26.1	56.6	240	00.3	33.3	326	40.9	54.4			
14	112	43.7	65	48.8	35.6	343	27.0	56.2	255	03.0	33.3	341	43.1	54.3			
15	127	46.1	80	48.3	36.5	358	27.9	55.8	270	05.6	33.2	356	45.3	54.2			
16	142	48.6	95	47.8	37.3	13	28.8	55.4	285	08.2	33.2	11	47.5	54.2			
17	157	51.1	110	47.4	+15 38.2	28	29.7	+19 55.0	300	10.8	-13 33.1	26	49.7	+18 54.1			
18	172	53.5	125	46.9	+15 39.0	43	30.6	+19 54.6	315	13.4	-13 33.1	41	51.9	+18 54.0			
19	187	56.0	140	46.4	39.9	58	31.5	54.2	330	16.1	33.1	56	54.1	54.0			
20	202	58.5	155	46.0	40.7	73	32.4	53.8	345	18.7	33.0	71	56.3	53.9			
21	218	00.9	170	45.5	41.6	88	33.4	53.4	0	21.3	33.0	86	58.5	53.8			
22	233	03.4	185	45.0	42.4	103	34.3	53.0	15	23.9	32.9	102	00.7	53.8			
23	248	05.9	200	44.6	43.2	118	35.2	52.6	30	26.6	32.9	117	02.9	53.7			
24	263	08.3	215	44.1	+15 44.1	133	36.1	+19 52.2	45	29.2	-13 32.9	132	05.1	+18 53.6			
Dif	—		-5 +8			+9 -4			+26 0			+22 -1					

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 15 ^h 7			Edad: 18 ^d 8 PHE	SD: 16 ^h 1				Civil		Náutico	Hora		R°	
	PMG: 12 ^h 00 ^m 4				PMG: 3 ^h 13 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec	Dif								
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m	m	h m	m
0	179	54.9	+23	313	27.8	-22	40.0	60 N	21 25	23 09	** **	0 13	2	6 27	111
1	194	54.8		327	53.6	68	29.1	58	21 05	22 20	** **	** **	**	44	105
2	209	54.7		342	19.5	69	18.1	56	20 48	21 50	** **	23 54	8	6 59	99
3	224	54.6		356	45.5	70	-22 07.0	54	34	28	23 13	45	12	7 11	95
4	239	54.4		11	11.6	71	-21 55.7	52	22	21 10	22 28	37	15	22	91
5	254	54.3	+23	25	37.8	72	-21 44.3	50	20 11	20 55	22 01	23 29	19	7 32	87
6	269	54.2	+23	40	04.0	72	-21 32.7	45	19 48	20 26	21 15	23 14	24	7 52	81
7	284	54.0		54	30.4	74	21.0	40	30	20 03	20 45	23 01	29	8 08	76
8	299	53.9		68	56.8	74	-21 09.2	35	15	19 45	22	22 50	33	22	72
9	314	53.8		83	23.4	76	-20 57.2	30	19 03	30	20 03	40	36	33	69
10	329	53.6		97	50.0	76	45.2	20	18 41	19 05	19 34	24	42	8 53	64
11	344	53.5	+23	112	16.7	77	-20 33.0	10 N	18 22	18 45	19 12	22 09	47	9 11	58
12	359	53.4	+23	126	43.5	78	-20 20.6	0	18 04	18 27	18 53	21 55	52	9 27	53
13	14	53.2		141	10.4	79	-20 08.2	10 S	17 47	18 10	36	42	56	9 43	49
14	29	53.1		155	37.4	80	-19 55.6	20	28	17 52	20	27	62	10 00	44
15	44	53.0		170	04.4	80	42.9	30	17 07	33	18 03	10	67	19	38
16	59	52.8		184	31.6	82	30.1	35	16 55	23	17 55	21 00	71	30	35
17	74	52.7	+23	198	58.8	82	-19 17.2	40	16 41	17 11	17 45	20 48	76	10 43	31
18	89	52.6	+23	213	26.2	84	-19 04.2	45	16 24	16 58	17 35	20 35	80	10 58	27
19	104	52.4		227	53.6	84	-18 51.0	50	16 03	42	23	18	87	11 16	21
20	119	52.3		242	21.1	85	37.8	52	15 54	34	18	10	90	25	18
21	134	52.2		256	48.7	86	24.4	54	42	26	12	20 01	93	34	15
22	149	52.0		271	16.4	87	-18 10.9	56	30	17	06	19 51	98	45	11
23	164	51.9		285	44.2	88	-17 57.3	58	15 15	16 07	17 00	40 102		11 57	7
24	179	51.8	+23	300	12.1	89	-17 43.7	60 S	14 58	15 55	16 52	19 27	107	12 11	2

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 6 ^h 26 ^m 4		Mag: -3.9 PMG: 9 ^h 37 ^m		Mag: +1.8 PMG: 15 ^h 05 ^m		Mag: -2.4 PMG: 20 ^h 54 ^m		Mag: +0.4 PMG: 15 ^h 09 ^m									
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	263	08.3	215	44.1	+15	44.1	133	36.1	+19	52.2	45	29.2	-13	32.9	132	05.1	+18	53.6
1	278	10.8	230	43.6		44.9	148	37.0		51.8	60	31.8		32.8	147	07.3		53.6
2	293	13.2	245	43.1		45.8	163	37.9		51.4	75	34.4		32.8	162	09.5		53.5
3	308	15.7	260	42.7		46.6	178	38.8		51.0	90	37.0		32.7	177	11.7		53.4
4	323	18.2	275	42.2		47.4	193	39.7		50.6	105	39.6		32.7	192	13.8		53.4
5	338	20.6	290	41.7	+15	48.3	208	40.6	+19	50.2	120	42.3	-13	32.7	207	16.0	+18	53.3
6	353	23.1	305	41.2	+15	49.1	223	41.5	+19	49.8	135	44.9	-13	32.6	222	18.2	+18	53.2
7	8	25.6	320	40.8		49.9	238	42.4		49.4	150	47.5		32.6	237	20.4		53.2
8	23	28.0	335	40.3		50.8	253	43.3		49.0	165	50.1		32.6	252	22.6		53.1
9	38	30.5	350	39.8		51.6	268	44.2		48.6	180	52.7		32.5	267	24.8		53.0
10	53	33.0	5	39.3		52.5	283	45.2		48.2	195	55.4		32.5	282	27.0		53.0
11	68	35.4	20	38.9	+15	53.3	298	46.1	+19	47.8	210	58.0	-13	32.4	297	29.2	+18	52.9
12	83	37.9	35	38.4	+15	54.1	313	47.0	+19	47.4	226	00.6	-13	32.4	312	31.4	+18	52.8
13	98	40.4	50	37.9		55.0	328	47.9		47.0	241	03.2		32.4	327	33.6		52.8
14	113	42.8	65	37.4		55.8	343	48.8		46.6	256	05.8		32.3	342	35.8		52.7
15	128	45.3	80	36.9		56.6	358	49.7		46.2	271	08.4		32.3	357	38.0		52.6
16	143	47.7	95	36.5		57.4	13	50.6		45.8	286	11.1		32.2	12	40.2		52.6
17	158	50.2	110	36.0	+15	58.3	28	51.5	+19	45.4	301	13.7	-13	32.2	27	42.4	+18	52.5
18	173	52.7	125	35.5	+15	59.1	43	52.4	+19	45.0	316	16.3	-13	32.2	42	44.6	+18	52.4
19	188	55.1	140	35.0	+15	59.9	58	53.3		44.6	331	18.9		32.1	57	46.8		52.4
20	203	57.6	155	34.5	+16	00.8	73	54.2		44.2	346	21.5		32.1	72	49.0		52.3
21	219	00.1	170	34.1		01.6	88	55.2		43.8	1	24.1		32.1	87	51.2		52.2
22	234	02.5	185	33.6		02.4	103	56.1		43.4	16	26.7		32.0	102	53.4		52.2
23	249	05.0	200	33.1		03.3	118	57.0		43.0	31	29.4		32.0	117	55.6		52.1
24	264	07.5	215	32.6	+16	04.1	133	57.9	+19	42.6	46	32.0	-13	31.9	132	57.8	+18	52.0
Dif	—		-5		+8		+9		-4		+26		0		+22		-1	

UT	SOL				LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 15 ^h 7				Edad: 19 ^d 8 PHE { 4 ^h : 59 ^m /4 12 ^h : 59 ^m /4 20 ^h : 59 ^m /4 PMG: 4 ^h 08 ^m R°: 51 ^m															
	PMG: 12 ^h 00 ^m 7																			
	hG ☉		Dec		hG ☾		Dif		Náutico	Civil		Hora	R°	Hora	R°					
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m					
0	179	51.8	+23	20.1	300	12.1	-17	43.7	60 N	** **	0 52	2 36	0 15 0	8 18 105						
1	194	51.6		20.2	314	40.1	90	29.9 ¹³⁸	58	** **	1 41	2 56	0 04 4	29 99						
2	209	51.5		20.3	329	08.1	90	16.0 ¹³⁹	56	** **	2 11	3 13	** ** *	38 95						
3	224	51.4		20.4	343	36.2	91	-17 02.0 ¹⁴⁰	54	0 48	33	27	23 57 10	46 92						
4	239	51.2		20.5	358	04.4	92	-16 47.9 ¹⁴¹	52	1 33	2 51	39	52 13	53 89						
5	254	51.1	+23	20.6	12	32.7	93	-16 33.8 ¹⁴¹	50	2 00	3 06	3 50	23 48 15	8 59 86						
6	269	51.0	+23	20.7	27	01.1	94	-16 19.5 ¹⁴³	45	2 46	3 35	4 13	23 38 20	9 13 80						
7	284	50.8		20.8	41	29.6	95	-16 05.1 ¹⁴⁴	40	3 16	3 58	31	30 25	24 75						
8	299	50.7		20.9	55	58.1	95	-15 50.7 ¹⁴⁴	35	39	4 16	46	23 29	34 70						
9	314	50.6		21.0	70	26.8	97	36.2 ¹⁴⁵	30	3 58	31	4 59	16 33	42 67						
10	329	50.4		21.1	84	55.5	97	21.5 ¹⁴⁷	20	4 27	4 56	5 21	23 06 38	9 57 60						
11	344	50.3	+23	21.2	99	24.3	98	-15 06.8 ¹⁴⁷	10 N	4 49	5 16	5 39	22 56 44	10 09 55						
12	359	50.2	+23	21.2	113	53.1	98	-14 52.1 ¹⁴⁷	0	5 08	5 34	5 57	22 47 49	10 20 51						
13	14	50.0		21.3	128	22.1	100	37.2 ¹⁴⁹	10 S	25	5 52	6 14	38 54	32 45						
14	29	49.9		21.4	142	51.1	100	22.2 ¹⁵⁰	20	41	6 09	33	29 59	44 40						
15	44	49.8		21.5	157	20.2	101	-14 07.2 ¹⁵⁰	30	5 58	28	6 54	17 66	10 57 35						
16	59	49.6		21.6	171	49.4	102	-13 52.1 ¹⁵¹	35	6 07	38	7 06	11 69	11 05 31						
17	74	49.5	+23	21.7	186	18.6	102	-13 36.9 ¹⁵²	40	6 16	6 50	7 20	22 04 73	11 14 27						
18	89	49.3	+23	21.7	200	47.9	103	-13 21.7 ¹⁵²	45	6 26	7 03	7 37	21 55 78	11 25 22						
19	104	49.2		21.8	215	17.3	104	-13 06.4 ¹⁵³	50	38	19	7 58	45 84	37 16						
20	119	49.1		21.9	229	46.8	105	-12 51.0 ¹⁵⁴	52	43	27	8 08	40 87	43 14						
21	134	48.9		22.0	244	16.3	105	35.5 ¹⁵⁵	54	49	35	19	34 91	49 11						
22	149	48.8		22.1	258	45.9	106	20.0 ¹⁵⁵	56	6 55	44	31	29 93	11 56 8						
23	164	48.7		22.1	273	15.6	107	-12 04.4 ¹⁵⁶	58	7 02	7 54	8 46	22 97	12 04 4						
24	179	48.5	+23	22.2	287	45.3	107	-11 48.8 ¹⁵⁶	60 S	7 09	8 06	9 04	21 14 102	12 13 **						
UT	ARIES				VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 6 ^h 22 ^m 5				Mag: -3.9 PMG: 9 ^h 38 ^m				Mag: +1.8 PMG: 15 ^h 03 ^m				Mag: -2.4 PMG: 20 ^h 50 ^m				Mag: +0.4 PMG: 15 ^h 06 ^m			
	hG ♈		Dec		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	264	07.5	215	32.6	+16	04.1	133	57.9	+19	42.6	46	32.0	-13	31.9	132	57.8	+18	52.0		
1	279	09.9	230	32.1		04.9	148	58.8		42.2	61	34.6		31.9	148	00.0		52.0		
2	294	12.4	245	31.6		05.7	163	59.7		41.8	76	37.2		31.9	163	02.2		51.9		
3	309	14.8	260	31.1		06.6	179	00.6		41.4	91	39.8		31.8	178	04.4		51.8		
4	324	17.3	275	30.7		07.4	194	01.5		41.0	106	42.4		31.8	193	06.6		51.8		
5	339	19.8	290	30.2	+16	08.2	209	02.4	+19	40.6	121	45.0	-13	31.8	208	08.8	+18	51.7		
6	354	22.2	305	29.7	+16	09.0	224	03.3	+19	40.2	136	47.7	-13	31.7	223	11.0	+18	51.6		
7	9	24.7	320	29.2		09.8	239	04.3		39.8	151	50.3		31.7	238	13.2		51.5		
8	24	27.2	335	28.7		10.7	254	05.2		39.4	166	52.9		31.6	253	15.4		51.5		
9	39	29.6	350	28.2		11.5	269	06.1		39.0	181	55.5		31.6	268	17.6		51.4		
10	54	32.1	5	27.7		12.3	284	07.0		38.6	196	58.1		31.6	283	19.8		51.3		
11	69	34.6	20	27.2	+16	13.1	299	07.9	+19	38.1	212	00.7	-13	31.5	298	22.0	+18	51.3		
12	84	37.0	35	26.8	+16	13.9	314	08.8	+19	37.7	227	03.3	-13	31.5	313	24.2	+18	51.2		
13	99	39.5	50	26.3		14.8	329	09.7		37.3	242	05.9		31.5	328	26.4		51.1		
14	114	42.0	65	25.8		15.6	344	10.6		36.9	257	08.5		31.4	343	28.6		51.1		
15	129	44.4	80	25.3		16.4	359	11.5		36.5	272	11.1		31.4	358	30.8		51.0		
16	144	46.9	95	24.8		17.2	14	12.5		36.1	287	13.8		31.4	13	33.0		50.9		
17	159	49.3	110	24.3	+16	18.0	29	13.4	+19	35.7	302	16.4	-13	31.3	28	35.2	+18	50.9		
18	174	51.8	125	23.8	+16	18.8	44	14.3	+19	35.3	317	19.0	-13	31.3	43	37.4	+18	50.8		
19	189	54.3	140	23.3		19.7	59	15.2		34.9	332	21.6		31.2	58	39.5		50.7		
20	204	56.7	155	22.8		20.5	74	16.1		34.5	347	24.2		31.2	73	41.7		50.7		
21	219	59.2	170	22.3		21.3	89	17.0		34.1	2	26.8		31.2	88	43.9		50.6		
22	235	01.7	185	21.8		22.1	104	17.9		33.7	17	29.4		31.1	103	46.1		50.5		
23	250	04.1	200	21.3		22.9	119	18.8		33.3	32	32.0		31.1	118	48.3		50.5		
24	265	06.6	215	20.8	+16	23.7	134	19.7	+19	32.8	47	34.6	-13	31.1	133	50.5	+18	50.4		
Dif	—		-5		+8		+9		-4		+26		0		+22		-1			

UT	SOL				☾ LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna		
	SD: 15 ^h 7 PMG: 12 ^h 00 ^m 9				Edad: 20 ^d 8 PHE { 4 ^h : 59 ^h 4 12 ^h : 59 ^h 4 20 ^h : 59 ^h 4 PMG: 4 ^h 59 ^m R°: 48 ^m													
	hG ☉		Dec		hG ☾		Dif				Civil			Náutico			Hora R°	
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m		
0	179	48.5	+23	22.2	287	45.3	-11	48.8	60 N	21 26	23 12	** **	0 15 0		10 03 101			
1	194	48.4		22.3	302	15.1 ¹⁰⁸		33.1 ¹⁵⁷	58	21 06	22 22	** **	08 4		08 97			
2	209	48.3		22.4	316	45.0 ¹⁰⁹		17.3 ¹⁵⁸	56	20 49	21 52	** **	0 02 7		13 93			
3	224	48.1		22.5	331	14.9 ¹⁰⁹	-11	01.5 ¹⁵⁸	54	35	29	23 16	** ** *		18 89			
4	239	48.0		22.5	345	44.9 ¹¹⁰	-10	45.6 ¹⁵⁹	52	23	21 11	22 30	** ** *		22 86			
5	254	47.9	+23	22.6	0	14.9 ¹¹⁰	-10	29.6 ¹⁶⁰	50	20 12	20 56	22 02	** ** *		10 25 83			
6	269	47.7	+23	22.7	14	45.1 ¹¹²	-10	13.7 ¹⁵⁹	45	19 49	20 27	21 16	23 58 20		10 33 77			
7	284	47.6		22.8	29	15.2 ¹¹¹	-9	57.6 ¹⁶¹	40	31	20 04	20 46	55 24		39 73			
8	299	47.5		22.8	43	45.4 ¹¹²		41.5 ¹⁶¹	35	16	19 46	23	52 27		44 69			
9	314	47.3		22.9	58	15.7 ¹¹³		25.4 ¹⁶¹	30	19 03	31	20 04	49 31		49 65			
10	329	47.2		23.0	72	46.1 ¹¹⁴	-9	09.2 ¹⁶²	20	18 41	19 06	19 35	44 37		10 57 59			
11	344	47.1	+23	23.0	87	16.5 ¹¹⁴	-8	53.0 ¹⁶²	10 N	18 22	18 45	19 12	23 40 43		11 04 53			
12	359	46.9	+23	23.1	101	46.9 ¹¹⁴	-8	36.7 ¹⁶³	0	18 05	18 27	18 53	23 36 48		11 11 48			
13	14	46.8		23.2	116	17.4 ¹¹⁵		20.4 ¹⁶³	10 S	17 47	18 10	36	32 53		17 43			
14	29	46.7		23.2	130	47.9 ¹¹⁵	-8	04.0 ¹⁶⁴	20	29	17 53	20	28 58		24 38			
15	44	46.5		23.3	145	18.5 ¹¹⁶	-7	47.6 ¹⁶⁴	30	17 07	34	18 04	23 64		32 31			
16	59	46.4		23.4	159	49.1 ¹¹⁶		31.2 ¹⁶⁴	35	16 55	23	17 55	20 68		36 28			
17	74	46.2	+23	23.4	174	19.8 ¹¹⁷	-7	14.7 ¹⁶⁵	40	16 41	17 11	17 45	23 17 72		11 41 24			
18	89	46.1	+23	23.5	188	50.6 ¹¹⁸	-6	58.2 ¹⁶⁵	45	16 24	16 58	17 35	23 13 77		11 47 19			
19	104	46.0		23.6	203	21.3 ¹¹⁷		41.7 ¹⁶⁵	50	16 03	42	23	09 83		53 15			
20	119	45.8		23.6	217	52.1 ¹¹⁸		25.1 ¹⁶⁶	52	15 53	34	18	07 85		11 57 11			
21	134	45.7		23.7	232	23.0 ¹¹⁹	-6	08.5 ¹⁶⁶	54	42	26	12	05 88		12 00 9			
22	149	45.6		23.8	246	53.9 ¹¹⁹	-5	51.9 ¹⁶⁶	56	30	17	06	23 02 92		04 6			
23	164	45.4		23.8	261	24.8 ¹¹⁹		35.3 ¹⁶⁶	58	15 15	16 07	17 00	22 59 96		08 3			
24	179	45.3	+23	23.9	275	55.8 ¹²⁰	-5	18.6 ¹⁶⁷	60 S	14 58	15 55	16 52	22 56 100		12 12 0			
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 6 ^h 18 ^m 5		Mag: -3.9 PMG: 9 ^h 39 ^m				Mag: +1.8 PMG: 15 ^h 02 ^m				Mag: -2.4 PMG: 20 ^h 46 ^m				Mag: +0.4 PMG: 15 ^h 02 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	265	06.6	215	20.8	+16	23.7	134	19.7	+19	32.8	47	34.6	-13	31.1	133	50.5	+18	50.4
1	280	09.1	230	20.3		24.5	149	20.7		32.4	62	37.2		31.0	148	52.7		50.3
2	295	11.5	245	19.8		25.3	164	21.6		32.0	77	39.8		31.0	163	54.9		50.3
3	310	14.0	260	19.4		26.2	179	22.5		31.6	92	42.4		31.0	178	57.1		50.2
4	325	16.5	275	18.9		27.0	194	23.4		31.2	107	45.0		30.9	193	59.3		50.1
5	340	18.9	290	18.4	+16	27.8	209	24.3	+19	30.8	122	47.7	-13	30.9	209	01.5	+18	50.1
6	355	21.4	305	17.9	+16	28.6	224	25.2	+19	30.4	137	50.3	-13	30.9	224	03.7	+18	50.0
7	10	23.8	320	17.4		29.4	239	26.1		30.0	152	52.9		30.8	239	05.9		49.9
8	25	26.3	335	16.9		30.2	254	27.0		29.6	167	55.5		30.8	254	08.1		49.9
9	40	28.8	350	16.4		31.0	269	28.0		29.2	182	58.1		30.8	269	10.3		49.8
10	55	31.2	5	15.9		31.8	284	28.9		28.7	198	00.7		30.7	284	12.5		49.7
11	70	33.7	20	15.4	+16	32.6	299	29.8	+19	28.3	213	03.3	-13	30.7	299	14.7	+18	49.7
12	85	36.2	35	14.9	+16	33.4	314	30.7	+19	27.9	228	05.9	-13	30.6	314	16.9	+18	49.6
13	100	38.6	50	14.4		34.2	329	31.6		27.5	243	08.5		30.6	329	19.1		49.5
14	115	41.1	65	13.9		35.0	344	32.5		27.1	258	11.1		30.6	344	21.2		49.4
15	130	43.6	80	13.3		35.8	359	33.4		26.7	273	13.7		30.5	359	23.4		49.4
16	145	46.0	95	12.8		36.6	14	34.3		26.3	288	16.3		30.5	14	25.6		49.3
17	160	48.5	110	12.3	+16	37.4	29	35.3	+19	25.9	303	18.9	-13	30.5	29	27.8	+18	49.2
18	175	50.9	125	11.8	+16	38.2	44	36.2	+19	25.5	318	21.5	-13	30.4	44	30.0	+18	49.2
19	190	53.4	140	11.3		39.0	59	37.1		25.0	333	24.1		30.4	59	32.2		49.1
20	205	55.9	155	10.8		39.8	74	38.0		24.6	348	26.7		30.4	74	34.4		49.0
21	220	58.3	170	10.3		40.6	89	38.9		24.2	3	29.3		30.3	89	36.6		49.0
22	236	00.8	185	09.8		41.4	104	39.8		23.8	18	31.9		30.3	104	38.8		48.9
23	251	03.3	200	09.3		42.2	119	40.7		23.4	33	34.5		30.3	119	41.0		48.8
24	266	05.7	215	08.8	+16	43.0	134	41.7	+19	23.0	48	37.1	-13	30.2	134	43.2	+18	48.8
Dif	—		-5		+8		+9		-4		+26		0		+22		-1	

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15 ^h 7			Edad: 21 ^d 8 PHE	SD: 16 ^h 2			R°: 48 ^m							
	PMG: 12 ^h 01 ^m 1				PMG: 5 ^h 47 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	m
0	179	45.3	+23	23.9	275	55.8	-5	18.6	60 N	** ** *	0 50	2 36	0 15	**	11 44 98
1	194	45.2		23.9	290	26.8 ¹²⁰	-5	01.9 ¹⁶⁷	58	** ** *	1 40	2 56	12 2		45 95
2	209	45.0		24.0	304	57.8 ¹²⁰	-4	45.2 ¹⁶⁷	56	** ** *	2 10	3 13	09 6		46 91
3	224	44.9		24.1	319	28.8 ¹²⁰		28.4 ¹⁶⁸	54	0 46	32	27	07 9		47 88
4	239	44.8		24.1	333	59.9 ¹²¹	-4	11.7 ¹⁶⁷	52	1 32	2 50	39	05 11		48 85
5	254	44.6	+23	24.2	348	31.1 ¹²²	-3	54.9 ¹⁶⁸	50	2 00	3 06	3 50	0 03 14		11 48 83
6	269	44.5	+23	24.2	3	02.2 ¹²¹	-3	38.1 ¹⁶⁸	45	2 46	3 35	4 13	** ** *	**	11 50 77
7	284	44.3		24.3	17	33.4 ¹²²		21.3 ¹⁶⁸	40	3 16	3 58	31	** ** *	**	52 71
8	299	44.2		24.4	32	04.6 ¹²²	-3	04.5 ¹⁶⁸	35	39	4 16	46	** ** *	**	53 68
9	314	44.1		24.4	46	35.8 ¹²²	-2	47.7 ¹⁶⁸	30	3 58	31	4 59	** ** *	**	54 64
10	329	43.9		24.5	61	07.1 ¹²³		30.8 ¹⁶⁹	20	4 27	4 56	5 21	** ** *	**	56 58
11	344	43.8	+23	24.5	75	38.3 ¹²²	-2	14.0 ¹⁶⁸	10 N	4 50	5 17	5 40	** ** *	**	11 57 53
12	359	43.7	+23	24.6	90	09.6 ¹²³	-1	57.1 ¹⁶⁹	0	5 09	5 35	5 57	** ** *	**	11 59 47
13	14	43.5		24.6	104	40.9 ¹²³		40.3 ¹⁶⁸	10 S	26	5 52	6 15	** ** *	**	12 00 42
14	29	43.4		24.7	119	12.2 ¹²³		23.4 ¹⁶⁹	20	42	6 09	33	** ** *	**	02 37
15	44	43.3		24.7	133	43.6 ¹²⁴	-1	06.5 ¹⁶⁹	30	5 58	28	6 55	** ** *	**	03 31
16	59	43.1		24.8	148	14.9 ¹²³	-0	49.6 ¹⁶⁹	35	6 07	39	7 07	** ** *	**	04 28
17	74	43.0	+23	24.8	162	46.3 ¹²⁴	-0	32.8 ¹⁶⁸	40	6 17	6 51	7 21	** ** *	**	12 05 24
18	89	42.9	+23	24.9	177	17.6 ¹²³	-0	15.9 ¹⁶⁹	45	6 27	7 04	7 38	** ** *	**	12 06 20
19	104	42.7		24.9	191	49.0 ¹²⁴	+0	01.0 ¹⁶⁹	50	39	20	7 59	** ** *	**	08 14
20	119	42.6		25.0	206	20.4 ¹²⁴		17.8 ¹⁶⁸	52	44	28	8 09	** ** *	**	08 12
21	134	42.4		25.0	220	51.8 ¹²⁴		34.7 ¹⁶⁹	54	50	36	20	** ** *	**	09 9
22	149	42.3		25.1	235	23.2 ¹²⁴	+0	51.5 ¹⁶⁸	56	6 56	45	32	** ** *	**	10 6
23	164	42.2		25.1	249	54.6 ¹²⁴	+1	08.3 ¹⁶⁸	58	7 03	7 55	8 47	** ** *	**	11 2
24	179	42.0	+23	25.1	264	26.0 ¹²⁴	+1	25.2 ¹⁶⁹	60 S	7 10	8 07	9 05	** ** *	**	12 12 **

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 6 ^h 14 ^m 6		Mag: -3.9 PMG: 9 ^h 40 ^m		Mag: +1.8 PMG: 15 ^h 00 ^m		Mag: -2.4 PMG: 20 ^h 42 ^m		Mag: +0.4 PMG: 14 ^h 59 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	266	05.7	215	08.8	+16	43.0	134	41.7	+19	23.0	48	37.1	-13	30.2	134	43.2	+18	48.8
1	281	08.2	230	08.3		43.8	149	42.6		22.6	63	39.7		30.2	149	45.4		48.7
2	296	10.7	245	07.8		44.6	164	43.5		22.1	78	42.3		30.2	164	47.6		48.6
3	311	13.1	260	07.3		45.4	179	44.4		21.7	93	44.9		30.1	179	49.8		48.6
4	326	15.6	275	06.8		46.2	194	45.3		21.3	108	47.5		30.1	194	51.9		48.5
5	341	18.1	290	06.3	+16	47.0	209	46.2	+19	20.9	123	50.1	-13	30.1	209	54.1	+18	48.4
6	356	20.5	305	05.7	+16	47.8	224	47.1	+19	20.5	138	52.7	-13	30.0	224	56.3	+18	48.3
7	11	23.0	320	05.2		48.6	239	48.1		20.1	153	55.3		30.0	239	58.5		48.3
8	26	25.4	335	04.7		49.4	254	49.0		19.7	168	57.9		30.0	255	00.7		48.2
9	41	27.9	350	04.2		50.1	269	49.9		19.2	184	00.5		30.0	270	02.9		48.1
10	56	30.4	5	03.7		50.9	284	50.8		18.8	199	03.1		29.9	285	05.1		48.1
11	71	32.8	20	03.2	+16	51.7	299	51.7	+19	18.4	214	05.7	-13	29.9	300	07.3	+18	48.0
12	86	35.3	35	02.7	+16	52.5	314	52.6	+19	18.0	229	08.3	-13	29.9	315	09.5	+18	47.9
13	101	37.8	50	02.2		53.3	329	53.5		17.6	244	10.9		29.8	330	11.7		47.9
14	116	40.2	65	01.6		54.1	344	54.5		17.2	259	13.5		29.8	345	13.9		47.8
15	131	42.7	80	01.1		54.9	359	55.4		16.7	274	16.1		29.8	0	16.1		47.7
16	146	45.2	95	00.6		55.7	14	56.3		16.3	289	18.7		29.7	15	18.3		47.7
17	161	47.6	110	00.1	+16	56.4	29	57.2	+19	15.9	304	21.3	-13	29.7	30	20.4	+18	47.6
18	176	50.1	124	59.6	+16	57.2	44	58.1	+19	15.5	319	23.9	-13	29.7	45	22.6	+18	47.5
19	191	52.6	139	59.1		58.0	59	59.0		15.1	334	26.5		29.6	60	24.8		47.5
20	206	55.0	154	58.5		58.8	75	00.0		14.6	349	29.0		29.6	75	27.0		47.4
21	221	57.5	169	58.0	+16	59.6	90	00.9		14.2	4	31.6		29.6	90	29.2		47.3
22	236	59.9	184	57.5	+17	00.4	105	01.8		13.8	19	34.2		29.5	105	31.4		47.2
23	252	02.4	199	57.0		01.1	120	02.7		13.4	34	36.8		29.5	120	33.6		47.2
24	267	04.9	214	56.5	+17	01.9	135	03.6	+19	13.0	49	39.4	-13	29.5	135	35.8	+18	47.1
Dif	—		-5		+8		+9		-4		+26		0		+22		-1	

UT	SOL			 LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15 ^h 7			Edad: 22 ^d 8	PHE { 4 ^h : 59 ^m 1 12 ^h : 59 ^m 1 20 ^h : 59 ^m 0									
	PMG: 12 ^h 01 ^m 3					SD: 16 ^h 1								
	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	42.0	+23 25.1	264	26.0	+1 25.2		60 N	21 27	23 14	** **	0 14 **	13 22	101
1	194	41.9	25.2	278	57.4 ¹²⁴	42.0 ¹⁶⁸		58	21 07	22 23	** **	14 3	20	95
2	209	41.8	25.2	293	28.8 ¹²⁴	+1 58.8 ¹⁶⁸		56	20 50	21 53	** **	15 6	17	92
3	224	41.6	25.3	308	00.3 ¹²⁵	+2 15.6 ¹⁶⁸		54	36	30	23 18	16 9	15	88
4	239	41.5	25.3	322	31.7 ¹²⁴	32.4 ¹⁶⁸		52	23	21 12	22 31	16 12	13	85
5	254	41.4	+23 25.3	337	03.1 ¹²⁴	+2 49.1 ¹⁶⁷		50	20 12	20 57	22 03	0 17 14	13 11	83
6	269	41.2	+23 25.4	351	34.4 ¹²³	+3 05.8 ¹⁶⁷		45	19 50	20 27	21 17	0 18 19	13 07	77
7	284	41.1	25.4	6	05.8 ¹²⁴	22.6 ¹⁶⁸		40	32	20 05	20 46	19 23	03	73
8	299	40.9	25.5	20	37.2 ¹²⁴	39.3 ¹⁶⁷		35	17	19 46	23	19 28	13 01	68
9	314	40.8	25.5	35	08.6 ¹²⁴	+3 55.9 ¹⁶⁶		30	19 04	31	20 05	20 31	12 58	64
10	329	40.7	25.5	49	39.9 ¹²³	+4 12.6 ¹⁶⁷		20	18 42	19 06	19 35	21 38	54	58
11	344	40.5	+23 25.6	64	11.3 ¹²⁴	+4 29.2 ¹⁶⁶		10 N	18 23	18 46	19 13	0 23 42	12 50	53
12	359	40.4	+23 25.6	78	42.6 ¹²³	+4 45.8 ¹⁶⁶		0	18 05	18 28	18 54	0 24 47	12 46	48
13	14	40.3	25.6	93	13.9 ¹²³	+5 02.4 ¹⁶⁶		10 S	17 48	18 10	37	25 52	42	43
14	29	40.1	25.7	107	45.2 ¹²³	18.9 ¹⁶⁵		20	29	17 53	21	26 58	39	37
15	44	40.0	25.7	122	16.5 ¹²³	35.4 ¹⁶⁵		30	17 08	34	18 04	27 65	34	32
16	59	39.9	25.7	136	47.8 ¹²³	+5 51.9 ¹⁶⁵		35	16 55	24	17 55	28 68	32	28
17	74	39.7	+23 25.8	151	19.0 ¹²²	+6 08.3 ¹⁶⁴		40	16 41	17 12	17 46	0 29 72	12 29	24
18	89	39.6	+23 25.8	165	50.2 ¹²²	+6 24.7 ¹⁶⁴		45	16 24	16 58	17 35	0 30 77	12 26	20
19	104	39.4	25.8	180	21.4 ¹²²	41.1 ¹⁶⁴		50	16 04	42	24	32 82	22	14
20	119	39.3	25.9	194	52.6 ¹²²	+6 57.4 ¹⁶³		52	15 54	35	18	32 85	20	12
21	134	39.2	25.9	209	23.7 ¹²¹	+7 13.7 ¹⁶³		54	42	26	13	33 88	18	9
22	149	39.0	25.9	223	54.8 ¹²¹	29.9 ¹⁶²		56	30	17	06	34 91	16	6
23	164	38.9	25.9	238	25.9 ¹²¹	+7 46.1 ¹⁶²		58	15 15	16 07	17 00	35 95	13	3
24	179	38.8	+23 26.0	252	57.0 ¹²¹	+8 02.3 ¹⁶²		60 S	14 57	15 55	16 52	0 36 99	12 11	**

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 6 ^h 10 ^m 7		Mag: -3.9 PMG: 9 ^h 41 ^m		Mag: +1.8 PMG: 14 ^h 59 ^m		Mag: -2.4 PMG: 20 ^h 38 ^m		Mag: +0.4 PMG: 14 ^h 55 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	267	04.9	214	56.5	+17 01.9	135	03.6	+19 13.0	49	39.4	-13 29.5	135	35.8	+18 47.1
1	282	07.3	229	56.0	02.7	150	04.5	12.6	64	42.0	29.4	150	38.0	47.0
2	297	09.8	244	55.4	03.5	165	05.4	12.1	79	44.6	29.4	165	40.2	47.0
3	312	12.3	259	54.9	04.3	180	06.4	11.7	94	47.2	29.4	180	42.4	46.9
4	327	14.7	274	54.4	05.0	195	07.3	11.3	109	49.8	29.4	195	44.5	46.8
5	342	17.2	289	53.9	+17 05.8	210	08.2	+19 10.9	124	52.4	-13 29.3	210	46.7	+18 46.8
6	357	19.7	304	53.3	+17 06.6	225	09.1	+19 10.5	139	55.0	-13 29.3	225	48.9	+18 46.7
7	12	22.1	319	52.8	07.4	240	10.0	10.0	154	57.6	29.3	240	51.1	46.6
8	27	24.6	334	52.3	08.1	255	10.9	09.6	170	00.2	29.2	255	53.3	46.6
9	42	27.0	349	51.8	08.9	270	11.9	09.2	185	02.8	29.2	270	55.5	46.5
10	57	29.5	4	51.3	09.7	285	12.8	08.8	200	05.3	29.2	285	57.7	46.4
11	72	32.0	19	50.7	+17 10.5	300	13.7	+19 08.3	215	07.9	-13 29.1	300	59.9	+18 46.3
12	87	34.4	34	50.2	+17 11.2	315	14.6	+19 07.9	230	10.5	-13 29.1	316	02.1	+18 46.3
13	102	36.9	49	49.7	12.0	330	15.5	07.5	245	13.1	29.1	331	04.3	46.2
14	117	39.4	64	49.2	12.8	345	16.4	07.1	260	15.7	29.1	346	06.4	46.1
15	132	41.8	79	48.6	13.5	0	17.4	06.7	275	18.3	29.0	1	08.6	46.1
16	147	44.3	94	48.1	14.3	15	18.3	06.2	290	20.9	29.0	16	10.8	46.0
17	162	46.8	109	47.6	+17 15.1	30	19.2	+19 05.8	305	23.5	-13 29.0	31	13.0	+18 45.9
18	177	49.2	124	47.0	+17 15.9	45	20.1	+19 05.4	320	26.1	-13 28.9	46	15.2	+18 45.9
19	192	51.7	139	46.5	16.6	60	21.0	05.0	335	28.6	28.9	61	17.4	45.8
20	207	54.2	154	46.0	17.4	75	22.0	04.5	350	31.2	28.9	76	19.6	45.7
21	222	56.6	169	45.5	18.2	90	22.9	04.1	5	33.8	28.9	91	21.8	45.6
22	237	59.1	184	44.9	18.9	105	23.8	03.7	20	36.4	28.8	106	24.0	45.6
23	253	01.5	199	44.4	19.7	120	24.7	03.3	35	39.0	28.8	121	26.1	45.5
24	268	04.0	214	43.9	+17 20.5	135	25.6	+19 02.8	50	41.6	-13 28.8	136	28.3	+18 45.4
Dif	—		-5		+8	+9		-4	+26		0	+22		-1

UT	SOL				☾ LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna													
	SD: 15 ^h 7 PMG: 12 ^h 01 ^m 5				Edad: 23 ^d 8 PHE { SD: 16 ^h 1 PMG: 7 ^h 22 ^m R°: 50 ^m																							
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°												
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	m												
0	179	38.8	+23	26.0	252	57.0	+8	02.3	60 N	** **	0 49	2 35	0 13	**	15 03	103												
1	194	38.6		26.0	267	28.0 ¹²⁰		18.4 ¹⁶¹	58	** **	1 40	2 56	17	4	14 55	99												
2	209	38.5		26.0	281	59.0 ¹²⁰		34.5 ¹⁶¹	56	** **	2 10	3 13	21	7	49	94												
3	224	38.4		26.1	296	30.0 ¹²⁰	+8	50.5 ¹⁶⁰	54	0 45	33	27	25	10	43	90												
4	239	38.2		26.1	311	00.9 ¹¹⁹	+9	06.5 ¹⁶⁰	52	1 32	2 51	39	28	13	38	87												
5	254	38.1	+23	26.1	325	31.8 ¹¹⁹	+9	22.4 ¹⁵⁹	50	2 00	3 06	3 50	0 31	16	14 34	83												
6	269	37.9	+23	26.1	340	02.6 ¹¹⁸	+9	38.2 ¹⁵⁸	45	2 46	3 36	4 13	0 37	21	14 24	78												
7	284	37.8		26.1	354	33.5 ¹¹⁹	+9	54.0 ¹⁵⁸	40	3 16	3 58	31	42	26	16	73												
8	299	37.7		26.2	9	04.2 ¹¹⁷	+10	09.8 ¹⁵⁸	35	40	4 16	46	47	30	09	69												
9	314	37.5		26.2	23	35.0 ¹¹⁸		25.5 ¹⁵⁷	30	3 58	32	4 59	51	33	14	02	66											
10	329	37.4		26.2	38	05.7 ¹¹⁷		41.1 ¹⁵⁶	20	4 27	4 57	5 21	0 59	38	13	52	60											
11	344	37.3	+23	26.2	52	36.3 ¹¹⁶	+10	56.7 ¹⁵⁶	10 N	4 50	5 17	5 40	1 05	44	13	43	54											
12	359	37.1	+23	26.2	67	06.9 ¹¹⁶	+11	12.2 ¹⁵⁵	0	5 09	5 35	5 58	1 11	49	13	34	50											
13	14	37.0		26.3	81	37.5 ¹¹⁶		27.7 ¹⁵⁵	10 S	26	5 52	6 15	17	54	25	46												
14	29	36.8		26.3	96	08.0 ¹¹⁵		43.1 ¹⁵⁴	20	42	6 10	34	24	59	16	41												
15	44	36.7		26.3	110	38.5 ¹¹⁵	+11	58.4 ¹⁵³	30	5 59	29	6 55	32	64	06	35												
16	59	36.6		26.3	125	08.9 ¹¹⁴	+12	13.7 ¹⁵³	35	6 08	39	7 08	36	68	13	00	31											
17	74	36.4	+23	26.3	139	39.3 ¹¹⁴	+12	28.9 ¹⁵²	40	6 17	6 51	7 22	1 41	73	12	53	28											
18	89	36.3	+23	26.3	154	09.6 ¹¹³	+12	44.0 ¹⁵¹	45	6 27	7 05	7 39	1 47	77	12	46	22											
19	104	36.2		26.3	168	39.9 ¹¹³	+12	59.0 ¹⁵⁰	50	39	21	7 59	54	83	36	18												
20	119	36.0		26.4	183	10.1 ¹¹²	+13	14.0 ¹⁵⁰	52	45	28	8 09	1 57	87	32	15												
21	134	35.9		26.4	197	40.3 ¹¹²		28.9 ¹⁴⁹	54	50	37	20	2 01	89	27	12												
22	149	35.8		26.4	212	10.4 ¹¹¹		43.8 ¹⁴⁹	56	6 56	46	33	05	93	22	8												
23	164	35.6		26.4	226	40.5 ¹¹¹	+13	58.5 ¹⁴⁷	58	7 03	7 56	8 48	10	97	16	5												
24	179	35.5	+23	26.4	241	10.5 ¹¹⁰	+14	13.2 ¹⁴⁷	60 S	7 11	8 08	9 05	2 15	102	12	10	0											
UT	ARIES				VENUS				MARTE				JÚPITER				SATURNO											
	PMG: 6 ^h 06 ^m 7				Mag: -3.9 PMG: 9 ^h 41 ^m				Mag: +1.8 PMG: 14 ^h 57 ^m				Mag: -2.4 PMG: 20 ^h 34 ^m				Mag: +0.4 PMG: 14 ^h 52 ^m											
	hG ♈		Dec		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec									
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'								
0	268	04.0			214	43.9	+17	20.5	135	25.6	+19	02.8	50	41.6	-13	28.8	136	28.3	+18	45.4								
1	283	06.5			229	43.3		21.2	150	26.5		02.4	65	44.2		28.7	151	30.5		45.4								
2	298	08.9			244	42.8		22.0	165	27.5		02.0	80	46.7		28.7	166	32.7		45.3								
3	313	11.4			259	42.3		22.7	180	28.4		01.6	95	49.3		28.7	181	34.9		45.2								
4	328	13.9			274	41.7		23.5	195	29.3		01.1	110	51.9		28.7	196	37.1		45.2								
5	343	16.3			289	41.2	+17	24.3	210	30.2	+19	00.7	125	54.5	-13	28.6	211	39.3	+18	45.1								
6	358	18.8			304	40.7	+17	25.0	225	31.1	+19	00.3	140	57.1	-13	28.6	226	41.5	+18	45.0								
7	13	21.3			319	40.1		25.8	240	32.1	+18	59.9	155	59.7		28.6	241	43.7		44.9								
8	28	23.7			334	39.6		26.5	255	33.0		59.4	171	02.3		28.5	256	45.8		44.9								
9	43	26.2			349	39.1		27.3	270	33.9		59.0	186	04.8		28.5	271	48.0		44.8								
10	58	28.7			4	38.5		28.1	285	34.8		58.6	201	07.4		28.5	286	50.2		44.7								
11	73	31.1			19	38.0	+17	28.8	300	35.7	+18	58.2	216	10.0	-13	28.5	301	52.4	+18	44.7								
12	88	33.6			34	37.5	+17	29.6	315	36.6	+18	57.7	231	12.6	-13	28.4	316	54.6	+18	44.6								
13	103	36.0			49	36.9		30.3	330	37.6		57.3	246	15.2		28.4	331	56.8		44.5								
14	118	38.5			64	36.4		31.1	345	38.5		56.9	261	17.8		28.4	346	59.0		44.5								
15	133	41.0			79	35.8		31.8	0	39.4		56.5	276	20.3		28.3	2	01.2		44.4								
16	148	43.4			94	35.3		32.6	15	40.3		56.0	291	22.9		28.3	17	03.3		44.3								
17	163	45.9			109	34.8	+17	33.3	30	41.2	+18	55.6	306	25.5	-13	28.3	32	05.5	+18	44.2								
18	178	48.4			124	34.2	+17	34.1	45	42.2	+18	55.2	321	28.1	-13	28.3	47	07.7	+18	44.2								
19	193	50.8			139	33.7		34.8	60	43.1		54.7	336	30.7		28.2	62	09.9		44.1								
20	208	53.3			154	33.1		35.6	75	44.0		54.3	351	33.2		28.2	77	12.1		44.0								
21	223	55.8			169	32.6		36.3	90	44.9		53.9	6	35.8		28.2	92	14.3		44.0								
22	238	58.2			184	32.1		37.1	105	45.8		53.5	21	38.4		28.2	107	16.5		43.9								
23	254	00.7			199	31.5		37.8	120	46.8		53.0	36	41.0		28.1	122	18.7		43.8								
24	269	03.1			214	31.0	+17	38.6	135	47.7	+18	52.6	51	43.6	-13	28.1	137	20.8	+18	43.7								
Dif	—				-5				+8				+26				0				+22				-1			

UT	SOL				 LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15 ^h 7				Edad: 24 ^d 8 PHE $\left\{ \begin{array}{l} 4^h: 58/6 \\ 12^h: 58/5 \\ 20^h: 58/3 \end{array} \right.$												
	PMG: 12 ^h 01 ^m 7				SD: 16 ^h 0												
	hG ☉ Dec				hG ☾ Dif Dec Dif						Civil	Náutico	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m	
0	179	35.5	+23	26.4	241	10.5	+14	13.2	60 N	21 28	23 15	** **	0 12 1	16 46	107		
1	194	35.3		26.4	255	40.4 ¹⁰⁹		27.8 ¹⁴⁶	58	21 07	22 23	** **	21 6	34	100		
2	209	35.2		26.4	270	10.3 ¹⁰⁹		42.3 ¹⁴⁵	56	20 50	21 53	** **	28 10	23	95		
3	224	35.1		26.4	284	40.1 ¹⁰⁸	+14	56.7 ¹⁴⁴	54	36	31	23 19	35 14	13	91		
4	239	34.9		26.4	299	09.9 ¹⁰⁸	+15	11.1 ¹⁴⁴	52	24	21 13	22 31	41 17	16 05	87		
5	254	34.8	+23	26.4	313	39.6 ¹⁰⁷	+15	25.4 ¹⁴³	50	20 13	20 58	22 03	0 47 19	15 57	85		
6	269	34.7	+23	26.4	328	09.3 ¹⁰⁷	+15	39.5 ¹⁴¹	45	19 50	20 28	21 18	0 58 25	15 42	78		
7	284	34.5		26.4	342	38.9 ¹⁰⁶	+15	53.6 ¹⁴¹	40	32	20 05	20 47	1 08 30	29	73		
8	299	34.4		26.4	357	08.4 ¹⁰⁵	+16	07.6 ¹⁴⁰	35	17	19 47	24	17 33	18	69		
9	314	34.2		26.4	11	37.8 ¹⁰⁴		21.5 ¹³⁹	30	19 04	32	20 05	24 37	15 08	67		
10	329	34.1		26.5	26	07.2 ¹⁰⁴		35.4 ¹³⁹	20	18 42	19 07	19 36	37 42	14 52	61		
11	344	34.0	+23	26.5	40	36.6 ¹⁰⁴	+16	49.1 ¹³⁷	10 N	18 23	18 46	19 13	1 49 47	14 37	57		
12	359	33.8	+23	26.5	55	05.9 ¹⁰³	+17	02.7 ¹³⁶	0	18 05	18 28	18 54	2 00 51	14 24	53		
13	14	33.7		26.5	69	35.1 ¹⁰²		16.3 ¹³⁶	10 S	17 48	18 11	37	11 56	14 11	48		
14	29	33.6		26.5	84	04.2 ¹⁰¹		29.7 ¹³⁴	20	29	17 53	21	23 60	13 57	44		
15	44	33.4		26.5	98	33.3 ¹⁰¹		43.0 ¹³³	30	17 08	35	18 04	36 67	41	38		
16	59	33.3		26.4	113	02.3 ¹⁰⁰	+17	56.3 ¹³³	35	16 56	24	17 56	44 70	31	36		
17	74	33.2	+23	26.4	127	31.2 ⁹⁹	+18	09.4 ¹³¹	40	16 42	17 12	17 46	2 54 73	13 21	32		
18	89	33.0	+23	26.4	142	00.1 ⁹⁹	+18	22.4 ¹³⁰	45	16 25	16 59	17 36	3 04 79	13 08	28		
19	104	32.9		26.4	156	28.9 ⁹⁸		35.4 ¹³⁰	50	16 04	42	24	17 85	12 54	21		
20	119	32.7		26.4	170	57.6 ⁹⁷	+18	48.2 ¹²⁸	52	15 54	35	19	24 87	47	19		
21	134	32.6		26.4	185	26.3 ⁹⁷	+19	00.9 ¹²⁷	54	43	27	13	30 91	39	16		
22	149	32.5		26.4	199	54.9 ⁹⁶		13.5 ¹²⁶	56	30	18	07	38 95	30	12		
23	164	32.3		26.4	214	23.4 ⁹⁵		26.0 ¹²⁵	58	15 15	16 07	17 00	47 100	21	7		
24	179	32.2	+23	26.4	228	51.9 ⁹⁵	+19	38.4 ¹²⁴	60 S	14 58	15 56	16 52	3 57 106	12 10	1		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 6 ^h 02 ^m 8		Mag: -3.9 PMG: 9 ^h 42 ^m		Mag: +1.8 PMG: 14 ^h 56 ^m		Mag: -2.4 PMG: 20 ^h 30 ^m		Mag: +0.4 PMG: 14 ^h 48 ^m	
	hG ♈	hG ♀ Dec	hG ♂ Dec	hG ♃ Dec	hG ♄ Dec	hG ♅ Dec				
h	°	'	°	'	°	'	°	'	°	'
0	269	03.1	214	31.0	+17	38.6	135	47.7	+18	52.6
1	284	05.6	229	30.4		39.3	150	48.6		52.2
2	299	08.1	244	29.9		40.1	165	49.5		51.7
3	314	10.5	259	29.3		40.8	180	50.4		51.3
4	329	13.0	274	28.8		41.6	195	51.4		50.9
5	344	15.5	289	28.2	+17	42.3	210	52.3	+18	50.4
6	359	17.9	304	27.7	+17	43.0	225	53.2	+18	50.0
7	14	20.4	319	27.2		43.8	240	54.1		49.6
8	29	22.9	334	26.6		44.5	255	55.0		49.2
9	44	25.3	349	26.1		45.3	270	56.0		48.7
10	59	27.8	4	25.5		46.0	285	56.9		48.3
11	74	30.3	19	25.0	+17	46.8	300	57.8	+18	47.9
12	89	32.7	34	24.4	+17	47.5	315	58.7	+18	47.4
13	104	35.2	49	23.9		48.2	330	59.6		47.0
14	119	37.6	64	23.3		49.0	346	00.6		46.6
15	134	40.1	79	22.8		49.7	1	01.5		46.1
16	149	42.6	94	22.2		50.4	16	02.4		45.7
17	164	45.0	109	21.7	+17	51.2	31	03.3	+18	45.3
18	179	47.5	124	21.1	+17	51.9	46	04.3	+18	44.8
19	194	50.0	139	20.6		52.6	61	05.2		44.4
20	209	52.4	154	20.0		53.4	76	06.1		44.0
21	224	54.9	169	19.5		54.1	91	07.0		43.5
22	239	57.4	184	18.9		54.8	106	07.9		43.1
23	254	59.8	199	18.3		55.6	121	08.9		42.7
24	270	02.3	214	17.8	+17	56.3	136	09.8	+18	42.2
Dif	—		-5		+7		+9		-4	
							+26		0	
									+22	
									-1	

UT	SOL				● LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15'7 PMG: 12 ^h 02 ^m 0				Edad: 25 ^d 8 PHE { 4 ^h : 58'2 12 ^h : 58'1 20 ^h : 57'9 PMG: 9 ^h 04 ^m R°: 55 ^m													
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m
0	179	32.2	+23	26.4	228	51.9	+19	38.4	60 N	** **	0 49	2 36	0 13	4	18 33	107		
1	194	32.1		26.4	243	20.3	+19	50.6	58	** **	1 40	2 56	27	10	18 14	98		
2	209	31.9		26.4	257	48.6	+20	02.8	56	** **	2 11	3 13	38	15	17 58	91		
3	224	31.8		26.4	272	16.8		14.8	54	0 45	33	28	49	19	44	87		
4	239	31.7		26.4	286	45.0		26.7	52	1 32	2 51	40	0 58	22	32	84		
5	254	31.5	+23	26.4	301	13.1	+20	38.5	50	2 00	3 06	3 51	1 06	25	17 22	81		
6	269	31.4	+23	26.3	315	41.1	+20	50.2	45	2 46	3 36	4 13	1 23	31	17 00	75		
7	284	31.2		26.3	330	09.1	+21	01.8	40	3 17	3 59	31	38	35	16 42	72		
8	299	31.1		26.3	344	37.0		13.2	35	40	4 17	4 47	1 50	39	27	69		
9	314	31.0		26.3	359	04.8		24.5	30	3 59	32	5 00	2 01	41	16 15	66		
10	329	30.8		26.3	13	32.6		35.7	20	4 28	4 57	22	19	47	15 53	62		
11	344	30.7	+23	26.3	28	00.3	+21	46.8	10 N	4 50	5 18	5 41	2 36	50	15 34	59		
12	359	30.6	+23	26.3	42	27.9	+21	57.7	0	5 10	5 36	5 58	2 51	54	15 17	55		
13	14	30.4		26.2	56	55.4	+22	08.5	10 S	27	5 53	6 16	3 07	58	14 59	53		
14	29	30.3		26.2	71	22.9		19.2	20	43	6 10	34	23	62	41	49		
15	44	30.2		26.2	85	50.3		29.7	30	5 59	29	6 56	43	66	19	45		
16	59	30.0		26.2	100	17.6		40.1	35	6 08	40	7 08	3 54	70	14 07	42		
17	74	29.9	+23	26.2	114	44.9	+22	50.4	40	6 18	6 52	7 22	4 07	73	13 53	39		
18	89	29.7	+23	26.1	129	12.1	+23	00.6	45	6 28	7 05	7 39	4 23	77	13 36	35		
19	104	29.6		26.1	143	39.2		10.6	50	40	21	8 00	42	83	15	30		
20	119	29.5		26.1	158	06.2		20.4	52	45	29	10	4 51	86	13 06	26		
21	134	29.3		26.1	172	33.2		30.2	54	51	37	21	5 01	90	12 55	23		
22	149	29.2		26.0	187	00.2		39.8	56	6 57	46	34	13	95	42	19		
23	164	29.1		26.0	201	27.0		49.2	58	7 04	7 56	8 48	27	100	28	13		
24	179	28.9	+23	26.0	215	53.8	+23	58.5	60 S	7 11	8 08	9 06	5 43	109	12 11	5		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG 5 ^h 58 ^m 9		Mag: -3.9 PMG: 9 ^h 43 ^m		Mag: +1.8 PMG: 14 ^h 54 ^m		Mag: -2.4 PMG: 20 ^h 25 ^m		Mag: +0.4 PMG: 14 ^h 45 ^m									
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄									
h	°	'	°	'	°	'	°	'	°	'								
0	270	02.3	214	17.8	+17	56.3	136	09.8	+18	42.2	52	45.4	-13	27.5	138	13.3	+18	42.0
1	285	04.8	229	17.2		57.0	151	10.7		41.8	67	48.0		27.5	153	15.5		42.0
2	300	07.2	244	16.7		57.8	166	11.6		41.4	82	50.5		27.5	168	17.7		41.9
3	315	09.7	259	16.1		58.5	181	12.5		40.9	97	53.1		27.4	183	19.8		41.8
4	330	12.1	274	15.6		59.2	196	13.5		40.5	112	55.7		27.4	198	22.0		41.8
5	345	14.6	289	15.0	+17	59.9	211	14.4	+18	40.0	127	58.2	-13	27.4	213	24.2	+18	41.7
6	0	17.1	304	14.4	+18	00.7	226	15.3	+18	39.6	143	00.8	-13	27.4	228	26.4	+18	41.6
7	15	19.5	319	13.9		01.4	241	16.2		39.2	158	03.4		27.3	243	28.6		41.5
8	30	22.0	334	13.3		02.1	256	17.2		38.7	173	05.9		27.3	258	30.8		41.5
9	45	24.5	349	12.8		02.8	271	18.1		38.3	188	08.5		27.3	273	32.9		41.4
10	60	26.9	4	12.2		03.6	286	19.0		37.9	203	11.1		27.3	288	35.1		41.3
11	75	29.4	19	11.7	+18	04.3	301	19.9	+18	37.4	218	13.7	-13	27.3	303	37.3	+18	41.3
12	90	31.9	34	11.1	+18	05.0	316	20.9	+18	37.0	233	16.2	-13	27.2	318	39.5	+18	41.2
13	105	34.3	49	10.5		05.7	331	21.8		36.6	248	18.8		27.2	333	41.7		41.1
14	120	36.8	64	10.0		06.4	346	22.7		36.1	263	21.4		27.2	348	43.9		41.0
15	135	39.3	79	09.4		07.2	1	23.6		35.7	278	23.9		27.2	3	46.1		41.0
16	150	41.7	94	08.8		07.9	16	24.5		35.2	293	26.5		27.1	18	48.2		40.9
17	165	44.2	109	08.3	+18	08.6	31	25.5	+18	34.8	308	29.1	-13	27.1	33	50.4	+18	40.8
18	180	46.6	124	07.7	+18	09.3	46	26.4	+18	34.4	323	31.6	-13	27.1	48	52.6	+18	40.8
19	195	49.1	139	07.2		10.0	61	27.3		33.9	338	34.2		27.1	63	54.8		40.7
20	210	51.6	154	06.6		10.7	76	28.2		33.5	353	36.8		27.0	78	57.0		40.6
21	225	54.0	169	06.0		11.5	91	29.2		33.1	8	39.3		27.0	93	59.1		40.5
22	240	56.5	184	05.5		12.2	106	30.1		32.6	23	41.9		27.0	109	01.3		40.5
23	255	59.0	199	04.9		12.9	121	31.0		32.2	38	44.5		27.0	124	03.5		40.4
24	271	01.4	214	04.3	+18	13.6	136	31.9	+18	31.7	53	47.0	-13	27.0	139	05.7	+18	40.3
Dif	—		-6		+7		+9		-4		+26		0		+22		-1	

UT	SOL		● LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15'7 PMG: 12 ^h 02 ^m 2		Edad: 26 ^d 8 PHE { 4 ^h : 57'8 12 ^h : 57'6 20 ^h : 57'4 SD: 15'8 PMG: 9 ^h 59 ^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	179	28.9	+23 26.0	215	53.8	+23 58.5	60 N	21 28	23 14	** **	0 17 10	20 20 93		
1	194	28.8	26.0	230	20.5	+24 07.7	58	21 08	22 23	** **	37 19	19 52 83		
2	209	28.7	25.9	244	47.2	16.7	56	20 51	21 53	** **	0 53 25	29 79		
3	224	28.5	25.9	259	13.8	25.5	54	36	31	23 18	1 08 29	19 11 76		
4	239	28.4	25.9	273	40.4	34.3	52	24	21 13	22 31	20 32	18 56 74		
5	254	28.2	+23 25.9	288	06.8	+24 42.8	50	20 13	20 58	22 04	1 31 35	18 43 72		
6	269	28.1	+23 25.8	302	33.3	+24 51.3	45	19 51	20 28	21 18	1 54 40	18 15 69		
7	284	28.0	25.8	316	59.6	+24 59.6	40	33	20 05	20 47	2 13 43	17 54 67		
8	299	27.8	25.8	331	25.9	+25 07.7	35	18	19 47	24	29 45	36 65		
9	314	27.7	25.7	345	52.2	15.7	30	19 05	32	20 05	2 42 48	17 21 64		
10	329	27.6	25.7	0	18.4	23.5	20	18 42	19 07	19 36	3 06 51	16 55 61		
11	344	27.4	+23 25.7	14	44.5	+25 31.1	10 N	18 23	18 47	19 14	3 26 54	16 33 59		
12	359	27.3	+23 25.6	29	10.6	+25 38.7	0	18 06	18 28	18 55	3 45 57	16 12 58		
13	14	27.2	25.6	43	36.6	46.0	10 S	17 48	18 11	38	4 05 59	15 52 55		
14	29	27.0	25.6	58	02.6	+25 53.2	20	30	17 54	21	25 62	30 53		
15	44	26.9	25.5	72	28.5	+26 00.3	30	17 09	35	18 05	4 49 66	15 04 51		
16	59	26.7	25.5	86	54.4	07.1	35	16 56	24	17 56	5 04 67	14 49 50		
17	74	26.6	+23 25.5	101	20.2	+26 13.9	40	16 42	17 13	17 47	5 20 70	14 32 47		
18	89	26.5	+23 25.4	115	46.0	+26 20.4	45	16 25	16 59	17 36	5 40 73	14 11 45		
19	104	26.3	25.4	130	11.8	26.8	50	16 04	43	25	6 05 78	13 45 41		
20	119	26.2	25.3	144	37.5	33.1	52	15 55	35	19	17 80	32 39		
21	134	26.1	25.3	159	03.1	39.2	54	43	27	14	31 83	18 36		
22	149	25.9	25.3	173	28.7	45.1	56	31	18	07	6 48 87	13 01 32		
23	164	25.8	25.2	187	54.3	50.9	58	15 16	16 08	17 01	7 07 93	12 41 26		
24	179	25.7	+23 25.2	202	19.9	+26 56.4	60 S	14 58	15 56	16 53	7 32 104	12 16 15		
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 5 ^h 54 ^m 9		Mag: -3.9 PMG: 9 ^h 44 ^m		Mag: +1.8 PMG: 14 ^h 53 ^m		Mag: -2.4 PMG: 20 ^h 21 ^m		Mag: +0.4 PMG: 14 ^h 41 ^m					
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	271	01.4	214	04.3	136	31.9	53	47.0	139	05.7				
1	286	03.9	229	03.8	151	32.9	68	49.6	154	07.9				
2	301	06.4	244	03.2	166	33.8	83	52.2	169	10.1				
3	316	08.8	259	02.6	181	34.7	98	54.7	184	12.2				
4	331	11.3	274	02.1	196	35.6	113	57.3	199	14.4				
5	346	13.7	289	01.5	211	36.6	128	59.8	214	16.6				
6	1	16.2	304	00.9	226	37.5	144	02.4	229	18.8				
7	16	18.7	319	00.3	241	38.4	159	05.0	244	21.0				
8	31	21.1	333	59.8	256	39.3	174	07.5	259	23.2				
9	46	23.6	348	59.2	271	40.3	189	10.1	274	25.3				
10	61	26.1	3	58.6	286	41.2	204	12.7	289	27.5				
11	76	28.5	18	58.1	301	42.1	219	15.2	304	29.7				
12	91	31.0	33	57.5	316	43.0	234	17.8	319	31.9				
13	106	33.5	48	56.9	331	44.0	249	20.3	334	34.1				
14	121	35.9	63	56.3	346	44.9	264	22.9	349	36.2				
15	136	38.4	78	55.8	1	45.8	279	25.5	4	38.4				
16	151	40.9	93	55.2	16	46.7	294	28.0	19	40.6				
17	166	43.3	108	54.6	31	47.7	309	30.6	34	42.8				
18	181	45.8	123	54.0	46	48.6	324	33.1	49	45.0				
19	196	48.2	138	53.5	61	49.5	339	35.7	64	47.2				
20	211	50.7	153	52.9	76	50.4	354	38.3	79	49.3				
21	226	53.2	168	52.3	91	51.4	9	40.8	94	51.5				
22	241	55.6	183	51.7	106	52.3	24	43.4	109	53.7				
23	256	58.1	198	51.2	121	53.2	39	45.9	124	55.9				
24	272	00.6	213	50.6	136	54.1	54	48.5	139	58.1				
Dif	—		-6	+7	+9	-4	+26	0	+22	-1				

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna											
	SD: 15 ^h 7 PMG: 12 ^h 02 ^m 4			Edad: 27 ^d 8 PHE { 4 ^h : 57/3 12 ^h : 57/1 20 ^h : 56/9 PMG: 10 ^h 56 ^m Rº: 58 ^m																				
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	Rº	Hora	Rº									
h	°	'	°	°	'	°	°	h	m	h	m	h	m	h	m									
0	179	25.7	+23	25.2		202	19.9	+26	56.4	55	0	50	2	37	21	53	55							
1	194	25.5		25.1		216	45.4	65	+27	01.9	55	58	2	57	0	56	37							
2	209	25.4		25.1		231	10.8	64		07.1	52	56	2	11	1	18	42							
3	224	25.3		25.0		245	36.3	65		12.2	51	54	0	46	37	44	27	58						
4	239	25.1		25.0		260	01.7	64		17.2	50	52	1	33	2	52	40	1	52	46				
5	254	25.0	+23	25.0		274	27.1	64	+27	21.9	47	50	2	01	3	07	3	51	2	06	48			
6	269	24.9	+23	24.9		288	52.5	64	+27	26.5	46	45	2	47	3	37	4	14	2	34	50			
7	284	24.7		24.9		303	17.8	63		31.0	45	40	3	17	3	59	32		2	56	52			
8	299	24.6		24.8		317	43.1	63		35.2	42	35	41	4	17	4	47	3	14	53	18	41	58	
9	314	24.4		24.8		332	08.4	63		39.3	41	30	3	59	33	5	00	30	54	18	25	58		
10	329	24.3		24.7		346	33.7	63		43.3	40	20	4	28	4	58	22	3	57	56	17	56	58	
11	344	24.2	+23	24.7		0	58.9	62	+27	47.0	37	10	4	51	5	18	5	41	4	20	57	17	32	58
12	359	24.0	+23	24.6		15	24.2	63	+27	50.6	36	0	5	10	5	36	5	59	4	42	58	17	10	57
13	14	23.9		24.6		29	49.4	62		54.0	34	10	27	5	53	6	16	5	04	59	16	47	58	
14	29	23.8		24.5		44	14.6	62	+27	57.3	33	20	5	43	6	11	35	27	60	16	23	57		
15	44	23.6		24.5		58	39.8	62	+28	00.3	30	30	6	00	30	6	56	5	55	61	15	55	57	
16	59	23.5		24.4		73	05.0	62		03.3	30	35	08	40	7	08	6	11	62	39	56			
17	74	23.4	+23	24.4		87	30.2	62	+28	06.0	27	40	6	18	6	52	7	23	6	30	63	15	19	56
18	89	23.2	+23	24.3		101	55.4	62	+28	08.6	26	45	6	28	7	05	7	39	6	53	64	14	56	55
19	104	23.1		24.2		116	20.6	62		11.0	24	50	40	22	8	00	8	00	7	23	65	26	54	
20	119	23.0		24.2		130	45.8	62		13.2	22	52	45	29	10				37	66	14	11	54	
21	134	22.8		24.1		145	11.0	62		15.2	20	54	51	37	21				7	54	67	13	54	53
22	149	22.7		24.1		159	36.2	62		17.1	19	56	6	57	46	34			8	15	68	33	52	
23	164	22.6		24.0		174	01.4	62		18.9	18	58	7	04	7	57	8	48	8	40	71	13	07	50
24	179	22.4	+23	23.9		188	26.6	62	+28	20.4	15	60	7	11	8	08	9	06	9	16	77	12	31	44

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 5 ^h 51 ^m 0		Mag: -3.9 PMG: 9 ^h 45 ^m		Mag: +1.8 PMG: 14 ^h 51 ^m		Mag: -2.3 PMG: 20 ^h 17 ^m		Mag: +0.4 PMG: 14 ^h 38 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	°	°	'	°	°	°	'								
0	272	00.6	213	50.6	+18	30.5	136	54.1	+18	21.1	54	48.5	-13	26.5	139	58.1	+18	38.6
1	287	03.0	228	50.0		31.2	151	55.1		20.7	69	51.1		26.5	155	00.2		38.5
2	302	05.5	243	49.4		31.9	166	56.0		20.2	84	53.6		26.4	170	02.4		38.4
3	317	08.0	258	48.8		32.5	181	56.9		19.8	99	56.2		26.4	185	04.6		38.4
4	332	10.4	273	48.3		33.2	196	57.8		19.3	114	58.7		26.4	200	06.8		38.3
5	347	12.9	288	47.7	+18	33.9	211	58.8	+18	18.9	130	01.3	-13	26.4	215	09.0	+18	38.2
6	2	15.4	303	47.1	+18	34.6	226	59.7	+18	18.4	145	03.8	-13	26.4	230	11.1	+18	38.2
7	17	17.8	318	46.5		35.3	242	00.6		18.0	160	06.4		26.3	245	13.3		38.1
8	32	20.3	333	45.9		36.0	257	01.5		17.6	175	09.0		26.3	260	15.5		38.0
9	47	22.7	348	45.4		36.7	272	02.5		17.1	190	11.5		26.3	275	17.7		37.9
10	62	25.2	3	44.8		37.4	287	03.4		16.7	205	14.1		26.3	290	19.9		37.9
11	77	27.7	18	44.2	+18	38.1	302	04.3	+18	16.2	220	16.6	-13	26.3	305	22.0	+18	37.8
12	92	30.1	33	43.6	+18	38.7	317	05.3	+18	15.8	235	19.2	-13	26.3	320	24.2	+18	37.7
13	107	32.6	48	43.0		39.4	332	06.2		15.3	250	21.7		26.2	335	26.4		37.6
14	122	35.1	63	42.4		40.1	347	07.1		14.9	265	24.3		26.2	350	28.6		37.6
15	137	37.5	78	41.8		40.8	2	08.0		14.4	280	26.8		26.2	5	30.8		37.5
16	152	40.0	93	41.3		41.5	17	09.0		14.0	295	29.4		26.2	20	32.9		37.4
17	167	42.5	108	40.7	+18	42.2	32	09.9	+18	13.5	310	31.9	-13	26.2	35	35.1	+18	37.3
18	182	44.9	123	40.1	+18	42.8	47	10.8	+18	13.1	325	34.5	-13	26.1	50	37.3	+18	37.3
19	197	47.4	138	39.5		43.5	62	11.7		12.6	340	37.0		26.1	65	39.5		37.2
20	212	49.9	153	38.9		44.2	77	12.7		12.2	355	39.6		26.1	80	41.7		37.1
21	227	52.3	168	38.3		44.9	92	13.6		11.7	10	42.2		26.1	95	43.8		37.1
22	242	54.8	183	37.7		45.5	107	14.5		11.3	25	44.7		26.1	110	46.0		37.0
23	257	57.2	198	37.1		46.2	122	15.5		10.8	40	47.3		26.1	125	48.2		36.9
24	272	59.7	213	36.6	+18	46.9	137	16.4	+18	10.4	55	49.8	-13	26.0	140	50.4	+18	36.8
Dif	—		-6		+7		+9		-4		+26		0		+22		-1	

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15 ^h 7 PMG: 12 ^h 02 ^m 6			Edad: 28 ^d 8 PHE { 4 ^h : 56 ^m 7 12 ^h : 56 ^m 6 20 ^h : 56 ^m 4 R°: 56 ^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	22.4	+23 23.9	188	26.6	+28 20.4	14	60 N	21 28	23 13	** **	0 55 65	22 48 21	
1	194	22.3	23.9	202	51.9 63	21.8	14	58	21 07	22 23	** **	1 33 63	22 12 30	
2	209	22.2	23.8	217	17.1 62	23.0	12	56	20 51	21 53	** **	2 00 62	21 45 36	
3	224	22.0	23.8	231	42.4 63	24.0	10	54	37	31	23 17	21 61	25 38	
4	239	21.9	23.7	246	07.6 62	24.9	9	52	24	21 13	22 31	38 62	21 07 41	
5	254	21.8	+23 23.6	260	32.9 63	+28 25.6	7	50	20 13	20 58	22 03	2 54 60	20 52 43	
6	269	21.6	+23 23.6	274	58.3 64	+28 26.1	5	45	19 51	20 28	21 18	3 24 60	20 22 46	
7	284	21.5	23.5	289	23.6 63	26.5	4	40	33	20 06	20 47	3 48 59	19 59 47	
8	299	21.4	23.4	303	49.0 64	26.7	2	35	18	19 48	24	4 07 60	39 50	
9	314	21.2	23.4	318	14.4 64	26.7	0	30	19 05	32	20 06	24 59	19 23 50	
10	329	21.1	23.3	332	39.8 64	26.5	2	20	18 43	19 07	19 37	4 53 58	18 54 53	
11	344	20.9	+23 23.2	347	05.3 65	+28 26.2	3	10 N	18 24	18 47	19 14	5 17 58	18 30 54	
12	359	20.8	+23 23.2	1	30.8 65	+28 25.8	4	0	18 06	18 29	18 55	5 40 57	18 07 56	
13	14	20.7	23.1	15	56.3 65	25.1	7	10 S	17 49	18 12	38	6 03 56	17 45 57	
14	29	20.5	23.0	30	21.8 65	24.3	8	20	30	17 54	22	27 56	17 20 59	
15	44	20.4	23.0	44	47.5 67	23.3	10	30	17 09	36	18 05	6 56 54	16 52 60	
16	59	20.3	22.9	59	13.1 66	22.2	11	35	16 57	25	17 57	7 13 53	35 61	
17	74	20.1	+23 22.8	73	38.8 67	+28 20.9	13	40	16 43	17 13	17 47	7 33 52	16 15 63	
18	89	20.0	+23 22.8	88	04.5 67	+28 19.4	15	45	16 26	17 00	17 37	7 57 51	15 51 64	
19	104	19.9	22.7	102	30.3 68	17.8	16	50	16 05	16 44	25	8 28 49	20 67	
20	119	19.7	22.6	116	56.2 69	16.0	18	52	15 55	36	20	8 43 49	15 05 68	
21	134	19.6	22.5	131	22.0 68	14.0	20	54	44	28	14	9 01 47	14 47 69	
22	149	19.5	22.5	145	48.0 70	11.9	21	56	32	19	08	23 45	14 25 72	
23	164	19.3	22.4	160	14.0 70	09.6	23	58	15 17	16 09	17 01	9 51 42	13 57 75	
24	179	19.2	+23 22.3	174	40.0 70	+28 07.2	24	60 S	14 59	15 57	16 54	10 33 33	13 15 85	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 5 ^h 47 ^m 1		Mag: -3.9 PMG: 9 ^h 46 ^m		Mag: +1.8 PMG: 14 ^h 50 ^m		Mag: -2.3 PMG: 20 ^h 13 ^m		Mag: +0.4 PMG: 14 ^h 35 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	272	59.7	213 36.6	+18 46.9	137 16.4	+18 10.4	55 49.8	-13 26.0	140 50.4	+18 36.8
1	288	02.2	228 36.0	47.6	152 17.3	09.9	70 52.4	26.0	155 52.5	36.8
2	303	04.6	243 35.4	48.2	167 18.2	09.5	85 54.9	26.0	170 54.7	36.7
3	318	07.1	258 34.8	48.9	182 19.2	09.0	100 57.5	26.0	185 56.9	36.6
4	333	09.6	273 34.2	49.6	197 20.1	08.6	116 00.0	26.0	200 59.1	36.5
5	348	12.0	288 33.6	+18 50.3	212 21.0	+18 08.1	131 02.6	-13 26.0	216 01.3	+18 36.5
6	3	14.5	303 33.0	+18 50.9	227 22.0	+18 07.7	146 05.1	-13 25.9	231 03.4	+18 36.4
7	18	17.0	318 32.4	51.6	242 22.9	07.2	161 07.7	25.9	246 05.6	36.3
8	33	19.4	333 31.8	52.3	257 23.8	06.8	176 10.2	25.9	261 07.8	36.2
9	48	21.9	348 31.2	52.9	272 24.7	06.3	191 12.8	25.9	276 10.0	36.2
10	63	24.4	3 30.6	53.6	287 25.7	05.9	206 15.3	25.9	291 12.2	36.1
11	78	26.8	18 30.0	+18 54.3	302 26.6	+18 05.4	221 17.8	-13 25.9	306 14.3	+18 36.0
12	93	29.3	33 29.4	+18 54.9	317 27.5	+18 05.0	236 20.4	-13 25.9	321 16.5	+18 36.0
13	108	31.7	48 28.8	55.6	332 28.5	04.5	251 22.9	25.8	336 18.7	35.9
14	123	34.2	63 28.2	56.3	347 29.4	04.1	266 25.5	25.8	351 20.9	35.8
15	138	36.7	78 27.7	56.9	2 30.3	03.6	281 28.0	25.8	6 23.0	35.7
16	153	39.1	93 27.1	57.6	17 31.2	03.2	296 30.6	25.8	21 25.2	35.7
17	168	41.6	108 26.5	+18 58.3	32 32.2	+18 02.7	311 33.1	-13 25.8	36 27.4	+18 35.6
18	183	44.1	123 25.9	+18 58.9	47 33.1	+18 02.3	326 35.7	-13 25.8	51 29.6	+18 35.5
19	198	46.5	138 25.3	+18 59.6	62 34.0	01.8	341 38.2	25.7	66 31.8	35.4
20	213	49.0	153 24.7	+19 00.2	77 35.0	01.4	356 40.8	25.7	81 33.9	35.4
21	228	51.5	168 24.1	00.9	92 35.9	00.9	11 43.3	25.7	96 36.1	35.3
22	243	53.9	183 23.5	01.6	107 36.8	+18 00.5	26 45.8	25.7	111 38.3	35.2
23	258	56.4	198 22.9	02.2	122 37.8	+18 00.0	41 48.4	25.7	126 40.5	35.1
24	273	58.9	213 22.3	+19 02.9	137 38.7	+17 59.5	56 50.9	-13 25.7	141 42.6	+18 35.1
Dif	—		-6	+7	+9	-5	+25	0	+22	-1

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15'7 PMG: 12 ^h 02 ^m 8			Edad: 0 ^d 3 SD: 15'3 PMG: 12 ^h 50 ^m	PHE { 4 ^h : 56'2 12 ^h : 56'0 20 ^h : 55'8 Rº: 53 ^m											
	hG ☉	Dec				hG ☾		Dif	Dec		Dif	Náutico	Civil	Hora	Rº	Hora
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m
0	179	19.2	+23	22.3	174	40.0	+28	07.2	60 N	** *	0 53	2 38	2 00	93	23 09	7
1	194	19.1		22.2	189	06.1 71		04.6 26	58	** *	1 43	2 58	2 36	83	22 42	15
2	209	18.9		22.1	203	32.3 72	+28	01.9 27	56	** *	2 12	3 15	3 02	78	21 20	
3	224	18.8		22.1	217	58.5 72	+27	59.0 29	54	0 49	35	29	22	75	22 03	25
4	239	18.7		22.0	232	24.8 73		55.9 31	52	1 34	2 53	41	40	72	21 48	28
5	254	18.5	+23	21.9	246	51.2 74	+27	52.7 32	50	2 02	3 08	3 52	3 54	71	21 35	30
6	269	18.4	+23	21.8	261	17.6 74	+27	49.3 34	45	2 48	3 37	4 15	4 24	67	21 08	35
7	284	18.3		21.7	275	44.1 75		45.8 35	40	3 18	4 00	33	4 47	65	20 46	39
8	299	18.2		21.7	290	10.7 76		42.1 37	35	3 41	18	4 48	5 07	62	29 40	
9	314	18.0		21.6	304	37.3 76		38.3 38	30	4 00	33	5 01	23	61	20 13	43
10	329	17.9		21.5	319	04.0 77		34.3 40	20	29	4 58	23	5 51	58	19 47	47
11	344	17.8	+23	21.4	333	30.8 78	+27	30.2 41	10 N	4 51	5 19	5 42	6 15	56	19 24	50
12	359	17.6	+23	21.3	347	57.7 79	+27	25.9 43	0	5 10	5 37	5 59	6 37	54	19 03	52
13	14	17.5		21.2	2	24.6 79		21.5 44	10 S	27	5 54	6 17	6 59	52	18 42	55
14	29	17.4		21.2	16	51.6 80		16.9 46	20	5 44	6 11	35	7 23	49	18 19	57
15	44	17.2		21.1	31	18.7 81		12.2 47	30	6 00	30	6 56	7 50	47	17 52	61
16	59	17.1		21.0	45	45.9 82		07.3 49	35	09	40	7 09	8 06	45	36 63	
17	74	17.0	+23	20.9	60	13.1 82	+27	02.3 50	40	6 18	6 52	7 23	8 25	43	17 18	65
18	89	16.8	+23	20.8	74	40.5 84	+26	57.2 51	45	6 28	7 06	7 39	8 48	40	16 55	69
19	104	16.7		20.7	89	07.9 84		51.9 53	50	40	22	8 00	9 17	36	27 73	
20	119	16.6		20.6	103	35.4 85		46.5 54	52	45	29	10	32	33	16 13	76
21	134	16.4		20.5	118	03.0 86		40.9 56	54	51	37	21	9 48	31	15 56	79
22	149	16.3		20.4	132	30.6 86		35.2 57	56	6 57	46	34	10 08	27	37 83	
23	164	16.2		20.3	146	58.4 88		29.4 58	58	7 04	7 57	8 48	10 33	21	15 12	90
24	179	16.0	+23	20.2	161	26.2 88	+26	23.4 60	60 S	7 11	8 08	9 06	11 06	11	14 40	99

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 5 ^h 43 ^m 1		Mag: -3.9 PMG: 9 ^h 47 ^m		Mag: +1.8 PMG: 14 ^h 49 ^m		Mag: -2.3 PMG: 20 ^h 09 ^m		Mag: +0.4 PMG: 14 ^h 31 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	273	58.9	213	22.3	+19	02.9	56	50.9	-13	25.7
1	289	01.3	228	21.7		03.5	71	53.5		25.7
2	304	03.8	243	21.1		04.2	86	56.0		25.6
3	319	06.2	258	20.5		04.8	101	58.6		25.6
4	334	08.7	273	19.8		05.5	117	01.1		25.6
5	349	11.2	288	19.2	+19	06.1	132	03.6	-13	25.6
6	4	13.6	303	18.6	+19	06.8	147	06.2	-13	25.6
7	19	16.1	318	18.0		07.4	162	08.7		25.6
8	34	18.6	333	17.4		08.1	177	11.3		25.6
9	49	21.0	348	16.8		08.7	192	13.8		25.5
10	64	23.5	3	16.2		09.4	207	16.4		25.5
11	79	26.0	18	15.6	+19	10.0	222	18.9	-13	25.5
12	94	28.4	33	15.0	+19	10.7	237	21.4	-13	25.5
13	109	30.9	48	14.4		11.3	252	24.0		25.5
14	124	33.4	63	13.8		12.0	267	26.5		25.5
15	139	35.8	78	13.2		12.6	282	29.1		25.5
16	154	38.3	93	12.6		13.3	297	31.6		25.5
17	169	40.7	108	12.0	+19	13.9	312	34.1	-13	25.4
18	184	43.2	123	11.4	+19	14.6	327	36.7	-13	25.4
19	199	45.7	138	10.7		15.2	342	39.2		25.4
20	214	48.1	153	10.1		15.8	357	41.7		25.4
21	229	50.6	168	09.5		16.5	12	44.3		25.4
22	244	53.1	183	08.9		17.1	27	46.8		25.4
23	259	55.5	198	08.3		17.7	42	49.4		25.4
24	274	58.0	213	07.7	+19	18.4	57	51.9	-13	25.4
Dif	—		-6		+6		+25		0	
									+22	
									-1	

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 15°7			Edad: 1 ^d 3	PHE {	4 ^h : 55/7 12 ^h : 55/5 20 ^h : 55/3									
	PMG: 12 ^h 03 ^m 0														
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m
0	179	16.0	+23 20.2	161	26.2	+26 23.4	61	60 N	21 27	23 10	** **	3 33 98	23 16 3		
1	194	15.9	20.2	175	54.2	17.3	61	58	21 07	22 22	** **	3 59 90	22 57 8		
2	209	15.8	20.1	190	22.2	11.1	62	56	20 50	21 53	** **	4 20 85	41 13		
3	224	15.6	20.0	204	50.3	+26 04.7	64	54	36	31	23 15	37 81	28 16		
4	239	15.5	19.9	219	18.5	+25 58.2	65	52	24	21 13	22 30	4 52 77	16 19		
5	254	15.4	+23 19.8	233	46.8	+25 51.6	66	50	20 13	20 58	22 03	5 05 74	22 05 22		
6	269	15.2	+23 19.7	248	15.2	+25 44.8	68	45	19 51	20 28	21 18	5 31 70	21 43 27		
7	284	15.1	19.6	262	43.7	37.9	69	40	33	20 06	20 47	5 52 66	25 30		
8	299	15.0	19.5	277	12.3	30.9	70	35	18	19 48	24	6 09 63	21 09 34		
9	314	14.9	19.4	291	41.0	23.8	71	30	19 05	32	20 06	24 60	20 56 37		
10	329	14.7	19.3	306	09.7	16.5	73	20	18 43	19 08	19 37	6 49 56	34 40		
11	344	14.6	+23 19.2	320	38.6	+25 09.1	74	10 N	18 24	18 47	19 14	7 11 53	20 14 44		
12	359	14.5	+23 19.1	335	07.5	+25 01.6	75	0	18 07	18 29	18 55	7 31 50	19 55 48		
13	14	14.3	19.0	349	36.6	+24 54.0	76	10 S	17 49	18 12	39	7 51 47	37 51		
14	29	14.2	18.9	4	05.8	46.3	77	20	31	17 55	22	8 12 44	19 16 56		
15	44	14.1	18.8	18	35.0	38.4	79	30	17 10	36	18 06	37 39	18 53 60		
16	59	13.9	18.6	33	04.4	30.5	79	35	16 57	26	17 57	8 51 37	39 63		
17	74	13.8	+23 18.5	47	33.8	+24 22.4	81	40	16 43	17 14	17 48	9 08 34	18 23 66		
18	89	13.7	+23 18.4	62	03.3	+24 14.2	82	45	16 27	17 00	17 38	9 28 30	18 04 70		
19	104	13.6	18.3	76	33.0	+24 05.9	83	50	16 06	16 44	26	9 53 25	17 40 75		
20	119	13.4	18.2	91	02.7	+23 57.5	84	52	15 56	37	21	10 05 23	29 77		
21	134	13.3	18.1	105	32.5	49.0	85	54	45	29	15	19 19	15 81		
22	149	13.2	18.0	120	02.5	40.3	87	56	33	20	09	35 15	17 00 85		
23	164	13.0	17.9	134	32.5	31.6	87	58	18	16 10	17 02	10 54 10	16 42 90		
24	179	12.9	+23 17.8	149	02.6	+23 22.8	88	60 S	15 01	15 58	16 55	11 17 3	16 19 97		
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG: 5 ^h 39 ^m 2		Mag: -3.9 PMG: 9 ^h 48 ^m		Mag: +1.8 PMG: 14 ^h 47 ^m		Mag: -2.3 PMG: 20 ^h 05 ^m		Mag: +0.4 PMG: 14 ^h 28 ^m						
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'					
0	274	58.0	213	07.7	138	01.0	57	51.9	142	34.9					
1	290	00.5	228	07.1	153	02.0	72	54.4	157	37.0					
2	305	02.9	243	06.5	168	02.9	87	57.0	172	39.2					
3	320	05.4	258	05.8	183	03.8	102	59.5	187	41.4					
4	335	07.9	273	05.2	198	04.8	118	02.0	202	43.6					
5	350	10.3	288	04.6	213	05.7	133	04.6	217	45.7					
6	5	12.8	303	04.0	228	06.6	148	07.1	232	47.9					
7	20	15.2	318	03.4	243	07.6	163	09.6	247	50.1					
8	35	17.7	333	02.8	258	08.5	178	12.2	262	52.3					
9	50	20.2	348	02.1	273	09.4	193	14.7	277	54.4					
10	65	22.6	3	01.5	288	10.4	208	17.2	292	56.6					
11	80	25.1	18	00.9	303	11.3	223	19.8	307	58.8					
12	95	27.6	33	00.3	318	12.2	238	22.3	323	01.0					
13	110	30.0	47	59.7	333	13.2	253	24.8	338	03.1					
14	125	32.5	62	59.1	348	14.1	268	27.4	353	05.3					
15	140	35.0	77	58.4	3	15.0	283	29.9	8	07.5					
16	155	37.4	92	57.8	18	16.0	298	32.4	23	09.7					
17	170	39.9	107	57.2	33	16.9	313	35.0	38	11.8					
18	185	42.3	122	56.6	48	17.8	328	37.5	53	14.0					
19	200	44.8	137	56.0	63	18.8	343	40.0	68	16.2					
20	215	47.3	152	55.3	78	19.7	358	42.6	83	18.4					
21	230	49.7	167	54.7	93	20.6	13	45.1	98	20.5					
22	245	52.2	182	54.1	108	21.6	28	47.6	113	22.7					
23	260	54.7	197	53.5	123	22.5	43	50.1	128	24.9					
24	275	57.1	212	52.8	138	23.4	58	52.7	143	27.0					
Dif	—		-6	+6	+9	-5	+25	0	+22	-1					

UT	SOL				● LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 15'7 PMG: 12 ^h 03 ^m 2				Edad: 2 ^d 3 PHE { 4 ^h : 55'2 12 ^h : 55'0 20 ^h : 54'9 Rº: 45 ^m PMG: 14 ^h 32 ^m															
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	Rº	Hora	Rº				
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m			
0	179	12.9	+23	17.8	149	02.6	+23	22.8	60 N	** **	0 56	2 39	5 11	94	23 19	0				
1	194	12.8		17.7	163	32.8 ¹¹²		13.8 ⁹⁰	58	** **	1 45	2 59	29 88	23 05	5					
2	209	12.6		17.6	178	03.2 ¹¹⁴	+23	04.8 ⁹⁰	56	** **	2 14	3 16	45 83	22 54	8					
3	224	12.5		17.4	192	33.6 ¹¹⁴	+22	55.6 ⁹²	54	0 52	36	30	5 58 80	44	1					
4	239	12.4		17.3	207	04.1 ¹¹⁵		46.4 ⁹²	52	1 36	2 54	42	6 09 77	35	14					
5	254	12.3	+23	17.2	221	34.7 ¹¹⁶	+22	37.0 ⁹⁴	50	2 04	3 09	3 53	6 19 74	22 27	16					
6	269	12.1	+23	17.1	236	05.4 ¹¹⁷	+22	27.6 ⁹⁴	45	2 49	3 38	4 15	6 41 68	22 10	21					
7	284	12.0		17.0	250	36.2 ¹¹⁸		18.0 ⁹⁶	40	3 19	4 01	33	6 58 64	21 55	26					
8	299	11.9		16.9	265	07.1 ¹¹⁹	+22	08.4 ⁹⁶	35	3 42	19	4 48	7 12 61	43	29					
9	314	11.7		16.8	279	38.1 ¹²⁰	+21	58.6 ⁹⁸	30	4 01	34	5 01	24 59	33	31					
10	329	11.6		16.6	294	09.2 ¹²¹		48.8 ⁹⁸	20	29	4 59	23	7 45 54	21 14	37					
11	344	11.5	+23	16.5	308	40.4 ¹²²	+21	38.9 ⁹⁹	10 N	4 52	5 19	5 42	8 04 49	20 58	41					
12	359	11.4	+23	16.4	323	11.7 ¹²³	+21	28.9 ¹⁰⁰	0	5 11	5 37	6 00	8 21 46	20 43	44					
13	14	11.2		16.3	337	43.1 ¹²⁴		18.8 ¹⁰¹	10 S	28	5 54	17	38 42	28	48					
14	29	11.1		16.2	352	14.5 ¹²⁴	+21	08.6 ¹⁰²	20	5 44	6 11	35	8 56 38	20 12	52					
15	44	11.0		16.0	6	46.1 ¹²⁶	+20	58.3 ¹⁰³	30	6 00	30	6 56	9 16 34	19 53	57					
16	59	10.8		15.9	21	17.8 ¹²⁷		48.0 ¹⁰³	35	09	41	7 09	28 31	42	60					
17	74	10.7	+23	15.8	35	49.5 ¹²⁷	+20	37.5 ¹⁰⁵	40	6 18	6 52	7 23	9 42 28	19 29	63					
18	89	10.6	+23	15.7	50	21.4 ¹²⁹	+20	27.0 ¹⁰⁵	45	6 29	7 06	7 39	9 58 24	19 14	67					
19	104	10.5		15.5	64	53.3 ¹²⁹		16.4 ¹⁰⁶	50	40	22	8 00	10 18 19	18 55	73					
20	119	10.3		15.4	79	25.3 ¹³⁰	+20	05.7 ¹⁰⁷	52	45	29	10	28 16	46	76					
21	134	10.2		15.3	93	57.4 ¹³¹	+19	55.0 ¹⁰⁷	54	51	37	21	38 14	36	79					
22	149	10.1		15.2	108	29.7 ¹³³		44.1 ¹⁰⁹	56	6 57	46	33	10 50 10	25	82					
23	164	09.9		15.0	123	01.9 ¹³²		33.2 ¹⁰⁹	58	7 04	7 56	8 48	11 04 6	18 12	86					
24	179	09.8	+23	14.9	137	34.3 ¹³⁴	+19	22.2 ¹¹⁰	60 S	7 11	8 08	9 05	11 20 1	17 56	92					
UT	ARIES				VENUS				MARTE				JÚPITER				SATURNO			
	PMG 5 ^h 35 ^m 3				Mag: -3.9 PMG: 9 ^h 49 ^m				Mag: +1.8 PMG: 14 ^h 46 ^m				Mag: -2.3 PMG: 20 ^h 01 ^m				Mag: +0.4 PMG: 14 ^h 24 ^m			
	hG ♈		Dec		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	275	57.1	212	52.8	+19	33.4	138	23.4	+17	37.5	58	52.7	-13	25.1	143	27.0	+18	31.5		
1	290	59.6	227	52.2		34.0	153	24.4		37.0	73	55.2		25.1	158	29.2		31.4		
2	306	02.1	242	51.6		34.7	168	25.3		36.6	88	57.7		25.1	173	31.4		31.3		
3	321	04.5	257	51.0		35.3	183	26.2		36.1	104	00.3		25.1	188	33.6		31.3		
4	336	07.0	272	50.3		35.9	198	27.2		35.6	119	02.8		25.1	203	35.7		31.2		
5	351	09.5	287	49.7	+19	36.5	213	28.1	+17	35.2	134	05.3	-13	25.1	218	37.9	+18	31.1		
6	6	11.9	302	49.1	+19	37.1	228	29.0	+17	34.7	149	07.8	-13	25.0	233	40.1	+18	31.0		
7	21	14.4	317	48.5		37.7	243	30.0		34.3	164	10.4		25.0	248	42.3		31.0		
8	36	16.8	332	47.8		38.3	258	30.9		33.8	179	12.9		25.0	263	44.4		30.9		
9	51	19.3	347	47.2		38.9	273	31.8		33.3	194	15.4		25.0	278	46.6		30.8		
10	66	21.8	2	46.6		39.5	288	32.8		32.9	209	17.9		25.0	293	48.8		30.7		
11	81	24.2	17	45.9	+19	40.2	303	33.7	+17	32.4	224	20.5	-13	25.0	308	51.0	+18	30.7		
12	96	26.7	32	45.3	+19	40.8	318	34.6	+17	31.9	239	23.0	-13	25.0	323	53.1	+18	30.6		
13	111	29.2	47	44.7		41.4	333	35.6		31.5	254	25.5		25.0	338	55.3		30.5		
14	126	31.6	62	44.1		42.0	348	36.5		31.0	269	28.0		25.0	353	57.5		30.4		
15	141	34.1	77	43.4		42.6	3	37.5		30.5	284	30.6		25.0	8	59.6		30.4		
16	156	36.6	92	42.8		43.2	18	38.4		30.1	299	33.1		25.0	24	01.8		30.3		
17	171	39.0	107	42.2	+19	43.8	33	39.3	+17	29.6	314	35.6	-13	25.0	39	04.0	+18	30.2		
18	186	41.5	122	41.5	+19	44.4	48	40.3	+17	29.1	329	38.1	-13	24.9	54	06.2	+18	30.1		
19	201	44.0	137	40.9		45.0	63	41.2		28.7	344	40.7		24.9	69	08.3		30.1		
20	216	46.4	152	40.3		45.6	78	42.1		28.2	359	43.2		24.9	84	10.5		30.0		
21	231	48.9	167	39.6		46.2	93	43.1		27.7	14	45.7		24.9	99	12.7		29.9		
22	246	51.3	182	39.0		46.8	108	44.0		27.2	29	48.2		24.9	114	14.9		29.8		
23	261	53.8	197	38.4		47.4	123	44.9		26.8	44	50.8		24.9	129	17.0		29.8		
24	276	56.3	212	37.7	+19	48.0	138	45.9	+17	26.3	59	53.3	-13	24.9	144	19.2	+18	29.7		
Dif	—		-6		+6		+9		-5		+25		0		+22		-			

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna					
	SD: 15 ^h 7			Edad: 3 ^d 3	PHE { 4 ^h : 54'7 12 ^h : 54'6 20 ^h : 54'5	Puesta de Sol			Final del crepúsculo		Salida de Luna		Puesta de Luna					
	PMG: 12 ^h 03 ^m 4					Puesta de Sol			Final del crepúsculo		Salida de Luna		Puesta de Luna					
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°			
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m			
0	179	09.8	+23	14.9	137	34.3	+19	22.2	60 N	21 26	23 07	** **	6 45 89	23 19 **				
1	194	09.7		14.8	152	06.8 ¹³⁵	+19	11.1 ¹¹¹	58	21 06	22 20	** **	6 57 84	10 3				
2	209	09.6		14.6	166	39.4 ¹³⁶	+19	00.0 ¹¹¹	56	20 50	21 52	** **	7 08 80	23 02 6				
3	224	09.4		14.5	181	12.0 ¹³⁶	+18	48.8 ¹¹²	54	36	30	23 12	18 76	22 55 9				
4	239	09.3		14.4	195	44.8 ¹³⁸		37.5 ¹¹³	52	24	21 12	22 29	26 74	49 11				
5	254	09.2	+23	14.3	210	17.6 ¹³⁸	+18	26.1 ¹¹⁴	50	20 13	20 57	22 02	7 33 72	22 43 14				
6	269	09.1	+23	14.1	224	50.5 ¹³⁹	+18	14.7 ¹¹⁴	45	19 51	20 28	21 17	7 49 67	22 31 18				
7	284	08.9		14.0	239	23.5 ¹⁴⁰	+18	03.2 ¹¹⁵	40	33	20 06	20 47	8 02 62	21 22				
8	299	08.8		13.9	253	56.5 ¹⁴⁰	+17	51.6 ¹¹⁶	35	18	19 48	24	13 59	12 25				
9	314	08.7		13.7	268	29.7 ¹⁴²		40.0 ¹¹⁶	30	19 05	33	20 06	23 56	22 04 28				
10	329	08.5		13.6	283	02.9 ¹⁴²		28.3 ¹¹⁷	20	18 43	19 08	19 37	39 51	21 51 33				
11	344	08.4	+23	13.5	297	36.2 ¹⁴³	+17	16.5 ¹¹⁸	10 N	18 25	18 48	19 15	8 53 47	21 39 37				
12	359	08.3	+23	13.3	312	09.6 ¹⁴⁴	+17	04.7 ¹¹⁸	0	18 07	18 30	18 56	9 07 42	21 27 42				
13	14	08.2		13.2	326	43.1 ¹⁴⁵	+16	52.8 ¹¹⁹	10 S	17 50	18 13	39	20 38	16 46				
14	29	08.0		13.0	341	16.7 ¹⁴⁶		40.9 ¹¹⁹	20	31	17 55	23	34 34	21 04 50				
15	44	07.9		12.9	355	50.3 ¹⁴⁶		28.8 ¹²¹	30	17 10	37	18 07	50 29	20 50 55				
16	59	07.8		12.8	10	24.0 ¹⁴⁷		16.8 ¹²⁰	35	16 58	26	17 58	9 59 27	42 58				
17	74	07.7	+23	12.6	24	57.8 ¹⁴⁸	+16	04.6 ¹²²	40	16 44	17 15	17 49	10 10 23	20 32 62				
18	89	07.5	+23	12.5	39	31.6 ¹⁴⁸	+15	52.5 ¹²¹	45	16 28	17 01	17 38	10 22 19	20 21 66				
19	104	07.4		12.3	54	05.6 ¹⁵⁰		40.2 ¹²³	50	16 07	16 45	27	37 15	08 71				
20	119	07.3		12.2	68	39.6 ¹⁵⁰		27.9 ¹²³	52	15 57	38	22	44 12	20 02 73				
21	134	07.2		12.1	83	13.6 ¹⁵⁰		15.6 ¹²³	54	46	30	16	10 52 9	19 55 75				
22	149	07.0		11.9	97	47.8 ¹⁵²	+15	03.2 ¹²⁴	56	34	21	10	11 00 7	47 79				
23	164	06.9		11.8	112	22.0 ¹⁵²	+14	50.7 ¹²⁵	58	19	16 11	17 03	10 3	38 82				
24	179	06.8	+23	11.6	126	56.3 ¹⁵³	+14	38.2 ¹²⁵	60 S	15 02	15 59	16 56	11 21 **	19 28 86				
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 5 ^h 31 ^m 3		Mag: -3.9 PMG: 9 ^h 50 ^m		Mag: +1.8 PMG: 14 ^h 44 ^m		Mag: -2.3 PMG: 19 ^h 57 ^m		Mag: +0.4 PMG: 14 ^h 21 ^m									
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec							
h	°	'	°	'	°	'	°	'	°	'	°	'						
0	276	56.3	212	37.7	+19	48.0	138	45.9	+17	26.3	59	53.3	-13	24.9	144	19.2	+18	29.7
1	291	58.7	227	37.1		48.6	153	46.8		25.8	74	55.8		24.9	159	21.4		29.6
2	307	01.2	242	36.4		49.2	168	47.8		25.4	89	58.3		24.9	174	23.5		29.5
3	322	03.7	257	35.8		49.8	183	48.7		24.9	105	00.8		24.9	189	25.7		29.5
4	337	06.1	272	35.2		50.4	198	49.6		24.4	120	03.4		24.9	204	27.9		29.4
5	352	08.6	287	34.5	+19	50.9	213	50.6	+17	24.0	135	05.9	-13	24.9	219	30.1	+18	29.3
6	7	11.1	302	33.9	+19	51.5	228	51.5	+17	23.5	150	08.4	-13	24.9	234	32.2	+18	29.2
7	22	13.5	317	33.3		52.1	243	52.4		23.0	165	10.9		24.9	249	34.4		29.1
8	37	16.0	332	32.6		52.7	258	53.4		22.6	180	13.4		24.8	264	36.6		29.1
9	52	18.5	347	32.0		53.3	273	54.3		22.1	195	16.0		24.8	279	38.7		29.0
10	67	20.9	2	31.3		53.9	288	55.2		21.6	210	18.5		24.8	294	40.9		28.9
11	82	23.4	17	30.7	+19	54.5	303	56.2	+17	21.1	225	21.0	-13	24.8	309	43.1	+18	28.8
12	97	25.8	32	30.1	+19	55.1	318	57.1	+17	20.7	240	23.5	-13	24.8	324	45.3	+18	28.8
13	112	28.3	47	29.4		55.7	333	58.1		20.2	255	26.0		24.8	339	47.4		28.7
14	127	30.8	62	28.8		56.2	348	59.0		19.7	270	28.5		24.8	354	49.6		28.6
15	142	33.2	77	28.1		56.8	3	59.9		19.3	285	31.1		24.8	9	51.8		28.5
16	157	35.7	92	27.5		57.4	19	00.9		18.8	300	33.6		24.8	24	53.9		28.5
17	172	38.2	107	26.9	+19	58.0	34	01.8	+17	18.3	315	36.1	-13	24.8	39	56.1	+18	28.4
18	187	40.6	122	26.2	+19	58.6	49	02.7	+17	17.8	330	38.6	-13	24.8	54	58.3	+18	28.3
19	202	43.1	137	25.6		59.1	64	03.7		17.4	345	41.1		24.8	70	00.4		28.2
20	217	45.6	152	24.9	+19	59.7	79	04.6		16.9	0	43.6		24.8	85	02.6		28.2
21	232	48.0	167	24.3	+20	00.3	94	05.6		16.4	15	46.2		24.8	100	04.8		28.1
22	247	50.5	182	23.6		00.9	109	06.5		16.0	30	48.7		24.8	115	07.0		28.0
23	262	52.9	197	23.0		01.5	124	07.4		15.5	45	51.2		24.8	130	09.1		27.9
24	277	55.4	212	22.3	+20	02.0	139	08.4	+17	15.0	60	53.7	-13	24.8	145	11.3	+18	27.9
Dif	—		-6		+6		+9		-5		+25		0		+22		-1	

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna				
	SD: 15 ^h 7			Edad: 4 ^d 3	PHE	4^h: 54^m4 12^h: 54^m4 20^h: 54^m3		Náutico			Civil		Hora		R°		
	PMG: 12 ^h 03 ^m 6																
	hG ☉	Dec		hG ☾	Dif	Dec	Dif										
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	m	m	
0	179	06.8	+23	126	56.3	+14	38.2	60 N	** **	1 00	2 41	8 14	84	23 18	**		
1	194	06.7		141	30.6 ¹⁵³		25.7 ¹²⁵	58	** **	1 47	3 01	21 81		13	2		
2	209	06.5		156	05.0 ¹⁵⁴		13.1 ¹²⁶	56	** **	2 16	17	28 77		08	5		
3	224	06.4		170	39.5 ¹⁵⁵	+14	00.4 ¹²⁷	54	0 55	37	31	34 75		04	7		
4	239	06.3		185	14.1 ¹⁵⁶	+13	47.7 ¹²⁷	52	1 38	2 55	43	40 72		23 00	10		
5	254	06.2	+23	199	48.7 ¹⁵⁶	+13	35.0 ¹²⁷	50	2 05	3 10	3 54	8 45	69	22 57	11		
6	269	06.0	+23	214	23.3 ¹⁵⁶	+13	22.2 ¹²⁸	45	2 50	3 39	4 16	8 56	64	22 49	16		
7	284	05.9		228	58.1 ¹⁵⁸	+13	09.3 ¹²⁹	40	3 20	4 02	34	9 04	61	43	19		
8	299	05.8		243	32.9 ¹⁵⁸	+12	56.4 ¹²⁹	35	3 43	20	4 49	12 57		37	23		
9	314	05.7		258	07.7 ¹⁵⁸		43.5 ¹²⁹	30	4 01	35	5 02	19 54		32	26		
10	329	05.5		272	42.6 ¹⁵⁹		30.6 ¹²⁹	20	30	4 59	24	30 49		24	30		
11	344	05.4	+23	287	17.6 ¹⁶⁰	+12	17.5 ¹³¹	10 N	4 53	5 20	5 43	9 40	44	22 16	35		
12	359	05.3	+23	301	52.6 ¹⁶⁰	+12	04.5 ¹³⁰	0	5 11	5 37	6 00	9 49	40	22 09	39		
13	14	05.2		316	27.7 ¹⁶¹	+11	51.4 ¹³¹	10 S	28	5 54	17	9 58	37	22 02	43		
14	29	05.0		331	02.9 ¹⁶²		38.3 ¹³¹	20	5 44	6 12	36	10 08	32	21 54	48		
15	44	04.9		345	38.1 ¹⁶²		25.1 ¹³²	30	6 00	30	6 57	19 27		45	53		
16	59	04.8		0	13.3 ¹⁶²	+11	11.9 ¹³²	35	09	41	7 09	26 24		40	56		
17	74	04.7	+23	14	48.6 ¹⁶³	+10	58.7 ¹³²	40	6 18	6 52	7 23	10 33	21	21 34	60		
18	89	04.5	+23	29	23.9 ¹⁶³	+10	45.4 ¹³³	45	6 28	7 06	7 39	10 41	17	21 27	64		
19	104	04.4		43	59.3 ¹⁶⁴		32.1 ¹³³	50	40	21	8 00	52 12		19	68		
20	119	04.3		58	34.8 ¹⁶⁵		18.7 ¹³⁴	52	45	29	10	10 56	10	15	71		
21	134	04.2		73	10.3 ¹⁶⁵	+10	05.4 ¹³³	54	51	37	20	11 01	8	10	74		
22	149	04.1		87	45.8 ¹⁶⁵	+9	51.9 ¹³⁵	56	6 57	46	33	07 5		06	76		
23	164	03.9		102	21.4 ¹⁶⁶		38.5 ¹³⁴	58	7 03	7 56	8 47	13 2		21 00	80		
24	179	03.8	+23	116	57.0 ¹⁶⁶	+9	25.0 ¹³⁵	60 S	7 11	8 07	9 04	11 20	**	20 54	83		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 5 ^h 27 ^m 4		Mag: -3.9 PMG: 9 ^h 51 ^m		Mag: +1.8 PMG: 14 ^h 43 ^m		Mag: -2.3 PMG: 19 ^h 53 ^m		Mag: +0.4 PMG: 14 ^h 17 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	277	55.4	212	22.3	+20	02.0	139	08.4	+17	15.0	60	53.7	-13	24.8	145	11.3	+18	27.9
1	292	57.9	227	21.7		02.6	154	09.3		14.5	75	56.2		24.8	160	13.5		27.8
2	308	00.3	242	21.0		03.2	169	10.3		14.1	90	58.7		24.8	175	15.6		27.7
3	323	02.8	257	20.4		03.8	184	11.2		13.6	106	01.2		24.7	190	17.8		27.6
4	338	05.3	272	19.8		04.3	199	12.1		13.1	121	03.8		24.7	205	20.0		27.5
5	353	07.7	287	19.1	+20	04.9	214	13.1	+17	12.6	136	06.3	-13	24.7	220	22.1	+18	27.5
6	8	10.2	302	18.5	+20	05.5	229	14.0	+17	12.2	151	08.8	-13	24.7	235	24.3	+18	27.4
7	23	12.7	317	17.8		06.0	244	14.9		11.7	166	11.3		24.7	250	26.5		27.3
8	38	15.1	332	17.2		06.6	259	15.9		11.2	181	13.8		24.7	265	28.7		27.2
9	53	17.6	347	16.5		07.2	274	16.8		10.7	196	16.3		24.7	280	30.8		27.2
10	68	20.1	2	15.9		07.7	289	17.8		10.3	211	18.8		24.7	295	33.0		27.1
11	83	22.5	17	15.2	+20	08.3	304	18.7	+17	09.8	226	21.3	-13	24.7	310	35.2	+18	27.0
12	98	25.0	32	14.6	+20	08.9	319	19.6	+17	09.3	241	23.9	-13	24.7	325	37.3	+18	26.9
13	113	27.4	47	13.9		09.4	334	20.6		08.8	256	26.4		24.7	340	39.5		26.9
14	128	29.9	62	13.2		10.0	349	21.5		08.4	271	28.9		24.7	355	41.7		26.8
15	143	32.4	77	12.6		10.6	4	22.5		07.9	286	31.4		24.7	10	43.8		26.7
16	158	34.8	92	11.9		11.1	19	23.4		07.4	301	33.9		24.7	25	46.0		26.6
17	173	37.3	107	11.3	+20	11.7	34	24.3	+17	06.9	316	36.4	-13	24.7	40	48.2	+18	26.6
18	188	39.8	122	10.6	+20	12.2	49	25.3	+17	06.5	331	38.9	-13	24.7	55	50.4	+18	26.5
19	203	42.2	137	10.0		12.8	64	26.2		06.0	346	41.4		24.7	70	52.5		26.4
20	218	44.7	152	09.3		13.4	79	27.2		05.5	1	43.9		24.7	85	54.7		26.3
21	233	47.2	167	08.7		13.9	94	28.1		05.0	16	46.4		24.7	100	56.9		26.2
22	248	49.6	182	08.0		14.5	109	29.0		04.6	31	48.9		24.7	115	59.0		26.2
23	263	52.1	197	07.4		15.0	124	30.0		04.1	46	51.5		24.7	131	01.2		26.1
24	278	54.6	212	06.7	+20	15.6	139	30.9	+17	03.6	61	54.0	-13	24.7	146	03.4	+18	26.0
Dif	—		-7		+6		+9		-5		+25		0		+22		-1	

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna			Puesta de Luna			
	SD: 15 ^h 7			Edad: 5 ^d 3	PHE { 4 ^h : 54 ^h /3 12 ^h : 54 ^h /2 20 ^h : 54 ^h /2	Latitud			Puesta de Sol	Final del crepúsculo			Salida de Luna			Puesta de Luna		
	PMG: 12 ^h 03 ^m 8									PMG: 16 ^h 39 ^m			R°: 39 ^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	03.8	+23 07.9	116	57.0	+9 25.0		60 N	21 25	23 03	** **	9 38 81		23 17 **				
1	194	03.7	07.8	131	32.7 ¹⁶⁷	+9 11.5 ¹³⁵		58	21 05	22 18	** **	42 78		15 1				
2	209	03.6	07.6	146	08.4 ¹⁶⁷	+8 58.0 ¹³⁵		56	20 49	21 50	** **	45 76		13 4				
3	224	03.4	07.4	160	44.1 ¹⁶⁷	44.4 ¹³⁶		54	35	29	23 08	49 72		11 7				
4	239	03.3	07.3	175	19.9 ¹⁶⁸	30.8 ¹³⁶		52	23	21 11	22 27	52 70		10 9				
5	254	03.2	+23 07.1	189	55.7 ¹⁶⁸	+8 17.2 ¹³⁶		50	20 13	20 57	22 01	9 54 68		23 08 11				
6	269	03.1	+23 06.9	204	31.6 ¹⁶⁹	+8 03.6 ¹³⁶		45	19 50	20 28	21 17	10 00 63		23 05 15				
7	284	03.0	06.8	219	07.5 ¹⁶⁹	+7 49.9 ¹³⁷		40	33	20 05	20 47	05 59		02 19				
8	299	02.8	06.6	233	43.4 ¹⁶⁹	36.2 ¹³⁷		35	18	19 48	24	09 56		23 00 22				
9	314	02.7	06.4	248	19.4 ¹⁷⁰	22.5 ¹³⁷		30	19 05	33	20 06	13 52		22 58 25				
10	329	02.6	06.3	262	55.4 ¹⁷⁰	+7 08.7 ¹³⁸		20	18 43	19 08	19 37	19 48		54 31				
11	344	02.5	+23 06.1	277	31.4 ¹⁷⁰	+6 55.0 ¹³⁷		10 N	18 25	18 48	19 15	10 24 43		22 51 35				
12	359	02.4	+23 05.9	292	07.5 ¹⁷¹	+6 41.2 ¹³⁸		0	18 08	18 30	18 56	10 29 39		22 48 39				
13	14	02.2	05.8	306	43.5 ¹⁷⁰	27.4 ¹³⁸		10 S	17 50	18 13	39	35 34		45 43				
14	29	02.1	05.6	321	19.7 ¹⁷²	+6 13.5 ¹³⁹		20	32	17 56	23	40 30		42 47				
15	44	02.0	05.4	335	55.8 ¹⁷¹	+5 59.7 ¹³⁸		30	17 11	38	18 07	46 26		38 53				
16	59	01.9	05.2	350	32.0 ¹⁷²	45.8 ¹³⁹		35	16 59	27	17 59	50 22		36 56				
17	74	01.7	+23 05.1	5	08.1 ¹⁷¹	+5 31.9 ¹³⁹		40	16 45	17 16	17 50	10 54 19		22 34 59				
18	89	01.6	+23 04.9	19	44.4 ¹⁷³	+5 18.0 ¹³⁹		45	16 29	17 02	17 39	10 58 16		22 31 63				
19	104	01.5	04.7	34	20.6 ¹⁷²	+5 04.1 ¹³⁹		50	16 08	16 47	28	11 04 11		27 68				
20	119	01.4	04.5	48	56.8 ¹⁷²	+4 50.2 ¹³⁹		52	15 59	39	23	06 9		26 69				
21	134	01.3	04.4	63	33.1 ¹⁷³	36.2 ¹⁴⁰		54	48	31	17	09 7		24 72				
22	149	01.1	04.2	78	09.4 ¹⁷³	22.2 ¹⁴⁰		56	35	22	11	12 4		22 75				
23	164	01.0	04.0	92	45.7 ¹⁷³	+4 08.2 ¹⁴⁰		58	21	12	17 05	15 2		20 78				
24	179	00.9	+23 03.8	107	22.1 ¹⁷⁴	+3 54.2 ¹⁴⁰		60 S	15 04	16 01	16 57	11 19 **		22 17 81				
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG 5 ^h 23 ^m 5		Mag: -3.9 PMG: 9 ^h 52 ^m			Mag: +1.8 PMG: 14 ^h 41 ^m			Mag: -2.3 PMG: 19 ^h 49 ^m			Mag: +0.4 PMG: 14 ^h 14 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	°	'	°	°	'	°	°	'	°				
0	278	54.6	212	06.7	+20 15.6	139	30.9	+17 03.6	61	54.0	-13 24.7	146	03.4	+18 26.0				
1	293	57.0	227	06.0	16.1	154	31.9	03.1	76	56.5	24.7	161	05.5	25.9				
2	308	59.5	242	05.4	16.7	169	32.8	02.6	91	59.0	24.7	176	07.7	25.9				
3	324	01.9	257	04.7	17.2	184	33.7	02.2	107	01.5	24.7	191	09.9	25.8				
4	339	04.4	272	04.1	17.8	199	34.7	01.7	122	04.0	24.7	206	12.0	25.7				
5	354	06.9	287	03.4	+20 18.3	214	35.6	+17 01.2	137	06.5	-13 24.7	221	14.2	+18 25.6				
6	9	09.3	302	02.8	+20 18.9	229	36.6	+17 00.7	152	09.0	-13 24.7	236	16.4	+18 25.6				
7	24	11.8	317	02.1	19.4	244	37.5	+17 00.3	167	11.5	24.7	251	18.5	25.5				
8	39	14.3	332	01.4	20.0	259	38.5	+16 59.8	182	14.0	24.7	266	20.7	25.4				
9	54	16.7	347	00.8	20.5	274	39.4	59.3	197	16.5	24.7	281	22.9	25.3				
10	69	19.2	2	00.1	21.1	289	40.3	58.8	212	19.0	24.7	296	25.0	25.2				
11	84	21.7	16	59.4	+20 21.6	304	41.3	+16 58.3	227	21.5	-13 24.7	311	27.2	+18 25.2				
12	99	24.1	31	58.8	+20 22.2	319	42.2	+16 57.9	242	24.0	-13 24.7	326	29.4	+18 25.1				
13	114	26.6	46	58.1	22.7	334	43.2	57.4	257	26.5	24.7	341	31.6	25.0				
14	129	29.0	61	57.5	23.3	349	44.1	56.9	272	29.0	24.7	356	33.7	24.9				
15	144	31.5	76	56.8	23.8	4	45.0	56.4	287	31.5	24.7	11	35.9	24.9				
16	159	34.0	91	56.1	24.3	19	46.0	55.9	302	34.0	24.7	26	38.1	24.8				
17	174	36.4	106	55.5	+20 24.9	34	46.9	+16 55.5	317	36.5	-13 24.7	41	40.2	+18 24.7				
18	189	38.9	121	54.8	+20 25.4	49	47.9	+16 55.0	332	39.0	-13 24.7	56	42.4	+18 24.6				
19	204	41.4	136	54.1	25.9	64	48.8	54.5	347	41.5	24.7	71	44.6	24.5				
20	219	43.8	151	53.5	26.5	79	49.8	54.0	2	44.0	24.7	86	46.7	24.5				
21	234	46.3	166	52.8	27.0	94	50.7	53.5	17	46.5	24.7	101	48.9	24.4				
22	249	48.8	181	52.1	27.6	109	51.6	53.0	32	49.0	24.7	116	51.1	24.3				
23	264	51.2	196	51.5	28.1	124	52.6	52.6	47	51.5	24.7	131	53.2	24.2				
24	279	53.7	211	50.8	+20 28.6	139	53.5	+16 52.1	62	54.0	-13 24.7	146	55.4	+18 24.2				
Dif	—		-7	+5		+9	-5		+25	0		+22		-1				

UT	SOL			 LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15'7 PMG: 12 ^h 04 ^m 0			Edad: 6 ^d 3 SD: 14'8 PMG: 17 ^h 18 ^m	PHE { 4 ^h : 54'2 12 ^h : 54'3 20 ^h : 54'3 R°: 39 ^m			Náutico	Civil		Hora	R°	Hora	R°		
	hG ☉	Dec		hG ☾	Dif	Dec		Dif								
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m
0	179	00.9	+23 03.8	107	22.1	+3 54.2	140	60 N	** *	1 05	2 43	10 59	82	23 16	**	
1	194	00.8	03.7	121	58.4 ¹⁷³	40.2 ¹⁴⁰		58	** *	1 50	3 03	11 00	78	16	2	
2	209	00.7	03.5	136	34.7 ¹⁷³	26.2 ¹⁴⁰		56	** *	2 18	19	01 75		17	5	
3	224	00.5	03.3	151	11.1 ¹⁷⁴	+3 12.2 ¹⁴⁰		54	1 00	39	33	01 73		18		
4	239	00.4	03.1	165	47.5 ¹⁷⁴	+2 58.1 ¹⁴¹		52	1 41	2 57	45	02 70		19	9	
5	254	00.3	+23 02.9	180	23.9 ¹⁷⁴	+2 44.0 ¹⁴¹		50	2 07	3 11	3 55	11 02	68	23 19	11	
6	269	00.2	+23 02.7	195	00.3 ¹⁷⁴	+2 30.0 ¹⁴⁰		45	2 51	3 40	4 18	11 03	63	23 20	16	
7	284	00.1	02.6	209	36.7 ¹⁷⁴	15.9 ¹⁴¹		40	3 21	4 03	35	04 59		21	20	
8	299	00.0	02.4	224	13.1 ¹⁷⁴	+2 01.8 ¹⁴¹		35	3 44	20	4 50	05 56		22	23	
9	313	59.8	02.2	238	49.5 ¹⁷⁴	+1 47.7 ¹⁴¹		30	4 02	4 35	5 03	05 53		23	26	
10	328	59.7	02.0	253	25.9 ¹⁷⁴	33.6 ¹⁴¹		20	31	5 00	24	07 47		25	30	
11	343	59.6	+23 01.8	268	02.4 ¹⁷⁵	+1 19.5 ¹⁴¹		10 N	4 53	5 20	5 43	11 07	44	23 26	35	
12	358	59.5	+23 01.6	282	38.8 ¹⁷⁴	+1 05.4 ¹⁴¹		0	5 12	5 38	6 00	11 08	39	23 27	39	
13	13	59.4	01.4	297	15.2 ¹⁷⁴	+0 51.2 ¹⁴²		10 S	28	5 55	18	09 35		28	44	
14	28	59.2	01.3	311	51.6 ¹⁷⁴	37.1 ¹⁴¹		20	5 44	6 12	36	10 31		29	49	
15	43	59.1	01.1	326	28.1 ¹⁷⁵	23.0 ¹⁴¹		30	6 00	30	6 57	12 25		31	53	
16	58	59.0	00.9	341	04.5 ¹⁷⁴	+0 08.8 ¹⁴²		35	09	41	7 09	12 23		32	56	
17	73	58.9	+23 00.7	355	40.9 ¹⁷⁴	-0 05.3 ¹⁴¹		40	6 18	6 52	7 23	11 13	19	23 33	59	
18	88	58.8	+23 00.5	10	17.3 ¹⁷⁴	-0 19.5 ¹⁴²		45	6 28	7 05	7 39	11 14	15	23 34	63	
19	103	58.7	00.3	24	53.7 ¹⁷⁴	33.6 ¹⁴¹		50	40	21	7 59	15 11		35	68	
20	118	58.5	+23 00.1	39	30.1 ¹⁷⁴	-0 47.8 ¹⁴²		52	45	28	8 09	15 9		35	71	
21	133	58.4	+22 59.9	54	06.5 ¹⁷⁴	-1 01.9 ¹⁴¹		54	50	36	20	16 7		36	73	
22	148	58.3	59.7	68	42.9 ¹⁷⁴	16.1 ¹⁴²		56	6 56	45	32	16 5		37	76	
23	163	58.2	59.5	83	19.3 ¹⁷⁴	30.2 ¹⁴¹		58	7 03	7 55	8 46	17 2		38	79	
24	178	58.1	+22 59.3	97	55.6 ¹⁷³	-1 44.4 ¹⁴²		60 S	7 10	8 07	9 03	11 18	**	23 38	83	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG: 5 ^h 19 ^m 5		Mag: -3.9 PMG: 9 ^h 53 ^m		Mag: +1.8 PMG: 14 ^h 40 ^m		Mag: -2.3 PMG: 19 ^h 45 ^m		Mag: +0.4 PMG: 14 ^h 10 ^m						
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'					
0	279	53.7	211	50.8	+20 28.6	139	53.5	+16 52.1	62	54.0	-13 24.7	146	55.4	+18 24.2	
1	294	56.2	226	50.1	29.2	154	54.5	51.6	77	56.5	24.7	161	57.6	24.1	
2	309	58.6	241	49.5	29.7	169	55.4	51.1	92	59.0	24.7	176	59.7	24.0	
3	325	01.1	256	48.8	30.2	184	56.4	50.6	108	01.5	24.7	192	01.9	23.9	
4	340	03.5	271	48.1	30.7	199	57.3	50.1	123	04.0	24.7	207	04.1	23.9	
5	355	06.0	286	47.5	+20 31.3	214	58.2	+16 49.7	138	06.5	-13 24.7	222	06.2	+18 23.8	
6	10	08.5	301	46.8	+20 31.8	229	59.2	+16 49.2	153	09.0	-13 24.7	237	08.4	+18 23.7	
7	25	10.9	316	46.1	32.3	245	00.1	48.7	168	11.5	24.7	252	10.6	23.6	
8	40	13.4	331	45.5	32.9	260	01.1	48.2	183	14.0	24.7	267	12.7	23.5	
9	55	15.9	346	44.8	33.4	275	02.0	47.7	198	16.5	24.7	282	14.9	23.5	
10	70	18.3	1	44.1	33.9	290	03.0	47.2	213	19.0	24.7	297	17.1	23.4	
11	85	20.8	16	43.4	+20 34.4	305	03.9	+16 46.8	228	21.5	-13 24.7	312	19.2	+18 23.3	
12	100	23.3	31	42.8	+20 34.9	320	04.8	+16 46.3	243	24.0	-13 24.7	327	21.4	+18 23.2	
13	115	25.7	46	42.1	35.5	335	05.8	45.8	258	26.5	24.7	342	23.6	23.2	
14	130	28.2	61	41.4	36.0	350	06.7	45.3	273	29.0	24.7	357	25.7	23.1	
15	145	30.7	76	40.7	36.5	5	07.7	44.8	288	31.5	24.7	12	27.9	23.0	
16	160	33.1	91	40.1	37.0	20	08.6	44.3	303	34.0	24.7	27	30.1	22.9	
17	175	35.6	106	39.4	+20 37.5	35	09.6	+16 43.9	318	36.5	-13 24.7	42	32.2	+18 22.8	
18	190	38.0	121	38.7	+20 38.1	50	10.5	+16 43.4	333	39.0	-13 24.7	57	34.4	+18 22.8	
19	205	40.5	136	38.0	38.6	65	11.4	42.9	348	41.5	24.7	72	36.6	22.7	
20	220	43.0	151	37.4	39.1	80	12.4	42.4	3	44.0	24.7	87	38.7	22.6	
21	235	45.4	166	36.7	39.6	95	13.3	41.9	18	46.5	24.7	102	40.9	22.5	
22	250	47.9	181	36.0	40.1	110	14.3	41.4	33	48.9	24.7	117	43.1	22.5	
23	265	50.4	196	35.3	40.6	125	15.2	40.9	48	51.4	24.7	132	45.2	22.4	
24	280	52.8	211	34.7	+20 41.1	140	16.2	+16 40.5	63	53.9	-13 24.7	147	47.4	+18 22.3	
Dif	—		-7		+5	+9		-5	+25		0	+22		-1	

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna	Puesta de Luna		
	SD: 15 ^h 7			Edad: 7 ^d 3	PHE { 4 ^h : 54 ^h /4 12 ^h : 54 ^h /4 20 ^h : 54 ^h /5 R°: 40 ^m									
	PMG: 12 ^h 04 ^m 2													
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m	h m	m
0	178	58.1	+22 59.3	97	55.6	-1 44.4		60 N	21 23	22 58	** **	12 21 84	23 14	**
1	193	58.0	59.1	112	32.0 ¹⁷⁴	-1 58.5 ¹⁴¹		58	21 04	22 16	** **	18 81	18	2
2	208	57.8	58.9	127	08.3 ¹⁷³	-2 12.6 ¹⁴¹		56	20 48	21 49	** **	16 77	22	5
3	223	57.7	58.7	141	44.6 ¹⁷³	26.8 ¹⁴²		54	34	27	23 04	14 74	25	8
4	238	57.6	58.5	156	20.9 ¹⁷³	40.9 ¹⁴¹		52	22	21 10	22 25	12 72	28	10
5	253	57.5	+22 58.3	170	57.2 ¹⁷³	-2 55.0 ¹⁴¹		50	20 12	20 56	21 59	12 10 70	23 30	13
6	268	57.4	+22 58.1	185	33.4 ¹⁷²	-3 09.2 ¹⁴²		45	19 50	20 27	21 16	12 06 65	23 36	17
7	283	57.3	57.9	200	09.7 ¹⁷³	23.3 ¹⁴¹		40	32	20 05	20 46	03 61	41	21
8	298	57.1	57.7	214	45.9 ¹⁷²	37.4 ¹⁴¹		35	18	19 47	24	12 01 57	45	25
9	313	57.0	57.5	229	22.1 ¹⁷²	-3 51.5 ¹⁴¹		30	19 05	32	20 06	11 58 54	49	27
10	328	56.9	57.3	243	58.2 ¹⁷¹	-4 05.6 ¹⁴¹		20	18 44	19 08	19 37	54 49	23 55	33
11	343	56.8	+22 57.1	258	34.4 ¹⁷²	-4 19.7 ¹⁴¹		10 N	18 25	18 48	19 15	11 51 44	** ** *	**
12	358	56.7	+22 56.9	273	10.5 ¹⁷¹	-4 33.8 ¹⁴¹		0	18 08	18 30	18 56	11 47 40	** ** *	**
13	13	56.6	56.7	287	46.6 ¹⁷¹	-4 47.8 ¹⁴⁰		10 S	17 51	18 14	40	44 36	** ** *	**
14	28	56.5	56.5	302	22.6 ¹⁷⁰	-5 01.9 ¹⁴¹		20	33	17 57	24	41 31	** ** *	**
15	43	56.3	56.3	316	58.6 ¹⁷⁰	15.9 ¹⁴⁰		30	12	38	08	37 26	** ** *	**
16	58	56.2	56.1	331	34.6 ¹⁷⁰	30.0 ¹⁴¹		35	17 00	28	18 00	35 23	** ** *	**
17	73	56.1	+22 55.9	346	10.6 ¹⁷⁰	-5 44.0 ¹⁴⁰		40	16 46	17 17	17 50	11 32 20	** ** *	**
18	88	56.0	+22 55.7	0	46.5 ¹⁶⁹	-5 58.0 ¹⁴⁰		45	16 30	17 03	17 40	11 29 17	** ** *	**
19	103	55.9	55.5	15	22.4 ¹⁶⁹	-6 12.0 ¹⁴⁰		50	10	16 48	29	26 12	** ** *	**
20	118	55.8	55.3	29	58.2 ¹⁶⁸	26.0 ¹⁴⁰		52	16 00	41	24	24 10	** ** *	**
21	133	55.7	55.1	44	34.1 ¹⁶⁹	39.9 ¹³⁹		54	15 49	33	19	23 7	** ** *	**
22	148	55.5	54.9	59	09.8 ¹⁶⁷	-6 53.9 ¹⁴⁰		56	37	24	13	21 5	** ** *	**
23	163	55.4	54.6	73	45.6 ¹⁶⁸	-7 07.8 ¹³⁹		58	23	14	17 06	19 2	** ** *	**
24	178	55.3	+22 54.4	88	21.2 ¹⁶⁶	-7 21.7 ¹³⁹		60 S	15 06	16 03	16 59	11 16 **	** ** *	**
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 5 ^h 15 ^m 6		Mag: -3.9 PMG: 9 ^h 54 ^m			Mag: +1.8 PMG: 14 ^h 38 ^m			Mag: -2.3 PMG: 19 ^h 41 ^m			Mag: +0.4 PMG: 14 ^h 07 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	'	°	°	'	°	°	'	°	°	'	°
0	280	52.8	211	34.7	+20 41.1	140	16.2	+16 40.5	63	53.9	-13 24.7	147	47.4	+18 22.3
1	295	55.3	226	34.0	41.6	155	17.1	40.0	78	56.4	24.7	162	49.6	22.2
2	310	57.8	241	33.3	42.2	170	18.1	39.5	93	58.9	24.7	177	51.7	22.1
3	326	00.2	256	32.6	42.7	185	19.0	39.0	109	01.4	24.7	192	53.9	22.1
4	341	02.7	271	31.9	43.2	200	20.0	38.5	124	03.9	24.7	207	56.1	22.0
5	356	05.1	286	31.3	+20 43.7	215	20.9	+16 38.0	139	06.4	-13 24.7	222	58.2	+18 21.9
6	11	07.6	301	30.6	+20 44.2	230	21.8	+16 37.5	154	08.9	-13 24.7	238	00.4	+18 21.8
7	26	10.1	316	29.9	44.7	245	22.8	37.0	169	11.4	24.7	253	02.5	21.7
8	41	12.5	331	29.2	45.2	260	23.7	36.6	184	13.9	24.7	268	04.7	21.7
9	56	15.0	346	28.5	45.7	275	24.7	36.1	199	16.3	24.7	283	06.9	21.6
10	71	17.5	1	27.9	46.2	290	25.6	35.6	214	18.8	24.7	298	09.0	21.5
11	86	19.9	16	27.2	+20 46.7	305	26.6	+16 35.1	229	21.3	-13 24.7	313	11.2	+18 21.4
12	101	22.4	31	26.5	+20 47.2	320	27.5	+16 34.6	244	23.8	-13 24.7	328	13.4	+18 21.4
13	116	24.9	46	25.8	47.7	335	28.5	34.1	259	26.3	24.7	343	15.5	21.3
14	131	27.3	61	25.1	48.2	350	29.4	33.6	274	28.8	24.7	358	17.7	21.2
15	146	29.8	76	24.4	48.7	5	30.4	33.1	289	31.3	24.7	13	19.9	21.1
16	161	32.3	91	23.8	49.2	20	31.3	32.6	304	33.8	24.7	28	22.0	21.0
17	176	34.7	106	23.1	+20 49.7	35	32.2	+16 32.2	319	36.3	-13 24.7	43	24.2	+18 21.0
18	191	37.2	121	22.4	+20 50.2	50	33.2	+16 31.7	334	38.7	-13 24.7	58	26.4	+18 20.9
19	206	39.6	136	21.7	50.7	65	34.1	31.2	349	41.2	24.7	73	28.5	20.8
20	221	42.1	151	21.0	51.2	80	35.1	30.7	4	43.7	24.8	88	30.7	20.7
21	236	44.6	166	20.3	51.6	95	36.0	30.2	19	46.2	24.8	103	32.9	20.7
22	251	47.0	181	19.6	52.1	110	37.0	29.7	34	48.7	24.8	118	35.0	20.6
23	266	49.5	196	19.0	52.6	125	37.9	29.2	49	51.2	24.8	133	37.2	20.5
24	281	52.0	211	18.3	+20 53.1	140	38.9	+16 28.7	64	53.7	-13 24.8	148	39.3	+18 20.4
Dif	—		-7	+5		+9	-5		+25	0		+22	-1	

UT	SOL				LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna												
	SD: 15 ^h 7 PMG: 12 ^h 04 ^m 4				Edad: 8 ^d 3 PHE { 4 ^h : 54 ^m 7 12 ^h : 54 ^m 8 20 ^h : 55 ^m 0 R°: 44 ^m																						
	hG ☉	Dec			hG ☾	Dif				Náutico	Civil		Hora	R°	Hora	R°											
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m										
0	178	55.3	+22	54.4	88	21.2	-7	21.7	60 N	** **	1 10	2 45	13 45	89	23 13	**											
1	193	55.2		54.2	102	56.9 ¹⁶⁷		35.6 ¹³⁹	58	** **	1 53	3 05	39 84		20 4												
2	208	55.1		54.0	117	32.5 ¹⁶⁶	-7	49.5 ¹³⁹	56	** **	2 20	21	33 81		27 7												
3	223	55.0		53.8	132	08.0 ¹⁶⁵	-8	03.3 ¹³⁸	54	1 05	41	35	28 78		33 10												
4	238	54.9		53.6	146	43.6 ¹⁶⁶		17.2 ¹³⁹	52	1 44	2 58	46	24 75		38 13												
5	253	54.8	+22	53.4	161	19.0 ¹⁶⁴	-8	31.0 ¹³⁸	50	2 09	3 13	3 57	13 20	72	23 43	15											
6	268	54.6	+22	53.1	175	54.4 ¹⁶⁴	-8	44.8 ¹³⁸	45	2 53	3 42	4 19	13 11	67	23 53	21											
7	283	54.5		52.9	190	29.8 ¹⁶⁴	-8	58.5 ¹³⁷	40	3 22	4 04	36	13 04	63	** **	** **											
8	298	54.4		52.7	205	05.1 ¹⁶³	-9	12.3 ¹³⁸	35	3 45	21	4 51	12 58	59	** **	** **											
9	313	54.3		52.5	219	40.4 ¹⁶³		26.0 ¹³⁷	30	4 03	4 36	5 04	52 57		** **	** **											
10	328	54.2		52.3	234	15.6 ¹⁶²		39.7 ¹³⁷	20	32	5 01	25	43 51		** **	** **											
11	343	54.1	+22	52.1	248	50.7 ¹⁶¹	-9	53.3 ¹³⁶	10 N	4 54	5 21	5 44	12 35	47	0 01	37											
12	358	54.0	+22	51.8	263	25.8 ¹⁶¹	-10	07.0 ¹³⁷	0	5 12	5 38	6 01	12 27	43	0 06	41											
13	13	53.9		51.6	278	00.8 ¹⁶⁰		20.6 ¹³⁶	10 S	29	5 55	18	20 38		12 45												
14	28	53.8		51.4	292	35.8 ¹⁶⁰		34.2 ¹³⁶	20	5 45	6 12	36	12 34		18 49												
15	43	53.6		51.2	307	10.7 ¹⁵⁹	-10	47.7 ¹³⁵	30	6 00	30	6 56	12 03	29	24 55												
16	58	53.5		50.9	321	45.6 ¹⁵⁹	-11	01.2 ¹³⁵	35	09	41	7 09	11 58	26	28 58												
17	73	53.4	+22	50.7	336	20.3 ¹⁵⁷	-11	14.7 ¹³⁵	40	6 18	6 52	7 22	11 52	23	0 32	62											
18	88	53.3	+22	50.5	350	55.1 ¹⁵⁸	-11	28.2 ¹³⁵	45	6 28	7 05	7 39	11 46	18	0 37	66											
19	103	53.2		50.3	5 29.7 ¹⁵⁶	41.6 ¹³⁴			50	39	21	7 59	38 13		43 71												
20	118	53.1		50.0	20 04.3 ¹⁵⁶	-11 55.0 ¹³⁴			52	44	28	8 08	34 12		46 73												
21	133	53.0		49.8	34 38.8 ¹⁵⁵	-12 08.3 ¹³³			54	50	36	19	30 9		49 76												
22	148	52.9		49.6	49 13.3 ¹⁵⁵	21.6 ¹³³			56	6 56	44	31	26 6		53 78												
23	163	52.8		49.4	63 47.7 ¹⁵⁴	34.9 ¹³³			58	7 02	7 54	8 45	21 3		0 57	82											
24	178	52.7	+22	49.1	78 22.0 ¹⁵³	-12 48.1 ¹³²			60 S	7 09	8 05	9 02	11 15	0	1 01	86											
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO														
	PMG 5 ^h 11 ^m 7			Mag: -3.9 PMG: 9 ^h 55 ^m			Mag: +1.8 PMG: 14 ^h 36 ^m			Mag: -2.3 PMG: 19 ^h 37 ^m			Mag: +0.4 PMG: 14 ^h 03 ^m														
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec													
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'											
0	281	52.0	211	18.3	+20	53.1	140	38.9	+16	28.7	64	53.7	-13	24.8	148	39.3	+18	20.4									
1	296	54.4	226	17.6		53.6	155	39.8		28.2	79	56.1		24.8	163	41.5		20.3									
2	311	56.9	241	16.9		54.1	170	40.8		27.7	94	58.6		24.8	178	43.7		20.3									
3	326	59.4	256	16.2		54.6	185	41.7		27.2	110	01.1		24.8	193	45.8		20.2									
4	342	01.8	271	15.5		55.1	200	42.7		26.8	125	03.6		24.8	208	48.0		20.1									
5	357	04.3	286	14.8	+20	55.5	215	43.6	+16	26.3	140	06.1	-13	24.8	223	50.2	+18	20.0									
6	12	06.7	301	14.1	+20	56.0	230	44.6	+16	25.8	155	08.6	-13	24.8	238	52.3	+18	19.9									
7	27	09.2	316	13.4		56.5	245	45.5		25.3	170	11.0		24.8	253	54.5		19.9									
8	42	11.7	331	12.8		57.0	260	46.4		24.8	185	13.5		24.8	268	56.7		19.8									
9	57	14.1	346	12.1		57.5	275	47.4		24.3	200	16.0		24.8	283	58.8		19.7									
10	72	16.6	1	11.4		58.0	290	48.3		23.8	215	18.5		24.8	299	01.0		19.6									
11	87	19.1	16	10.7	+20	58.4	305	49.3	+16	23.3	230	21.0	-13	24.8	314	03.2	+18	19.5									
12	102	21.5	31	10.0	+20	58.9	320	50.2	+16	22.8	245	23.4	-13	24.8	329	05.3	+18	19.5									
13	117	24.0	46	09.3		59.4	335	51.2		22.3	260	25.9		24.8	344	07.5		19.4									
14	132	26.5	61	08.6	+20	59.9	350	52.1		21.8	275	28.4		24.9	359	09.6		19.3									
15	147	28.9	76	07.9	+21	00.3	5	53.1		21.3	290	30.9		24.9	14	11.8		19.2									
16	162	31.4	91	07.2		00.8	20	54.0		20.8	305	33.4		24.9	29	14.0		19.2									
17	177	33.9	106	06.5	+21	01.3	35	55.0	+16	20.3	320	35.9	-13	24.9	44	16.1	+18	19.1									
18	192	36.3	121	05.8	+21	01.7	50	55.9	+16	19.8	335	38.3	-13	24.9	59	18.3	+18	19.0									
19	207	38.8	136	05.1		02.2	65	56.9		19.4	350	40.8		24.9	74	20.5		18.9									
20	222	41.2	151	04.4		02.7	80	57.8		18.9	5	43.3		24.9	89	22.6		18.8									
21	237	43.7	166	03.7		03.2	95	58.8		18.4	20	45.8		24.9	104	24.8		18.8									
22	252	46.2	181	03.0		03.6	110	59.7		17.9	35	48.2		24.9	119	26.9		18.7									
23	267	48.6	196	02.3		04.1	126	00.7		17.4	50	50.7		24.9	134	29.1		18.6									
24	282	51.1	211	01.6	+21	04.6	141	01.6	+16	16.9	65	53.2	-13	24.9	149	31.3	+18	18.5									
Dif	—			-7			+5			+9			-5			+25			0			+22			-1		

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15 ^h 7			Edad: 9 ^d 3	PHE {	4 ^h : 55 ^h :1 12 ^h : 55 ^h :3 20 ^h : 55 ^h :5			Final del crepúsculo			Salida de Luna		Puesta de Luna	
	PMG: 12 ^h 04 ^m 6								R°: 47 ^m						
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m	m	h m	m
0	178	52.7	+22 49.1	78	22.0	-12 48.1		60 N	21 22	22 54	** **	15 14 96	23 12 1		
1	193	52.5	48.9	92	56.2 ¹⁵²	-13 01.3 ¹³²		58	21 02	22 13	** **	15 03 91	24 6		
2	208	52.4	48.7	107	30.4 ¹⁵²	14.5 ¹³²		56	20 47	21 47	** **	14 54 86	34 11		
3	223	52.3	48.4	122	04.5 ¹⁵¹	27.6 ¹³¹		54	33	26	23 00	46 82	43 14		
4	238	52.2	48.2	136	38.5 ¹⁵⁰	40.7 ¹³¹		52	21	21 09	22 23	39 79	51 17		
5	253	52.1	+22 48.0	151	12.4 ¹⁴⁹	-13 53.7 ¹³⁰		50	20 11	20 55	21 57	14 32 76	23 58 20		
6	268	52.0	+22 47.8	165	46.3 ¹⁴⁹	-14 06.7 ¹³⁰		45	19 49	20 26	21 15	14 18 71	** ** *		
7	283	51.9	47.5	180	20.1 ¹⁴⁸	19.7 ¹³⁰		40	32	20 05	20 46	14 07 66	0 02 24		
8	298	51.8	47.3	194	53.7 ¹⁴⁶	32.6 ¹²⁹		35	18	19 47	23	13 57 63	10 27		
9	313	51.7	47.0	209	27.4 ¹⁴⁷	45.4 ¹²⁸		30	19 05	32	20 05	49 59	16 31		
10	328	51.6	46.8	224	00.9 ¹⁴⁵	-14 58.2 ¹²⁸		20	18 44	19 08	19 37	34 55	28 35		
11	343	51.5	+22 46.6	238	34.3 ¹⁴⁴	-15 11.0 ¹²⁸		10 N	18 25	18 48	19 15	13 22 50	0 38 40		
12	358	51.3	+22 46.3	253	07.7 ¹⁴⁴	-15 23.7 ¹²⁷		0	18 08	18 31	18 57	13 10 46	0 47 45		
13	13	51.2	46.1	267	41.0 ¹⁴³	36.3 ¹²⁶		10 S	17 51	18 14	40	12 58 43	0 57 48		
14	28	51.1	45.9	282	14.1 ¹⁴¹	-15 48.9 ¹²⁶		20	33	17 57	25	46 38	1 07 53		
15	43	51.0	45.6	296	47.2 ¹⁴¹	-16 01.5 ¹²⁶		30	13	39	09	32 33	19 58		
16	58	50.9	45.4	311	20.2 ¹⁴⁰	14.0 ¹²⁵		35	17 01	29	18 00	24 30	26 61		
17	73	50.8	+22 45.1	325	53.2 ¹⁴⁰	-16 26.4 ¹²⁴		40	16 47	17 18	17 51	12 15 27	1 34 64		
18	88	50.7	+22 44.9	340	26.0 ¹³⁸	-16 38.8 ¹²⁴		45	16 31	17 05	17 42	12 04 23	1 43 69		
19	103	50.6	44.7	354	58.7 ¹³⁷	-16 51.1 ¹²³		50	11	16 49	30	11 51 18	54 74		
20	118	50.5	44.4	9	31.3 ¹³⁶	-17 03.4 ¹²³		52	16 02	42	25	46 15	1 59 77		
21	133	50.4	44.2	24	03.9 ¹³⁶	15.6 ¹²²		54	15 51	34	20	39 12	2 05 80		
22	148	50.3	43.9	38	36.3 ¹³⁴	27.7 ¹²¹		56	39	25	14	32 9	11 83		
23	163	50.2	43.7	53	08.7 ¹³⁴	39.8 ¹²¹		58	25	16	08	24 5	19 87		
24	178	50.1	+22 43.4	67	40.9 ¹³²	-17 51.8 ¹²⁰		60 S	15 08	16 05	17 01	11 15 0	2 27 92		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 5 ^h 07 ^m 8		Mag: -3.9 PMG: 9 ^h 56 ^m		Mag: +1.8 PMG: 14 ^h 35 ^m		Mag: -2.3 PMG: 19 ^h 33 ^m		Mag: +0.4 PMG: 14 ^h 00 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	282	51.1	211 01.6	+21 04.6	141 01.6	+16 16.9	65 53.2	-13 24.9	149 31.3	+18 18.5
1	297	53.6	226 00.9	05.0	156 02.6	16.4	80 55.7	24.9	164 33.4	18.4
2	312	56.0	241 00.2	05.5	171 03.5	15.9	95 58.2	24.9	179 35.6	18.4
3	327	58.5	255 59.5	05.9	186 04.5	15.4	111 00.6	24.9	194 37.8	18.3
4	343	01.0	270 58.8	06.4	201 05.4	14.9	126 03.1	25.0	209 39.9	18.2
5	358	03.4	285 58.1	+21 06.9	216 06.4	+16 14.4	141 05.6	-13 25.0	224 42.1	+18 18.1
6	13	05.9	300 57.4	+21 07.3	231 07.3	+16 13.9	156 08.1	-13 25.0	239 44.3	+18 18.0
7	28	08.4	315 56.7	07.8	246 08.3	13.4	171 10.5	25.0	254 46.4	18.0
8	43	10.8	330 56.0	08.2	261 09.2	12.9	186 13.0	25.0	269 48.6	17.9
9	58	13.3	345 55.3	08.7	276 10.2	12.4	201 15.5	25.0	284 50.7	17.8
10	73	15.7	0 54.6	09.2	291 11.1	11.9	216 18.0	25.0	299 52.9	17.7
11	88	18.2	15 53.9	+21 09.6	306 12.1	+16 11.4	231 20.4	-13 25.0	314 55.1	+18 17.6
12	103	20.7	30 53.2	+21 10.1	321 13.0	+16 10.9	246 22.9	-13 25.0	329 57.2	+18 17.6
13	118	23.1	45 52.5	10.5	336 14.0	10.4	261 25.4	25.0	344 59.4	17.5
14	133	25.6	60 51.8	11.0	351 14.9	09.9	276 27.9	25.0	0 01.6	17.4
15	148	28.1	75 51.1	11.4	6 15.9	09.4	291 30.3	25.0	15 03.7	17.3
16	163	30.5	90 50.4	11.9	21 16.8	08.9	306 32.8	25.1	30 05.9	17.3
17	178	33.0	105 49.7	+21 12.3	36 17.8	+16 08.4	321 35.3	-13 25.1	45 08.0	+18 17.2
18	193	35.5	120 49.0	+21 12.8	51 18.7	+16 07.9	336 37.7	-13 25.1	60 10.2	+18 17.1
19	208	37.9	135 48.3	13.2	66 19.7	07.4	351 40.2	25.1	75 12.4	17.0
20	223	40.4	150 47.6	13.7	81 20.6	06.9	6 42.7	25.1	90 14.5	16.9
21	238	42.8	165 46.9	14.1	96 21.6	06.4	21 45.2	25.1	105 16.7	16.9
22	253	45.3	180 46.2	14.6	111 22.5	05.9	36 47.6	25.1	120 18.8	16.8
23	268	47.8	195 45.5	15.0	126 23.5	05.4	51 50.1	25.1	135 21.0	16.7
24	283	50.2	210 44.8	+21 15.4	141 24.4	+16 04.9	66 52.6	-13 25.1	150 23.2	+18 16.6
Dif	—		-7	+5	+9	-5	+25	0	+22	-1

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15 ^h 7 ^m PMG: 12 ^h 04 ^m 7			Edad: 10 ^d 3 ^h PHE	SD: 15 ^h 2 ^m PMG: 20 ^h 08 ^m	R ^o : 52 ^m								
	hG ☉	Dec	Dif					Náutico	Civil		Hora	R°	Hora	R°
h	°	'	°	°	'	°	°	h	m	h	m	h	m	m
0	178	50.1	+22 43.4	67	40.9	-17 51.8	60 N	** **	1 16	2 48	16 50	103	23 13	5
1	193	50.0	43.2	82	13.0 ¹³¹	-18 03.7 ¹¹⁹	58	** **	1 56	3 07	34 95		30 13	
2	208	49.9	43.0	96	45.1 ¹³¹	15.6 ¹¹⁹	56	** **	2 23	23	20 89		45 18	
3	223	49.8	42.7	111	17.0 ¹²⁹	27.4 ¹¹⁸	54	1 10	2 44	36	16 08	85	23 57	22
4	238	49.6	42.5	125	48.9 ¹²⁹	39.2 ¹¹⁸	52	1 47	3 01	48	15 58	81	** **	**
5	253	49.5	+22 42.2	140	20.6 ¹²⁷	-18 50.8 ¹¹⁶	50	2 12	3 15	3 58	15 48	79	** **	**
6	268	49.4	+22 42.0	154	52.2 ¹²⁶	-19 02.4 ¹¹⁶	45	2 55	3 43	4 20	15 29	73	0 14	25
7	283	49.3	41.7	169	23.7 ¹²⁵	14.0 ¹¹⁶	40	3 24	4 05	37	13 69		26 30	
8	298	49.2	41.5	183	55.2 ¹²⁵	25.4 ¹¹⁴	35	3 46	22	4 52	15 00	66	37 33	
9	313	49.1	41.2	198	26.5 ¹²³	36.8 ¹¹⁴	30	4 04	4 37	5 04	14 48	63	0 47	36
10	328	49.0	41.0	212	57.7 ¹²²	48.1 ¹¹³	20	32	5 01	26	29 58		1 03	41
11	343	48.9	+22 40.7	227	28.7 ¹²⁰	-19 59.3 ¹¹²	10 N	4 54	5 21	5 44	14 12	54	1 18	45
12	358	48.8	+22 40.4	241	59.7 ¹²⁰	-20 10.5 ¹¹²	0	5 13	5 39	6 01	13 56	51	1 32	48
13	13	48.7	40.2	256	30.6 ¹¹⁹	21.5 ¹¹⁰	10 S	29	5 55	18	41 47		1 45	53
14	28	48.6	39.9	271	01.4 ¹¹⁸	32.5 ¹¹⁰	20	5 45	6 12	36	24 44		2 00	56
15	43	48.5	39.7	285	32.0 ¹¹⁶	43.4 ¹⁰⁹	30	6 00	30	6 56	13 05	39	17 61	
16	58	48.4	39.4	300	02.5 ¹¹⁵	-20 54.2 ¹⁰⁸	35	09	40	7 08	12 54	37	27 64	
17	73	48.3	+22 39.2	314	33.0 ¹¹⁵	-21 04.9 ¹⁰⁷	40	6 18	6 52	7 22	12 42	33	2 38	68
18	88	48.2	+22 38.9	329	03.3 ¹¹³	-21 15.6 ¹⁰⁷	45	6 28	7 05	7 38	12 27	29	2 52	72
19	103	48.1	38.7	343	33.4 ¹¹¹	26.1 ¹⁰⁵	50	39	20	7 58	09 24		3 08	78
20	118	48.0	38.4	358	03.5 ¹¹¹	36.6 ¹⁰⁵	52	44	27	8 07	12 01	21	16 80	
21	133	47.9	38.1	12	33.5 ¹¹⁰	46.9 ¹⁰³	54	49	35	18	11 51	18	25 83	
22	148	47.8	37.9	27	03.3 ¹⁰⁸	-21 57.2 ¹⁰³	56	6 55	43	30	41 14		34 88	
23	163	47.7	37.6	41	33.0 ¹⁰⁷	-22 07.3 ¹⁰¹	58	7 01	7 53	8 44	29 9		46 92	
24	178	47.6	+22 37.4	56	02.6 ¹⁰⁶	-22 17.4 ¹⁰¹	60 S	7 08	8 04	9 00	11 15	3	3 59	99

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 5 ^h 03 ^m 8		Mag: -3.9 PMG: 9 ^h 57 ^m		Mag: +1.8 PMG: 14 ^h 33 ^m		Mag: -2.3 PMG: 19 ^h 29 ^m		Mag: +0.4 PMG: 13 ^h 56 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	283	50.2	210 44.8	+21 15.4	141 24.4	+16 04.9	66 52.6	-13 25.1	150 23.2	+18 16.6
1	298	52.7	225 44.1	15.9	156 25.4	04.4	81 55.0	25.1	165 25.3	16.5
2	313	55.2	240 43.4	16.3	171 26.3	03.9	96 57.5	25.1	180 27.5	16.5
3	328	57.6	255 42.6	16.8	186 27.3	03.4	112 00.0	25.2	195 29.7	16.4
4	344	00.1	270 41.9	17.2	201 28.2	02.9	127 02.4	25.2	210 31.8	16.3
5	359	02.6	285 41.2	+21 17.6	216 29.2	+16 02.4	142 04.9	-13 25.2	225 34.0	+18 16.2
6	14	05.0	300 40.5	+21 18.1	231 30.1	+16 01.9	157 07.4	-13 25.2	240 36.1	+18 16.1
7	29	07.5	315 39.8	18.5	246 31.1	01.4	172 09.9	25.2	255 38.3	16.1
8	44	10.0	330 39.1	19.0	261 32.0	00.9	187 12.3	25.2	270 40.5	16.0
9	59	12.4	345 38.4	19.4	276 33.0	+16 00.4	202 14.8	25.2	285 42.6	15.9
10	74	14.9	0 37.7	19.8	291 33.9	+15 59.9	217 17.3	25.2	300 44.8	15.8
11	89	17.3	15 37.0	+21 20.2	306 34.9	+15 59.4	232 19.7	-13 25.2	315 46.9	+18 15.7
12	104	19.8	30 36.3	+21 20.7	321 35.8	+15 58.9	247 22.2	-13 25.3	330 49.1	+18 15.7
13	119	22.3	45 35.5	21.1	336 36.8	58.4	262 24.7	25.3	345 51.3	15.6
14	134	24.7	60 34.8	21.5	351 37.7	57.9	277 27.1	25.3	0 53.4	15.5
15	149	27.2	75 34.1	22.0	6 38.7	57.4	292 29.6	25.3	15 55.6	15.4
16	164	29.7	90 33.4	22.4	21 39.6	56.9	307 32.0	25.3	30 57.7	15.3
17	179	32.1	105 32.7	+21 22.8	36 40.6	+15 56.4	322 34.5	-13 25.3	45 59.9	+18 15.3
18	194	34.6	120 32.0	+21 23.2	51 41.5	+15 55.9	337 37.0	-13 25.3	61 02.1	+18 15.2
19	209	37.1	135 31.3	23.7	66 42.5	55.4	352 39.4	25.3	76 04.2	15.1
20	224	39.5	150 30.5	24.1	81 43.5	54.9	7 41.9	25.3	91 06.4	15.0
21	239	42.0	165 29.8	24.5	96 44.4	54.4	22 44.4	25.4	106 08.6	14.9
22	254	44.5	180 29.1	24.9	111 45.4	53.9	37 46.8	25.4	121 10.7	14.9
23	269	46.9	195 28.4	25.4	126 46.3	53.4	52 49.3	25.4	136 12.9	14.8
24	284	49.4	210 27.7	+21 25.8	141 47.3	+15 52.9	67 51.8	-13 25.4	151 15.0	+18 14.7
Dif	—		-7	+4	+10	-5	+25	0	+22	-1

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15 ^h 7			Edad: 11 ^d 3	PHE {	4 ^h : 56 ^s 5 12 ^h : 56 ^s 8 20 ^h : 57 ^s 0								
	PMG: 12 ^h 04 ^m 9								SD: 15 ^h 4		PMG: 21 ^h 00 ^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	47.6	+22 37.4	56	02.6	-22 17.4	100	60 N	21 19	22 48	** **	18 33 105	23 18 14	
1	193	47.5	37.1	70	32.1 ¹⁰⁵	27.4 ¹⁰⁰	100	58	21 01	22 10	** **	18 09 93	23 43 25	
2	208	47.4	36.8	85	01.5 ¹⁰⁴	37.3 ⁹⁹	99	56	20 45	21 44	** **	17 49 87	** ** **	
3	223	47.3	36.6	99	30.7 ¹⁰²	47.0 ⁹⁷	97	54	32	24	22 55	33 83	** ** *	
4	238	47.2	36.3	113	59.9 ¹⁰²	-22 56.7 ⁹⁷	97	52	20	21 07	22 20	19 80	0 08 26	
5	253	47.1	+22 36.0	128	28.9 ¹⁰⁰	-23 06.3 ⁹⁶	96	50	20 10	20 53	21 55	17 07 77	0 18 28	
6	268	47.0	+22 35.8	142	57.8 ⁹⁹	-23 15.7 ⁹⁴	94	45	19 49	20 25	21 14	16 42 72	0 39 33	
7	283	46.9	35.5	157	26.5 ⁹⁷	25.1 ⁹⁴	94	40	32	20 04	20 45	22 69	0 56 37	
8	298	46.8	35.2	171	55.2 ⁹⁷	34.3 ⁹²	92	35	17	19 46	23	16 06 66	1 10 40	
9	313	46.7	35.0	186	23.7 ⁹⁵	43.4 ⁹¹	91	30	19 05	32	20 05	15 51 65	23 42	
10	328	46.6	34.7	200	52.1 ⁹⁴	-23 52.5 ⁹¹	91	20	18 44	19 08	19 37	27 62	1 44 47	
11	343	46.5	+22 34.4	215	20.4 ⁹³	-24 01.4 ⁸⁹	89	10 N	18 25	18 48	19 15	15 06 59	2 03 50	
12	358	46.4	+22 34.2	229	48.6 ⁹²	-24 10.1 ⁸⁷	87	0	18 09	18 31	18 57	14 47 56	2 20 53	
13	13	46.3	33.9	244	16.6 ⁹⁰	18.8 ⁸⁷	87	10 S	17 52	18 15	41	28 54	38 56	
14	28	46.2	33.6	258	44.5 ⁸⁹	27.3 ⁸⁵	85	20	34	17 58	25	14 08 50	2 56 60	
15	43	46.1	33.4	273	12.3 ⁸⁸	35.8 ⁸⁵	85	30	14	40	10	13 44 47	3 18 64	
16	58	46.0	33.1	287	40.0 ⁸⁷	44.1 ⁸³	83	35	17 02	30	18 01	31 45	31 66	
17	73	45.9	+22 32.8	302	07.6 ⁸⁶	-24 52.3 ⁸²	82	40	16 48	17 19	17 52	13 15 42	3 46 69	
18	88	45.8	+22 32.5	316	35.0 ⁸⁴	-25 00.3 ⁸⁰	80	45	16 32	17 06	17 43	12 56 39	4 04 73	
19	103	45.7	32.3	331	02.3 ⁸³	08.2 ⁷⁹	79	50	13	16 51	32	33 34	26 78	
20	118	45.6	32.0	345	29.5 ⁸²	16.0 ⁷⁸	78	52	16 03	44	27	22 32	36 81	
21	133	45.5	31.7	359	56.6 ⁸¹	23.7 ⁷⁷	77	54	15 53	36	22	12 09 29	4 48 84	
22	148	45.4	31.4	14	23.6 ⁸⁰	31.2 ⁷⁵	75	56	41	27	16	11 55 24	5 02 89	
23	163	45.3	31.2	28	50.4 ⁷⁸	38.6 ⁷⁴	74	58	27	18	09	38 19	18 95	
24	178	45.2	+22 30.9	43	17.2 ⁷⁸	-25 45.9 ⁷³	73	60 S	15 11	16 07	17 03	11 18 10	5 38 103	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 4 ^h 59 ^m 9		Mag: -3.9 PMG: 9 ^h 59 ^m		Mag: +1.8 PMG: 14 ^h 32 ^m		Mag: -2.3 PMG: 19 ^h 25 ^m		Mag: +0.4 PMG: 13 ^h 53 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	284	49.4	210 27.7	+21 25.8	141 47.3	+15 52.9	67 51.8	-13 25.4	151 15.0	+18 14.7
1	299	51.8	225 27.0	26.2	156 48.2	52.4	82 54.2	25.4	166 17.2	14.6
2	314	54.3	240 26.2	26.6	171 49.2	51.9	97 56.7	25.4	181 19.4	14.5
3	329	56.8	255 25.5	27.0	186 50.1	51.4	112 59.1	25.4	196 21.5	14.5
4	344	59.2	270 24.8	27.4	201 51.1	50.9	128 01.6	25.4	211 23.7	14.4
5	0	01.7	285 24.1	+21 27.9	216 52.0	+15 50.4	143 04.1	-13 25.5	226 25.8	+18 14.3
6	15	04.2	300 23.4	+21 28.3	231 53.0	+15 49.9	158 06.5	-13 25.5	241 28.0	+18 14.2
7	30	06.6	315 22.7	28.7	246 53.9	49.4	173 09.0	25.5	256 30.2	14.1
8	45	09.1	330 21.9	29.1	261 54.9	48.9	188 11.5	25.5	271 32.3	14.1
9	60	11.6	345 21.2	29.5	276 55.8	48.3	203 13.9	25.5	286 34.5	14.0
10	75	14.0	0 20.5	29.9	291 56.8	47.8	218 16.4	25.5	301 36.6	13.9
11	90	16.5	15 19.8	+21 30.3	306 57.8	+15 47.3	233 18.8	-13 25.5	316 38.8	+18 13.8
12	105	19.0	30 19.1	+21 30.7	321 58.7	+15 46.8	248 21.3	-13 25.5	331 41.0	+18 13.7
13	120	21.4	45 18.3	31.1	336 59.7	46.3	263 23.7	25.6	346 43.1	13.6
14	135	23.9	60 17.6	31.5	352 00.6	45.8	278 26.2	25.6	1 45.3	13.6
15	150	26.3	75 16.9	31.9	7 01.6	45.3	293 28.7	25.6	16 47.4	13.5
16	165	28.8	90 16.2	32.3	22 02.5	44.8	308 31.1	25.6	31 49.6	13.4
17	180	31.3	105 15.4	+21 32.7	37 03.5	+15 44.3	323 33.6	-13 25.6	46 51.7	+18 13.3
18	195	33.7	120 14.7	+21 33.1	52 04.4	+15 43.8	338 36.0	-13 25.6	61 53.9	+18 13.2
19	210	36.2	135 14.0	33.5	67 05.4	43.3	353 38.5	25.6	76 56.1	13.2
20	225	38.7	150 13.3	33.9	82 06.3	42.8	8 41.0	25.7	91 58.2	13.1
21	240	41.1	165 12.5	34.3	97 07.3	42.3	23 43.4	25.7	107 00.4	13.0
22	255	43.6	180 11.8	34.7	112 08.3	41.8	38 45.9	25.7	122 02.5	12.9
23	270	46.1	195 11.1	35.1	127 09.2	41.3	53 48.3	25.7	137 04.7	12.8
24	285	48.5	210 10.4	+21 35.5	142 10.2	+15 40.7	68 50.8	-13 25.7	152 06.9	+18 12.8
Dif	—		-7	+4	+10	-5	+25	0	+22	-1

UT	SOL				LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15 ^h 7 PMG: 12 ^h 05 ^m 1				Edad: 12 ^d 3 PHE { 4 ^h : 57/3 12 ^h : 57/6 20 ^h : 57/8 Rº: 61 ^m													
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	Rº	Hora	Rº		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	
0	178	45.2	+22	30.9	43	17.2	-25	45.9	60 N	** **	1 22	2 51	20 18	81	23 32	47		
1	193	45.1		30.6	57	43.8	76	-25 53.0	58	** **	2 00	3 10	19 42	75	** **	**		
2	208	45.0		30.3	72	10.2	74	-26 00.0	70	** **	26	25	19 16	72	0 03	31		
3	223	44.9		30.0	86	36.6	74	-26 06.8	68	1 15	2 46	38	18 56	70	19	36		
4	238	44.8		29.8	101	02.9	73	13.6	68	1 51	3 03	3 50	39 69		34	38		
5	253	44.7	+22	29.5	115	29.0	71	-26 20.1	65	2 15	3 17	4 00	18 24	68	0 46	41		
6	268	44.6	+22	29.2	129	55.1	71	-26 26.5	64	2 57	3 45	4 22	17 54	67	1 12	45		
7	283	44.5		28.9	144	21.0	69	32.8	63	3 25	4 06	39	31 66		33	48		
8	298	44.4		28.6	158	46.8	68	38.9	61	3 47	24	4 53	17 12	65	1 50	50		
9	313	44.3		28.3	173	12.5	67	44.9	60	4 05	4 38	5 05	16 56	64	2 05	52		
10	328	44.2		28.1	187	38.1	66	50.7	58	33	5 02	26	29 62		31	54		
11	343	44.1	+22	27.8	202	03.5	64	-26 56.4	57	4 55	5 22	5 45	16 05	62	2 53	56		
12	358	44.0	+22	27.5	216	28.9	64	-27 01.9	55	0	5 13	5 39	6 01	15 43	61	3 13	59	
13	13	43.9		27.2	230	54.2	63	07.2	53	10 S	29	5 55	18	15 22	59	34	60	
14	28	43.8		26.9	245	19.3	61	12.4	52	20	5 45	6 12	36	14 58	58	3 56	63	
15	43	43.7		26.6	259	44.4	61	17.5	51	30	6 00	30	6 56	31 57	4 22	65		
16	58	43.6		26.3	274	09.3	59	22.4	49	35	08	40	7 08	14 16	55	37	66	
17	73	43.5	+22	26.1	288	34.2	59	-27 27.1	47	40	6 17	6 51	7 21	13 57	54	4 55	68	
18	88	43.5	+22	25.8	302	58.9	57	-27 31.6	45	45	6 27	7 04	7 37	13 35	52	5 17	70	
19	103	43.4		25.5	317	23.6	57	36.0	44	50	38	19	7 57	13 07	50	44	73	
20	118	43.3		25.2	331	48.1	55	40.2	42	52	43	26	8 06	12 54	47	5 57	75	
21	133	43.2		24.9	346	12.6	55	44.3	41	54	48	34	17	38 46	6 12	78		
22	148	43.1		24.6	0	37.0	54	48.2	39	56	6 54	42	28	12 19	43	31	80	
23	163	43.0		24.3	15	01.2	52	51.9	37	58	7 00	7 52	42	11 57	38	6 53	85	
24	178	42.9	+22	24.0	29	25.4	52	-27 55.4	35	60 S	7 07	8 03	8 58	11 28	29	7 21	95	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG 4 ^h 56 ^m 0		Mag: -3.9 PMG: 10 ^h 00 ^m		Mag: +1.8 PMG: 14 ^h 30 ^m		Mag: -2.3 PMG: 19 ^h 21 ^m		Mag: +0.4 PMG: 13 ^h 50 ^m									
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄									
h	°	'	°	'	°	'	°	'	°	'								
0	285	48.5	210	10.4	+21	35.5	142	10.2	+15	40.7	68	50.8	-13	25.7	152	06.9	+18	12.8
1	300	51.0	225	09.6		35.9	157	11.1		40.2	83	53.2		25.7	167	09.0		12.7
2	315	53.5	240	08.9		36.3	172	12.1		39.7	98	55.7		25.7	182	11.2		12.6
3	330	55.9	255	08.2		36.7	187	13.0		39.2	113	58.1		25.8	197	13.3		12.5
4	345	58.4	270	07.5		37.1	202	14.0		38.7	129	00.6		25.8	212	15.5		12.4
5	1	00.8	285	06.7	+21	37.5	217	14.9	+15	38.2	144	03.0	-13	25.8	227	17.7	+18	12.4
6	16	03.3	300	06.0	+21	37.9	232	15.9	+15	37.7	159	05.5	-13	25.8	242	19.8	+18	12.3
7	31	05.8	315	05.3		38.3	247	16.9		37.2	174	08.0		25.8	257	22.0		12.2
8	46	08.2	330	04.5		38.7	262	17.8		36.7	189	10.4		25.8	272	24.1		12.1
9	61	10.7	345	03.8		39.0	277	18.8		36.2	204	12.9		25.8	287	26.3		12.0
10	76	13.2	0	03.1		39.4	292	19.7		35.7	219	15.3		25.9	302	28.5		12.0
11	91	15.6	15	02.4	+21	39.8	307	20.7	+15	35.1	234	17.8	-13	25.9	317	30.6	+18	11.9
12	106	18.1	30	01.6	+21	40.2	322	21.6	+15	34.6	249	20.2	-13	25.9	332	32.8	+18	11.8
13	121	20.6	45	00.9		40.6	337	22.6		34.1	264	22.7		25.9	347	34.9		11.7
14	136	23.0	60	00.2		41.0	352	23.5		33.6	279	25.1		25.9	2	37.1		11.6
15	151	25.5	74	59.4		41.3	7	24.5		33.1	294	27.6		25.9	17	39.2		11.5
16	166	27.9	89	58.7		41.7	22	25.5		32.6	309	30.0		26.0	32	41.4		11.5
17	181	30.4	104	58.0	+21	42.1	37	26.4	+15	32.1	324	32.5	-13	26.0	47	43.6	+18	11.4
18	196	32.9	119	57.2	+21	42.5	52	27.4	+15	31.6	339	34.9	-13	26.0	62	45.7	+18	11.3
19	211	35.3	134	56.5		42.9	67	28.3		31.1	354	37.4		26.0	77	47.9		11.2
20	226	37.8	149	55.8		43.2	82	29.3		30.5	9	39.8		26.0	92	50.0		11.1
21	241	40.3	164	55.0		43.6	97	30.2		30.0	24	42.3		26.0	107	52.2		11.1
22	256	42.7	179	54.3		44.0	112	31.2		29.5	39	44.7		26.1	122	54.4		11.0
23	271	45.2	194	53.6		44.4	127	32.2		29.0	54	47.2		26.1	137	56.5		10.9
24	286	47.7	209	52.8	+21	44.7	142	33.1	+15	28.5	69	49.6	-13	26.1	152	58.7	+18	10.8
Dif	—		-7		+4		+10		-5		+25		0		+22		-	

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: 13 ^d 3 PHE { SD: 15 ^h 8 PMG: 22 ^h 58 ^m 4 ^h : 58 ^m 1 12 ^h : 58 ^m 4 20 ^h : 58 ^m 6 R°: 63 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m	h m	h m	h m	h m
0	178	42.9	+22	24.0	29	25.4	51	–27	55.4	60 N	21 17	22 43	** **	21 39	33	** ** *
1	193	42.8		23.7	43	49.5	51	–27	58.8	58	20 58	22 07	** **	20 57	43	0 08 53
2	208	42.7		23.4	58	13.5	50	–28	02.0	56	43	21 42	** **	28	48	34 55
3	223	42.6		23.1	72	37.5	50		05.0	54	30	22	22 50	20 06	51	0 55 55
4	238	42.5		22.8	87	01.3	48		07.9	52	19	21 06	22 17	19 48	52	1 12 58
5	253	42.4	+22	22.5	101	25.1	48	–28	10.5	50	20 09	20 52	21 53	19 32	54	1 27 58
6	268	42.3	+22	22.2	115	48.8	47	–28	13.0	45	19 48	20 24	21 12	19 01	56	1 57 59
7	283	42.2		21.9	130	12.4	46		15.3	40	31	20 03	20 44	18 37	57	2 21 60
8	298	42.1		21.6	144	36.0	46		17.5	35	17	19 46	22	17	59	40 60
9	313	42.1		21.3	158	59.4	44		19.4	30	19 04	31	20 04	18 00	59	2 57 60
10	328	42.0		21.0	173	22.9	45		21.2	20	18 43	19 08	19 37	17 31	61	3 25 61
11	343	41.9	+22	20.7	187	46.2	43	–28	22.8	10 N	18 26	18 48	19 15	17 07	61	3 49 62
12	358	41.8	+22	20.4	202	09.5	43	–28	24.1	0	18 09	18 31	18 57	16 44	62	4 12 61
13	13	41.7		20.1	216	32.7	42		25.4	10 S	17 52	18 15	41	16 21	63	34 62
14	28	41.6		19.8	230	55.9	42		26.4	20	35	17 59	26	15 56	64	4 59 61
15	43	41.5		19.5	245	19.0	41		27.2	30	15	41	10	28	64	5 27 62
16	58	41.4		19.2	259	42.0	40		27.8	35	17 03	31	18 02	15 11	65	5 43 62
17	73	41.3	+22	18.9	274	05.0	40	–28	28.3	40	16 50	17 20	17 54	14 51	66	6 03 62
18	88	41.2	+22	18.6	288	28.0	40	–28	28.6	45	16 34	17 07	17 44	14 27	67	6 27 61
19	103	41.1		18.3	302	50.9	39		28.6	50	14	16 52	33	13 57	67	6 57 61
20	118	41.1		18.0	317	13.7	38		28.5	52	16 05	45	28	41	68	7 12 61
21	133	41.0		17.7	331	36.5	38		28.2	54	15 55	38	23	24	68	30 61
22	148	40.9		17.4	345	59.3	38		27.7	56	43	29	18	13 02	70	7 51 60
23	163	40.8		17.1	0	22.1	38		27.0	58	30	20	11	12 35	71	8 18 59
24	178	40.7	+22	16.8	14	44.8	37	–28	26.1	60 S	15 14	16 09	17 05	11 57	73	8 56 57

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 4 ^h 52 ^m 0		Mag: –3.9 PMG: 10 ^h 01 ^m		Mag: +1.8 PMG: 14 ^h 29 ^m		Mag: –2.3 PMG: 19 ^h 18 ^m		Mag: +0.4 PMG: 13 ^h 46 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	286	47.7	209	52.8	142	33.1	69	49.6	152	58.7
1	301	50.1	224	52.1	157	34.1	84	52.1	168	00.8
2	316	52.6	239	51.4	172	35.0	99	54.5	183	03.0
3	331	55.1	254	50.6	187	36.0	114	57.0	198	05.1
4	346	57.5	269	49.9	202	36.9	129	59.4	213	07.3
5	2	00.0	284	49.2	217	37.9	145	01.9	228	09.5
6	17	02.4	299	48.4	232	38.9	160	04.3	243	11.6
7	32	04.9	314	47.7	247	39.8	175	06.7	258	13.8
8	47	07.4	329	47.0	262	40.8	190	09.2	273	15.9
9	62	09.8	344	46.2	277	41.7	205	11.6	288	18.1
10	77	12.3	359	45.5	292	42.7	220	14.1	303	20.2
11	92	14.8	14	44.7	307	43.6	235	16.5	318	22.4
12	107	17.2	29	44.0	322	44.6	250	19.0	333	24.6
13	122	19.7	44	43.3	337	45.6	265	21.4	348	26.7
14	137	22.2	59	42.5	352	46.5	280	23.9	3	28.9
15	152	24.6	74	41.8	7	47.5	295	26.3	18	31.0
16	167	27.1	89	41.0	50.5	22 48.4	310	28.7	33	33.2
17	182	29.6	104	40.3	37	49.4	325	31.2	48	35.3
18	197	32.0	119	39.6	52	50.3	340	33.6	63	37.5
19	212	34.5	134	38.8	51.6	67 51.3	355	36.1	78	39.7
20	227	36.9	149	38.1	51.9	82 52.3	10	38.5	93	41.8
21	242	39.4	164	37.3	52.3	97 53.2	25	41.0	108	44.0
22	257	41.9	179	36.6	52.6	112 54.2	40	43.4	123	46.1
23	272	44.3	194	35.9	53.0	127 55.1	55	45.8	138	48.3
24	287	46.8	209	35.1	53.3	142 56.1	70	48.3	153	50.4
Dif	—		–7		+4		+10		–5	

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15 ^h 7			Edad: 14 ^d 3	PHE {	4 ^h : 58 ^m 9		12 ^h : 59 ^m 1	20 ^h : 59 ^m 3		R°: ***	PMG: 12 ^h 05 ^m 4	PMG: *** **m	R°	R°	
	hG ☉	Dec	Dif													Dec
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m
0	178	40.7	+22	14	44.8	-28	26.1	11	60 N	** *	1 28	2 54	22 12	11	0 19	98
1	193	40.6		29	07.5		25.0	12	58	** *	2 04	3 12	21 40	21	1 01	87
2	208	40.5		43	30.1		23.8	15	56	** *	29	28	21 16	28	29	83
3	223	40.4		57	52.8		22.3	17	54	1 21	2 49	41	20 57	32	1 52	79
4	238	40.3		72	15.4		20.6	17	52	1 54	3 05	3 52	40 36	2	10 77	
5	253	40.3	+22	86	38.0	-28	18.7	19	50	2 18	3 19	4 02	20 26	39	2 25	76
6	268	40.2	+22	101	00.6	-28	16.7	20	45	2 59	3 47	4 23	19 57	44	2 56	73
7	283	40.1		115	23.1		14.4	23	40	3 27	4 08	40	34 48		3 21	70
8	298	40.0		129	45.7		12.0	24	35	3 49	25	4 54	19 16	50	40	70
9	313	39.9		144	08.2		09.3	27	30	4 06	4 39	5 06	18 59	53	3 57	68
10	328	39.8		158	30.8		06.5	28	20	34	5 03	27	32 56		4 26	66
11	343	39.7	+22	172	53.3	-28	03.5	30	10 N	4 55	5 22	5 45	18 08	59	4 51	64
12	358	39.6	+22	187	15.9	-28	00.2	33	0	5 13	5 39	6 02	17 46	62	5 13	63
13	13	39.6		201	38.4	-27	56.8	34	10 S	29	5 56	18	24 64		5 36	61
14	28	39.5		216	01.0		53.2	36	20	5 45	6 12	36	17 00	67	6 00	59
15	43	39.4		230	23.5		49.3	39	30	6 00	30	6 56	16 32	71	29	56
16	58	39.3		244	46.1		45.3	40	35	08	39	7 07	16 16	72	6 45	55
17	73	39.2	+22	259	08.7	-27	41.1	42	40	6 17	6 50	7 21	15 57	75	7 05	52
18	88	39.1	+22	273	31.3	-27	36.7	44	45	6 26	7 03	7 36	15 34	78	7 28	50
19	103	39.0		287	53.9		32.1	46	50	37	18	7 56	15 04	83	7 58	46
20	118	39.0		302	16.6		27.3	48	52	42	25	8 05	14 49	85	8 13	44
21	133	38.9		316	39.2		22.3	50	54	47	32	15	32 88		31	41
22	148	38.8		331	01.9		17.2	51	56	53	41	27	14 12	92	8 51	37
23	163	38.7		345	24.7		11.8	54	58	6 59	7 50	40	13 46	98	9 17	32
24	178	38.6	+22	359	47.4	-27	06.2	56	60 S	7 05	8 01	8 56	13 10	110	9 53	21

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG 4 ^h 48 ^m 1		Mag: -3.9 PMG: 10 ^h 02 ^m		Mag: +1.8 PMG: 14 ^h 27 ^m		Mag: -2.3 PMG: 19 ^h 14 ^m		Mag: +0.4 PMG: 13 ^h 43 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	287	46.8	209	35.1	+21	53.3	142	56.1	+15	16.2	70	48.3	-13	26.5	153	50.4	+18	08.9
1	302	49.3	224	34.4		53.7	157	57.1		15.6	85	50.7		26.5	168	52.6		08.8
2	317	51.7	239	33.6		54.0	172	58.0		15.1	100	53.2		26.6	183	54.8		08.7
3	332	54.2	254	32.9		54.4	187	59.0		14.6	115	55.6		26.6	198	56.9		08.6
4	347	56.7	269	32.1		54.7	202	59.9		14.1	130	58.0		26.6	213	59.1		08.5
5	2	59.1	284	31.4	+21	55.0	218	00.9	+15	13.6	146	00.5	-13	26.6	229	01.2	+18	08.5
6	18	01.6	299	30.7	+21	55.4	233	01.9	+15	13.1	161	02.9	-13	26.6	244	03.4	+18	08.4
7	33	04.1	314	29.9		55.7	248	02.8		12.5	176	05.4		26.7	259	05.5		08.3
8	48	06.5	329	29.2		56.1	263	03.8		12.0	191	07.8		26.7	274	07.7		08.2
9	63	09.0	344	28.4		56.4	278	04.7		11.5	206	10.2		26.7	289	09.8		08.1
10	78	11.4	359	27.7		56.7	293	05.7		11.0	221	12.7		26.7	304	12.0		08.0
11	93	13.9	14	26.9	+21	57.1	308	06.7	+15	10.5	236	15.1	-13	26.7	319	14.2	+18	08.0
12	108	16.4	29	26.2	+21	57.4	323	07.6	+15	09.9	251	17.6	-13	26.8	334	16.3	+18	07.9
13	123	18.8	44	25.4		57.7	338	08.6		09.4	266	20.0		26.8	349	18.5		07.8
14	138	21.3	59	24.7		58.1	353	09.5		08.9	281	22.4		26.8	4	20.6		07.7
15	153	23.8	74	23.9		58.4	8	10.5		08.4	296	24.9		26.8	19	22.8		07.6
16	168	26.2	89	23.2		58.7	23	11.5		07.9	311	27.3		26.9	34	24.9		07.6
17	183	28.7	104	22.4	+21	59.1	38	12.4	+15	07.4	326	29.7	-13	26.9	49	27.1	+18	07.5
18	198	31.2	119	21.7	+21	59.4	53	13.4	+15	06.8	341	32.2	-13	26.9	64	29.3	+18	07.4
19	213	33.6	134	20.9	+21	59.7	68	14.3		06.3	356	34.6		26.9	79	31.4		07.3
20	228	36.1	149	20.2	+22	00.0	83	15.3		05.8	11	37.0		26.9	94	33.6		07.2
21	243	38.6	164	19.4	+22	00.4	98	16.3		05.3	26	39.5		27.0	109	35.7		07.1
22	258	41.0	179	18.7		00.7	113	17.2		04.8	41	41.9		27.0	124	37.9		07.1
23	273	43.5	194	17.9		01.0	128	18.2		04.2	56	44.3		27.0	139	40.0		07.0
24	288	45.9	209	17.2	+22	01.3	143	19.1	+15	03.7	71	46.8	-13	27.0	154	42.2	+18	06.9
Dif	—		-7		+3		+10		-5		+24		0		+22		-	

UT	SOL			☉ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 15 ^h 7			Edad: 15 ^d 3	PHE {	4 ^h : 59 ^m 5 12 ^h : 59 ^m 6 20 ^h : 59 ^m 8			Civil		Náutico	Hora	R°	Hora	R°
	PMG: 12 ^h 05 ^m 5	hG ☉	Dec						hG ☾	Dif					
h	°	'	°	°	'	°	°	h m	h m	h m	h m m	h m m	h m m	h m m	
0	178	38.6	+22 09.1	359	47.4	-27 06.2	60 N	21 14	22 37	** ** *	22 23	3	1 57	117	
1	193	38.5	08.8	14	10.2	-27 00.5	58	20 56	22 03	** ** *	22 01	11	2 28	106	
2	208	38.5	08.5	28	33.1	-26 54.5	56	41	21 39	** ** *	21 44	16	2 52	99	
3	223	38.4	08.1	42	55.9	48.4	54	28	20	22 45	29	21	3 11	94	
4	238	38.3	07.8	57	18.9	42.1	52	17	21 04	22 13	16	25	27	90	
5	253	38.2	+22 07.5	71	41.8	-26 35.6	50	20 07	20 50	21 50	21 05	27	3 41	87	
6	268	38.1	+22 07.2	86	04.8	-26 28.9	45	19 47	20 23	21 10	20 41	34	4 09	82	
7	283	38.0	06.8	100	27.9	22.0	40	30	20 02	20 42	22	38	31	78	
8	298	37.9	06.5	114	51.0	14.9	35	16	19 45	21	20	06	42	4 50	74
9	313	37.9	06.2	129	14.1	07.7	30	19 04	31	20 04	19	52	45	5 05	72
10	328	37.8	05.8	143	37.3	-26 00.2	20	18 43	19 08	19 36	28	50	32	67	
11	343	37.7	+22 05.5	158	00.6	-25 52.6	10 N	18 26	18 48	19 15	19 07	55	5 55	63	
12	358	37.6	+22 05.2	172	23.9	-25 44.8	0	18 09	18 31	18 57	18 48	58	6 16	60	
13	13	37.5	04.8	186	47.3	36.9	10 S	17 53	18 15	42	28	63	37	56	
14	28	37.5	04.5	201	10.8	28.7	20	35	17 59	26	18	07	67	6 59	53
15	43	37.4	04.2	215	34.3	20.4	30	16	42	11	17	43	72	7 25	48
16	58	37.3	03.8	229	57.9	11.9	35	17 04	32	18 03	28	76	40	46	
17	73	37.2	+22 03.5	244	21.5	-25 03.2	40	16 51	17 21	17 55	17 12	79	7 57	43	
18	88	37.1	+22 03.1	258	45.3	-24 54.3	45	16 35	17 09	17 45	16	52	83	8 18	39
19	103	37.0	02.8	273	09.0	45.3	50	16	16 54	35	27	89	44	33	
20	118	37.0	02.5	287	32.9	36.1	52	16 07	47	30	14	93	8 57	30	
21	133	36.9	02.1	301	56.8	26.7	54	15 57	40	25	16	00	97	9 12	26
22	148	36.8	01.8	316	20.9	17.2	56	46	31	19	15	44	101	28	22
23	163	36.7	01.4	330	45.0	-24 07.5	58	33	22	13	24	108	9 49	15	
24	178	36.6	+22 01.1	345	09.1	-23 57.6	60 S	15 17	16 12	17 07	15 00	116	10 14	7	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 4 ^h 44 ^m 2		Mag: -3.8 PMG: 10 ^h 03 ^m		Mag: +1.8 PMG: 14 ^h 26 ^m		Mag: -2.2 PMG: 19 ^h 10 ^m		Mag: +0.4 PMG: 13 ^h 39 ^m	
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	'	°	°	'	°	'	°	'	
0	288	45.9	209 17.2	+22 01.3	143 19.1	+15 03.7	71 46.8	-13 27.0	154 42.2	+18 06.9
1	303	48.4	224 16.4	01.7	158 20.1	03.2	86 49.2	27.0	169 44.3	06.8
2	318	50.9	239 15.7	02.0	173 21.1	02.7	101 51.6	27.1	184 46.5	06.7
3	333	53.3	254 14.9	02.3	188 22.0	02.2	116 54.1	27.1	199 48.7	06.6
4	348	55.8	269 14.2	02.6	203 23.0	01.6	131 56.5	27.1	214 50.8	06.6
5	3	58.3	284 13.4	+22 02.9	218 23.9	+15 01.1	146 58.9	-13 27.1	229 53.0	+18 06.5
6	19	00.7	299 12.7	+22 03.3	233 24.9	+15 00.6	162 01.4	-13 27.2	244 55.1	+18 06.4
7	34	03.2	314 11.9	03.6	248 25.9	+15 00.1	177 03.8	27.2	259 57.3	06.3
8	49	05.7	329 11.2	03.9	263 26.8	+14 59.5	192 06.2	27.2	274 59.4	06.2
9	64	08.1	344 10.4	04.2	278 27.8	59.0	207 08.7	27.2	290 01.6	06.2
10	79	10.6	359 09.7	04.5	293 28.8	58.5	222 11.1	27.2	305 03.7	06.1
11	94	13.1	14 08.9	+22 04.8	308 29.7	+14 58.0	237 13.5	-13 27.3	320 05.9	+18 06.0
12	109	15.5	29 08.2	+22 05.1	323 30.7	+14 57.5	252 16.0	-13 27.3	335 08.1	+18 05.9
13	124	18.0	44 07.4	05.4	338 31.6	56.9	267 18.4	27.3	350 10.2	05.8
14	139	20.4	59 06.6	05.7	353 32.6	56.4	282 20.8	27.3	5 12.4	05.7
15	154	22.9	74 05.9	06.1	8 33.6	55.9	297 23.2	27.4	20 14.5	05.7
16	169	25.4	89 05.1	06.4	23 34.5	55.4	312 25.7	27.4	35 16.7	05.6
17	184	27.8	104 04.4	+22 06.7	38 35.5	+14 54.8	327 28.1	-13 27.4	50 18.8	+18 05.5
18	199	30.3	119 03.6	+22 07.0	53 36.4	+14 54.3	342 30.5	-13 27.4	65 21.0	+18 05.4
19	214	32.8	134 02.9	07.3	68 37.4	53.8	357 33.0	27.5	80 23.1	05.3
20	229	35.2	149 02.1	07.6	83 38.4	53.3	12 35.4	27.5	95 25.3	05.2
21	244	37.7	164 01.3	07.9	98 39.3	52.8	27 37.8	27.5	110 27.4	05.2
22	259	40.2	179 00.6	08.2	113 40.3	52.2	42 40.2	27.5	125 29.6	05.1
23	274	42.6	193 59.8	08.5	128 41.3	51.7	57 42.7	27.5	140 31.8	05.0
24	289	45.1	208 59.1	+22 08.8	143 42.2	+14 51.2	72 45.1	-13 27.6	155 33.9	+18 04.9
Dif	—	—	-8	+3	+10	-5	+24	0	+22	-1

UT	SOL				☾ LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna			Puesta de Luna				
	SD: 15'7 PMG: 12 ^h 05 ^m 6				Edad: 16 ^d 3 PHE { SD: 16'3 PMG: 1 ^h 02 ^m 4 ^h : 59'9 12 ^h : 60'0 20 ^h : 60'1 R°: 57 ^m															
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°				
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	m	h	m	m	
0	178	36.6	+22	01.1	345	09.1	-23	57.6	60 N	** **	1 35	2 58	22 26	0	3 54	116				
1	193	36.6		00.8	359	33.4	53	47.6 ¹⁰⁰	58	** **	2 09	3 15	12 6	4 14	109					
2	208	36.5		00.4	13	57.7	53	37.4 ¹⁰²	56	** **	33	30	22 00	11	31	103				
3	223	36.4	+22	00.1	28	22.1	54	27.0 ¹⁰⁴	54	1 27	2 52	43	21 50	14	45	98				
4	238	36.3	+21	59.7	42	46.6	55	16.5 ¹⁰⁵	52	1 58	3 08	3 54	41 17	4 57	94					
5	253	36.3	+21	59.4	57	11.2	56	-23 05.9 ¹⁰⁶	50	2 21	3 21	4 04	21 32	21	5 08	91				
6	268	36.2	+21	59.0	71	35.8	56	-22 55.0 ¹⁰⁹	45	3 01	3 48	4 25	21 15	26	5 31	84				
7	283	36.1		58.7	86	00.6	58	44.1 ¹⁰⁹	40	29	4 09	41	21 00	31	5 49	79				
8	298	36.0		58.4	100	25.4	58	32.9 ¹¹²	35	3 50	26	4 55	20 48	35	6 04	75				
9	313	35.9		58.0	114	50.3	59	21.7 ¹¹²	30	4 08	4 40	5 07	37 39		17 72					
10	328	35.9		57.7	129	15.3	60	-22 10.2 ¹¹⁵	20	35	5 04	28	18 45		39 66					
11	343	35.8	+21	57.3	143	40.4	61	-21 58.7 ¹¹⁵	10 N	4 56	5 23	5 46	20 02	49	6 58	61				
12	358	35.7	+21	57.0	158	05.6	62	-21 46.9 ¹¹⁸	0	5 14	5 40	6 02	19 46	55	7 16	57				
13	13	35.6		56.6	172	30.9	63	35.1 ¹¹⁸	10 S	30	5 56	18	31 59		33 53					
14	28	35.5		56.3	186	56.3	64	23.1 ¹²⁰	20	5 45	6 12	36	19 14	65	7 52	47				
15	43	35.5		55.9	201	21.7	64	-21 10.9 ¹²²	30	6 00	29	6 55	18 55	71	8 13	42				
16	58	35.4		55.6	215	47.3	66	-20 58.6 ¹²³	35	08	39	7 07	44 74		26 38					
17	73	35.3	+21	55.2	230	12.9	66	-20 46.2 ¹²⁴	40	6 16	6 50	7 20	18 31	78	8 40	34				
18	88	35.2	+21	54.8	244	38.6	67	-20 33.7 ¹²⁵	45	6 25	7 02	7 35	18 15	84	8 57	29				
19	103	35.2		54.5	259	04.5	69	21.0 ¹²⁷	50	36	17	7 54	17 56	90	9 17	24				
20	118	35.1		54.1	273	30.4	69	-20 08.2 ¹²⁸	52	41	24	8 03	47 94		27 21					
21	133	35.0		53.8	287	56.4	70	-19 55.2 ¹³⁰	54	46	31	13	37 97		38 17					
22	148	34.9		53.4	302	22.5	71	42.2 ¹³⁰	56	51	39	25	25 102		9 50 13					
23	163	34.9		53.1	316	48.7	72	29.0 ¹³²	58	6 57	48	38	17 12 107		10 04 8					
24	178	34.8	+21	52.7	331	15.0	73	-19 15.6 ¹³⁴	60 S	7 04	7 59	8 53	16 56 113		10 21 2					
UT	ARIES				VENUS				MARTE				JÚPITER				SATURNO			
	PMG 4 ^h 40 ^m 2				Mag: -3.8 PMG: 10 ^h 05 ^m				Mag: +1.8 PMG: 14 ^h 24 ^m				Mag: -2.2 PMG: 19 ^h 06 ^m				Mag: +0.4 PMG: 13 ^h 36 ^m			
	hG ♈		Dec		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	289	45.1			208	59.1	+22	08.8	143	42.2	+14	51.2	72	45.1	-13	27.6	155	33.9	+18	04.9
1	304	47.6			223	58.3		09.1	158	43.2		50.7	87	47.5		27.6	170	36.1		04.8
2	319	50.0			238	57.6		09.4	173	44.2		50.1	102	49.9		27.6	185	38.2		04.8
3	334	52.5			253	56.8		09.6	188	45.1		49.6	117	52.4		27.6	200	40.4		04.7
4	349	54.9			268	56.0		09.9	203	46.1		49.1	132	54.8		27.7	215	42.5		04.6
5	4	57.4			283	55.3	+22	10.2	218	47.0	+14	48.6	147	57.2	-13	27.7	230	44.7	+18	04.5
6	19	59.9			298	54.5	+22	10.5	233	48.0	+14	48.0	162	59.6	-13	27.7	245	46.8	+18	04.4
7	35	02.3			313	53.8		10.8	248	49.0		47.5	178	02.1		27.7	260	49.0		04.3
8	50	04.8			328	53.0		11.1	263	49.9		47.0	193	04.5		27.8	275	51.1		04.3
9	65	07.3			343	52.2		11.4	278	50.9		46.5	208	06.9		27.8	290	53.3		04.2
10	80	09.7			358	51.5		11.7	293	51.9		45.9	223	09.3		27.8	305	55.5		04.1
11	95	12.2			13	50.7	+22	12.0	308	52.8	+14	45.4	238	11.8	-13	27.8	320	57.6	+18	04.0
12	110	14.7			28	49.9	+22	12.2	323	53.8	+14	44.9	253	14.2	-13	27.9	335	59.8	+18	03.9
13	125	17.1			43	49.2		12.5	338	54.7		44.4	268	16.6		27.9	351	01.9		03.8
14	140	19.6			58	48.4		12.8	353	55.7		43.8	283	19.0		27.9	6	04.1		03.8
15	155	22.1			73	47.7		13.1	8	56.7		43.3	298	21.5		27.9	21	06.2		03.7
16	170	24.5			88	46.9		13.4	23	57.6		42.8	313	23.9		28.0	36	08.4		03.6
17	185	27.0			103	46.1	+22	13.7	38	58.6	+14	42.2	328	26.3	-13	28.0	51	10.5	+18	03.5
18	200	29.4			118	45.4	+22	13.9	53	59.6	+14	41.7	343	28.7	-13	28.0	66	12.7	+18	03.4
19	215	31.9			133	44.6		14.2	69	00.5		41.2	358	31.1		28.0	81	14.8		03.3
20	230	34.4			148	43.8		14.5	84	01.5		40.7	13	33.6		28.1	96	17.0		03.3
21	245	36.8			163	43.1		14.8	99	02.5		40.1	28	36.0		28.1	111	19.1		03.2
22	260	39.3			178	42.3		15.0	114	03.4		39.6	43	38.4		28.1	126	21.3		03.1
23	275	41.8			193	41.5		15.3	129	04.4		39.1	58	40.8		28.1	141	23.5		03.0
24	290	44.2			208	40.8	+22	15.6	144	05.4	+14	38.6	73	43.2	-13	28.2	156	25.6	+18	02.9
Dif	—				-8 +3				+10 -5				+24 0				+22 -1			

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 15 ^h 7			Edad: 17 ^d 3 PHE	SD: 16 ^h 4				R°: 54 ^m						
	PMG: 12 ^h 05 ^m 7				PMG: 1 ^h 59 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Civil	Náutico	Hora	R°	Hora	R°	
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m	h m	h m	
0	178	34.8	+21 52.7	331	15.0	-19 15.6	73	60 N	21 11	22 31	** **	22 26	0	5 50 110	
1	193	34.7	52.4	345	41.3	-19 02.2	134	58	20 53	21 59	** **	18	4	6 03 104	
2	208	34.6	52.0	0	07.8	-18 48.6	136	56	39	36	23 36	11	7	14 99	
3	223	34.6	51.6	14	34.4	35.0	136	54	26	17	22 39	22 04	11	23 96	
4	238	34.5	51.3	29	01.0	21.2	138	52	15	21 01	22 10	21 58	14	31 93	
5	253	34.4	+21 50.9	43	27.8	-18 07.3	139	50	20 06	20 48	21 48	21 53	16	6 39 89	
6	268	34.3	+21 50.6	57	54.6	-17 53.3	140	45	19 45	20 22	21 09	21 41	22	6 55 83	
7	283	34.3	50.2	72	21.5	39.1	142	40	29	20 01	20 41	31	27	7 08 78	
8	298	34.2	49.8	86	48.5	24.9	142	35	15	19 44	20	23	31	19 73	
9	313	34.1	49.5	101	15.6	-17 10.6	143	30	19 03	30	20 03	16	34	29 69	
10	328	34.0	49.1	115	42.8	-16 56.1	145	20	18 43	19 07	19 36	21 03	40	45 63	
11	343	34.0	+21 48.7	130	10.1	-16 41.6	145	10 N	18 26	18 48	19 15	20 51	47	7 59 58	
12	358	33.9	+21 48.4	144	37.5	-16 27.0	146	0	18 09	18 32	18 58	20 41	51	8 13 52	
13	13	33.8	48.0	159	05.0	-16 12.2	148	10 S	17 53	16	42	30	56	26 47	
14	28	33.8	47.6	173	32.5	-15 57.4	148	20	36	18 00	27	19	62	39 43	
15	43	33.7	47.3	188	00.1	42.5	149	30	17	17 43	12	20 06	68	8 55 37	
16	58	33.6	46.9	202	27.9	27.4	151	35	17 05	33	18 04	19 58	72	9 04 33	
17	73	33.5	+21 46.5	216	55.7	-15 12.3	151	40	16 52	17 22	17 56	19 49	76	9 14 29	
18	88	33.5	+21 46.2	231	23.6	-14 57.1	152	45	16 37	17 10	17 47	19 39	81	9 26 25	
19	103	33.4	45.8	245	51.6	41.9	152	50	18	16 56	36	26	88	41 18	
20	118	33.3	45.4	260	19.6	26.5	154	52	09	49	32	21	90	48 15	
21	133	33.3	45.1	274	47.8	-14 11.1	154	54	16 00	42	27	14	94	9 55 12	
22	148	33.2	44.7	289	16.0	-13 55.5	156	56	15 48	34	22	19 07	97	10 03 9	
23	163	33.1	44.3	303	44.3	39.9	156	58	35	25	16	18 59	101	12 5	
24	178	33.0	+21 44.0	318	12.7	-13 24.2	157	60 S	15 20	16 14	17 09	18 49	107	10 23 0	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 4 ^h 36 ^m 3		Mag: -3.8 PMG: 10 ^h 06 ^m		Mag: +1.8 PMG: 14 ^h 23 ^m		Mag: -2.2 PMG: 19 ^h 02 ^m		Mag: +0.4 PMG: 13 ^h 32 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	290	44.2	208	40.8	144	05.4	73	43.2	156	25.6
1	305	46.7	223	40.0	159	06.3	88	45.7	171	27.8
2	320	49.2	238	39.2	174	07.3	103	48.1	186	29.9
3	335	51.6	253	38.5	189	08.2	118	50.5	201	32.1
4	350	54.1	268	37.7	204	09.2	133	52.9	216	34.2
5	5	56.5	283	36.9	219	10.2	148	55.3	231	36.4
6	20	59.0	298	36.2	234	11.1	163	57.7	246	38.5
7	36	01.5	313	35.4	249	12.1	179	00.2	261	40.7
8	51	03.9	328	34.6	264	13.1	194	02.6	276	42.8
9	66	06.4	343	33.9	279	14.0	209	05.0	291	45.0
10	81	08.9	358	33.1	294	15.0	224	07.4	306	47.1
11	96	11.3	13	32.3	309	16.0	239	09.8	321	49.3
12	111	13.8	28	31.6	324	16.9	254	12.2	336	51.4
13	126	16.3	43	30.8	339	17.9	269	14.7	351	53.6
14	141	18.7	58	30.0	354	18.9	284	17.1	6	55.8
15	156	21.2	73	29.3	9	19.8	299	19.5	21	57.9
16	171	23.7	88	28.5	24	20.8	314	21.9	37	00.1
17	186	26.1	103	27.7	39	21.8	329	24.3	52	02.2
18	201	28.6	118	26.9	54	22.7	344	26.7	67	04.4
19	216	31.0	133	26.2	69	23.7	359	29.1	82	06.5
20	231	33.5	148	25.4	84	24.7	14	31.6	97	08.7
21	246	36.0	163	24.6	99	25.6	29	34.0	112	10.8
22	261	38.4	178	23.9	114	26.6	44	36.4	127	13.0
23	276	40.9	193	23.1	129	27.6	59	38.8	142	15.1
24	291	43.4	208	22.3	144	28.5	74	41.2	157	17.3
Dif	—		-8	+3	+10	-5	+24	0	+22	-1

UT	SOL			LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna													
	SD: 15 ^h 7 PMG: 12 ^h 05 ^m 9			Edad: 18 ^d 3 PHE { 4 ^h : 60 ^m 2 12 ^h : 60 ^m 1 20 ^h : 60 ^m 1 SD: 16 ^d 4 PMG: 2 ^h 53 ^m R°: 51 ^m																							
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°												
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'									
0	178	33.0	+21	44.0	318	12.7	-13	24.2	60 N	** **	1 41	3 01	22 26	**	7 40	105											
1	193	33.0		43.6	332	41.2	95	-13 08.5	58	** **	2 13	19	22 2		47	100											
2	208	32.9		43.2	347	09.7	95	-12 52.7	56	0 36	36	33	18 6		53	96											
3	223	32.8		42.8	1	38.3	96	36.8	54	1 33	2 55	46	15 9		7 59	92											
4	238	32.8		42.5	16	07.0	97	20.8	52	2 02	3 11	3 56	12 12		8 04	89											
5	253	32.7	+21	42.1	30	35.8	98	-12 04.8	50	2 24	3 24	4 06	22 09	14	8 08	87											
6	268	32.6	+21	41.7	45	04.7	99	-11 48.7	45	3 03	3 50	4 26	22 03	20	8 18	80											
7	283	32.6		41.3	59	33.6	99	32.5	40	31	4 11	43	21 58	25	26	75											
8	298	32.5		40.9	74	02.6	100	-11 16.3	35	3 52	27	4 57	54 28		32	71											
9	313	32.4		40.6	88	31.6	100	-11 00.0	30	4 09	4 41	5 08	50 32		38	68											
10	328	32.4		40.2	103	00.8	102	-10 43.7	20	36	5 04	29	43 39		48	61											
11	343	32.3	+21	39.8	117	30.0	102	-10 27.3	10 N	4 57	5 23	5 46	21 38	43	8 57	55											
12	358	32.2	+21	39.4	131	59.3	103	-10 10.9	0	5 14	5 40	6 02	21 32	49	9 05	50											
13	13	32.1		39.0	146	28.6	103	-9 54.4	10 S	30	5 56	18	26 55		13	45											
14	28	32.1		38.7	160	58.0	104	37.8	20	44	6 12	35	21 59		22	39											
15	43	32.0		38.3	175	27.5	105	21.2	30	5 59	29	6 55	14 66		32	33											
16	58	31.9		37.9	189	57.0	105	-9 04.6	35	6 07	38	7 06	10 70		37	30											
17	73	31.9	+21	37.5	204	26.6	106	-8 47.9	40	6 15	6 49	7 19	21 05	75	9 43	26											
18	88	31.8	+21	37.1	218	56.3	107	-8 31.2	45	6 24	7 01	7 34	21 00	79	9 51	20											
19	103	31.7		36.7	233	26.0	107	-8 14.4	50	35	15	7 53	20 54	85	9 59	15											
20	118	31.7		36.4	247	55.7	107	-7 57.6	52	39	22	8 01	51 88		10 03	13											
21	133	31.6		36.0	262	25.6	109	40.8	54	44	29	11	48 91		07	10											
22	148	31.5		35.6	276	55.5	109	23.9	56	50	37	22	44 95		12	7											
23	163	31.5		35.2	291	25.4	109	-7 07.0	58	6 55	46	35	40 98		17	4											
24	178	31.4	+21	34.8	305	55.4	110	-6 50.1	60 S	7 02	7 56	8 50	20 36	102	10 23	0											
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO														
	PMG 4 ^h 32 ^m 4			Mag: -3.8 PMG: 10 ^h 07 ^m			Mag: +1.8 PMG: 14 ^h 21 ^m			Mag: -2.2 PMG: 18 ^h 58 ^m			Mag: +0.4 PMG: 13 ^h 29 ^m														
	hG ♈		Dec	hG ♀		Dec	hG ♂		Dec	hG ♃		Dec	hG ♄		Dec												
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'											
0	291	43.4	208	22.3	+22	21.8	144	28.5	+14	25.8	74	41.2	-13	28.8	157	17.3	+18	00.9									
1	306	45.8	223	21.5		22.0	159	29.5		25.3	89	43.6		28.9	172	19.4		00.8									
2	321	48.3	238	20.8		22.3	174	30.5		24.8	104	46.0		28.9	187	21.6		00.8									
3	336	50.8	253	20.0		22.5	189	31.4		24.2	119	48.4		28.9	202	23.7		00.7									
4	351	53.2	268	19.2		22.8	204	32.4		23.7	134	50.9		29.0	217	25.9		00.6									
5	6	55.7	283	18.5	+22	23.0	219	33.4	+14	23.2	149	53.3	-13	29.0	232	28.0	+18	00.5									
6	21	58.2	298	17.7	+22	23.2	234	34.3	+14	22.6	164	55.7	-13	29.0	247	30.2	+18	00.4									
7	37	00.6	313	16.9		23.5	249	35.3		22.1	179	58.1		29.0	262	32.3		00.3									
8	52	03.1	328	16.1		23.7	264	36.3		21.6	195	00.5		29.1	277	34.5		00.3									
9	67	05.5	343	15.4		24.0	279	37.2		21.0	210	02.9		29.1	292	36.6		00.2									
10	82	08.0	358	14.6		24.2	294	38.2		20.5	225	05.3		29.1	307	38.8	+18	00.1									
11	97	10.5	13	13.8	+22	24.4	309	39.2	+14	20.0	240	07.7	-13	29.2	322	41.0	+18	00.0									
12	112	12.9	28	13.0	+22	24.7	324	40.1	+14	19.4	255	10.1	-13	29.2	337	43.1	+17	59.9									
13	127	15.4	43	12.2		24.9	339	41.1		18.9	270	12.5		29.2	352	45.3		59.8									
14	142	17.9	58	11.5		25.1	354	42.1		18.4	285	14.9		29.2	7	47.4		59.8									
15	157	20.3	73	10.7		25.3	9	43.0		17.8	300	17.3		29.3	22	49.6		59.7									
16	172	22.8	88	09.9		25.6	24	44.0		17.3	315	19.8		29.3	37	51.7		59.6									
17	187	25.3	103	09.1	+22	25.8	39	45.0	+14	16.8	330	22.2	-13	29.3	52	53.9	+17	59.5									
18	202	27.7	118	08.4	+22	26.0	54	45.9	+14	16.2	345	24.6	-13	29.4	67	56.0	+17	59.4									
19	217	30.2	133	07.6		26.3	69	46.9		15.7	0	27.0		29.4	82	58.2		59.3									
20	232	32.6	148	06.8		26.5	84	47.9		15.2	15	29.4		29.4	98	00.3		59.3									
21	247	35.1	163	06.0		26.7	99	48.8		14.6	30	31.8		29.5	113	02.5		59.2									
22	262	37.6	178	05.3		26.9	114	49.8		14.1	45	34.2		29.5	128	04.6		59.1									
23	277	40.0	193	04.5		27.2	129	50.8		13.5	60	36.6		29.5	143	06.8		59.0									
24	292	42.5	208	03.7	+22	27.4	144	51.7	+14	13.0	75	39.0	-13	29.6	158	08.9	+17	58.9									
Dif	—			-8			+2			+10			-5			+24			0			+22			-1		

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna					
	SD: 15 ^h 7			Edad: 19 ^d 3 PHE { 4 ^h : 60'0 12 ^h : 59'9 20 ^h : 59'8														
	PMG: 12 ^h 06 ^m 0			SD: 16'3 PMG: 3 ^h 44 ^m R°: 48 ^m														
	hG ☉		Dec	hG ☾ Dif		Dec Dif			Civil	Náutico	Hora	R°	Hora	R°				
h	°	'	°	'	°	'	°	h m	h m	h m	h m m		h m m					
0	178	31.4	+21	34.8	305	55.4	-6 50.1	60 N	21 07	22 25	** **	22 25	**	9 25 101				
1	193	31.4		34.4	320	25.4 ¹¹⁰	33.1 ¹⁷⁰	58	20 51	21 55	** **	24	3	27 97				
2	208	31.3		34.0	334	55.5 ¹¹¹	-6 16.1 ¹⁷⁰	56	36	32	23 21	24	6	29 94				
3	223	31.2		33.6	349	25.7 ¹¹²	-5 59.1 ¹⁷⁰	54	24	21 14	22 34	24	9	31 90				
4	238	31.2		33.3	3	55.8 ¹¹¹	42.1 ¹⁷⁰	52	14	20 59	22 06	24	11	33 87				
5	253	31.1	+21	32.9	18	26.1 ¹¹³	-5 25.0 ¹⁷¹	50	20 04	20 46	21 45	22 23	15	9 35 84				
6	268	31.0	+21	32.5	32	56.4 ¹¹³	-5 07.9 ¹⁷¹	45	19 44	20 20	21 06	22 23	19	9 38 78				
7	283	31.0		32.1	47	26.7 ¹¹³	-4 50.8 ¹⁷¹	40	28	20 00	20 40	23	24	41 73				
8	298	30.9		31.7	61	57.1 ¹¹⁴	33.7 ¹⁷¹	35	14	19 43	19	22	28	43 70				
9	313	30.8		31.3	76	27.5 ¹¹⁴	-4 16.6 ¹⁷¹	30	19 03	30	20 02	22	31	46 65				
10	328	30.8		30.9	90	57.9 ¹¹⁴	-3 59.4 ¹⁷²	20	18 43	19 07	19 36	22	37	49 59				
11	343	30.7	+21	30.5	105	28.4 ¹¹⁵	-3 42.2 ¹⁷²	10 N	18 26	18 48	19 15	22 21	43	9 52 54				
12	358	30.7	+21	30.1	119	58.9 ¹¹⁵	-3 25.1 ¹⁷¹	0	18 10	18 32	18 58	22 21	48	9 55 49				
13	13	30.6		29.7	134	29.5 ¹¹⁶	-3 07.9 ¹⁷²	10 S	17 54	16	42	21	53	9 58 43				
14	28	30.5		29.3	149	00.1 ¹¹⁶	-2 50.7 ¹⁷²	20	37	18 01	28	20	59	10 01 38				
15	43	30.5		28.9	163	30.7 ¹¹⁶	33.5 ¹⁷²	30	18	17 44	13	20	65	05 31				
16	58	30.4		28.5	178	01.3 ¹¹⁶	-2 16.3 ¹⁷²	35	17 07	34	18 05	20	68	07 28				
17	73	30.3	+21	28.1	192	32.0 ¹¹⁷	-1 59.1 ¹⁷²	40	16 54	17 24	17 57	22 20	72	10 09 24				
18	88	30.3	+21	27.7	207	02.7 ¹¹⁷	-1 41.9 ¹⁷²	45	16 39	17 12	17 48	22 19	78	10 11 20				
19	103	30.2		27.3	221	33.5 ¹¹⁸	24.7 ¹⁷²	50	20	16 58	38	19	84	14 14				
20	118	30.2		26.9	236	04.2 ¹¹⁷	-1 07.4 ¹⁷³	52	12	51	34	19	86	16 11				
21	133	30.1		26.5	250	35.0 ¹¹⁸	-0 50.2 ¹⁷²	54	16 02	44	29	19	89	17 9				
22	148	30.0		26.1	265	05.8 ¹¹⁸	33.1 ¹⁷¹	56	15 51	36	24	19	92	19 6				
23	163	30.0		25.7	279	36.7 ¹¹⁹	-0 15.9 ¹⁷²	58	38	27	18	18	97	21 2				
24	178	29.9	+21	25.3	294	07.5 ¹¹⁸	+0 01.3 ¹⁷²	60 S	15 24	16 17	17 12	22 18	101	10 23 **				
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 4 ^h 28 ^m 4		Mag: -3.8 PMG: 10 ^h 08 ^m		Mag: +1.8 PMG: 14 ^h 20 ^m		Mag: -2.2 PMG: 18 ^h 54 ^m		Mag: +0.4 PMG: 13 ^h 25 ^m									
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄									
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	292	42.5	208	03.7	+22	27.4	144	51.7	+14	13.0	75	39.0	-13	29.6	158	08.9	+17	58.9
1	307	45.0	223	02.9		27.6	159	52.7		12.5	90	41.4		29.6	173	11.1		58.8
2	322	47.4	238	02.1		27.8	174	53.7		11.9	105	43.8		29.6	188	13.2		58.8
3	337	49.9	253	01.4		28.0	189	54.6		11.4	120	46.2		29.6	203	15.4		58.7
4	352	52.4	268	00.6		28.2	204	55.6		10.9	135	48.6		29.7	218	17.5		58.6
5	7	54.8	282	59.8	+22	28.5	219	56.6	+14	10.3	150	51.0	-13	29.7	233	19.7	+17	58.5
6	22	57.3	297	59.0	+22	28.7	234	57.6	+14	09.8	165	53.4	-13	29.7	248	21.8	+17	58.4
7	37	59.8	312	58.2		28.9	249	58.5		09.3	180	55.8		29.8	263	24.0		58.3
8	53	02.2	327	57.5		29.1	264	59.5		08.7	195	58.2		29.8	278	26.1		58.2
9	68	04.7	342	56.7		29.3	280	00.5		08.2	211	00.6		29.8	293	28.3		58.2
10	83	07.1	357	55.9		29.5	295	01.4		07.6	226	03.0		29.9	308	30.4		58.1
11	98	09.6	12	55.1	+22	29.7	310	02.4	+14	07.1	241	05.4	-13	29.9	323	32.6	+17	58.0
12	113	12.1	27	54.3	+22	29.9	325	03.4	+14	06.6	256	07.8	-13	29.9	338	34.7	+17	57.9
13	128	14.5	42	53.5		30.1	340	04.3		06.0	271	10.2		30.0	353	36.9		57.8
14	143	17.0	57	52.8		30.3	355	05.3		05.5	286	12.6		30.0	8	39.0		57.7
15	158	19.5	72	52.0		30.5	10	06.3		05.0	301	15.0		30.0	23	41.2		57.7
16	173	21.9	87	51.2		30.8	25	07.2		04.4	316	17.4		30.1	38	43.3		57.6
17	188	24.4	102	50.4	+22	31.0	40	08.2	+14	03.9	331	19.8	-13	30.1	53	45.5	+17	57.5
18	203	26.9	117	49.6	+22	31.2	55	09.2	+14	03.3	346	22.2	-13	30.1	68	47.6	+17	57.4
19	218	29.3	132	48.8		31.4	70	10.2		02.8	1	24.6		30.2	83	49.8		57.3
20	233	31.8	147	48.1		31.6	85	11.1		02.3	16	27.0		30.2	98	52.0		57.2
21	248	34.3	162	47.3		31.8	100	12.1		01.7	31	29.4		30.2	113	54.1		57.2
22	263	36.7	177	46.5		31.9	115	13.1		01.2	46	31.8		30.3	128	56.3		57.1
23	278	39.2	192	45.7		32.1	130	14.0		00.6	61	34.2		30.3	143	58.4		57.0
24	293	41.6	207	44.9	+22	32.3	145	15.0	+14	00.1	76	36.6	-13	30.3	159	00.6	+17	56.9
Dif	—		-8		+2		+10		-5		+24		0		+22		-	

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15 ^h 7 PMG: 12 ^h 06 ^m 1			Edad: 20 ^d 3 PHE { 4 ^h : 59 ^m 6 12 ^h : 59 ^m 5 20 ^h : 59 ^m 4 PMG: 4 ^h 32 ^m R°: 48 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m	m	h m	m
0	178	29.9	+21	25.3	294	07.5	+0	01.3	60 N	** ** 1 47	3 05	22 24	**	11 06	100
1	193	29.9		24.9	308	38.4 ¹¹⁹		18.5 ¹⁷²	58	** ** 2 18	22	27 3		04 96	
2	208	29.8		24.5	323	09.3 ¹¹⁹		35.6 ¹⁷¹	56	0 51 40	36	30 7		03 92	
3	223	29.7		24.1	337	40.2 ¹¹⁹	+0	52.8 ¹⁷²	54	1 39 2	58	33 10		01 89	
4	238	29.7		23.7	352	11.1 ¹¹⁹	+1	09.9 ¹⁷¹	52	2 07 3	13	3 59	35 13	11 00	86
5	253	29.6	+21	23.3	6	42.0 ¹¹⁹	+1	27.0 ¹⁷¹	50	2 28 3	26	4 08	22 38	15	10 59 83
6	268	29.6	+21	22.9	21	13.0 ¹²⁰	+1	44.1 ¹⁷¹	45	3 06 3	52	4 28	22 42	21	10 56 78
7	283	29.5		22.5	35	43.9 ¹¹⁹	+2	01.2 ¹⁷¹	40	33 4	13	44	47 25		54 73
8	298	29.4		22.1	50	14.9 ¹²⁰		18.3 ¹⁷¹	35	3 53 29	4 58	50 29		53 68	
9	313	29.4		21.6	64	45.9 ¹²⁰		35.3 ¹⁷⁰	30	4 10 4	43	5 10	53 33		51 65
10	328	29.3		21.2	79	16.9 ¹²⁰	+2	52.3 ¹⁷⁰	20	37 5	05	29	22 59	39	48 59
11	343	29.3	+21	20.8	93	47.8 ¹¹⁹	+3	09.3 ¹⁷⁰	10 N	4 57 5	24	5 47	23 04	44	10 46 53
12	358	29.2	+21	20.4	108	18.8 ¹²⁰	+3	26.2 ¹⁶⁹	0	5 14 5	40	6 02	23 09	48	10 44 48
13	13	29.1		20.0	122	49.8 ¹²⁰	+3	43.2 ¹⁷⁰	10 S	30 5	56	18	14 53		41 44
14	28	29.1		19.6	137	20.8 ¹²⁰	+4	00.1 ¹⁶⁹	20	44 6	11	35	19 59		39 38
15	43	29.0		19.2	151	51.8 ¹²⁰		16.9 ¹⁶⁸	30	5 59 28	6 54	25 65		36 32	
16	58	29.0		18.8	166	22.8 ¹²⁰		33.8 ¹⁶⁹	35	6 06 38	7 05	28 69		35 28	
17	73	28.9	+21	18.4	180	53.7 ¹¹⁹	+4	50.6 ¹⁶⁸	40	6 15 6	48	7 18	23 32	73	10 33 24
18	88	28.9	+21	17.9	195	24.7 ¹²⁰	+5	07.3 ¹⁶⁷	45	6 23 7	00	7 33	23 37	78	10 31 20
19	103	28.8		17.5	209	55.7 ¹²⁰		24.1 ¹⁶⁸	50	33 14	7 51	43 83		28 15	
20	118	28.8		17.1	224	26.7 ¹²⁰		40.8 ¹⁶⁷	52	38 20	8 00	45 86		27 12	
21	133	28.7		16.7	238	57.6 ¹¹⁹	+5	57.4 ¹⁶⁶	54	43 27	09	48 89		26 9	
22	148	28.6		16.3	253	28.6 ¹²⁰	+6	14.0 ¹⁶⁶	56	48 35	20	51 93		25 6	
23	163	28.6		15.9	267	59.5 ¹¹⁹		30.6 ¹⁶⁶	58	6 53 44	33	55 97		23 3	
24	178	28.5	+21	15.4	282	30.4 ¹¹⁹	+6	47.1 ¹⁶⁵	60 S	7 00 7	54	8 47	23 59	101	10 22 **
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG 4 ^h 24 ^m 5		Mag: -3.8 PMG: 10 ^h 10 ^m			Mag: +1.8 PMG: 14 ^h 18 ^m			Mag: -2.2 PMG: 18 ^h 51 ^m			Mag: +0.4 PMG: 13 ^h 22 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	
0	293	41.6	207	44.9	+22	32.3	145	15.0	+14	00.1	76	36.6	-13	30.3	
1	308	44.1	222	44.1		32.5	160	16.0	+13	59.6	91	39.0		30.4	
2	323	46.6	237	43.4		32.7	175	16.9		59.0	106	41.4		30.4	
3	338	49.0	252	42.6		32.9	190	17.9		58.5	121	43.8		30.4	
4	353	51.5	267	41.8		33.1	205	18.9		57.9	136	46.2		30.5	
5	8	54.0	282	41.0	+22	33.3	220	19.9	+13	57.4	151	48.6	-13	30.5	
6	23	56.4	297	40.2	+22	33.5	235	20.8	+13	56.9	166	51.0	-13	30.5	
7	38	58.9	312	39.4		33.7	250	21.8		56.3	181	53.4		30.6	
8	54	01.4	327	38.6		33.9	265	22.8		55.8	196	55.8		30.6	
9	69	03.8	342	37.8		34.0	280	23.7		55.2	211	58.2		30.6	
10	84	06.3	357	37.1		34.2	295	24.7		54.7	227	00.6		30.7	
11	99	08.7	12	36.3	+22	34.4	310	25.7	+13	54.2	242	03.0	-13	30.7	
12	114	11.2	27	35.5	+22	34.6	325	26.6	+13	53.6	257	05.4	-13	30.7	
13	129	13.7	42	34.7		34.8	340	27.6		53.1	272	07.8		30.8	
14	144	16.1	57	33.9		34.9	355	28.6		52.5	287	10.2		30.8	
15	159	18.6	72	33.1		35.1	10	29.6		52.0	302	12.6		30.8	
16	174	21.1	87	32.3		35.3	25	30.5		51.5	317	15.0		30.9	
17	189	23.5	102	31.5	+22	35.5	40	31.5	+13	50.9	332	17.3	-13	30.9	
18	204	26.0	117	30.8	+22	35.7	55	32.5	+13	50.4	347	19.7	-13	30.9	
19	219	28.5	132	30.0		35.8	70	33.4		49.8	2	22.1		31.0	
20	234	30.9	147	29.2		36.0	85	34.4		49.3	17	24.5		31.0	
21	249	33.4	162	28.4		36.2	100	35.4		48.7	32	26.9		31.0	
22	264	35.9	177	27.6		36.3	115	36.4		48.2	47	29.3		31.1	
23	279	38.3	192	26.8		36.5	130	37.3		47.7	62	31.7		31.1	
24	294	40.8	207	26.0	+22	36.7	145	38.3	+13	47.1	77	34.1	-13	31.2	
Dif	—		-8		+2	+10		-5		+24		0		+22	

UT	SOL				☾ LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna			Puesta de Luna			
	SD: 15 ^h 7 PMG: 12 ^h 06 ^m 1				Edad: 21 ^d 3 PHE { 4 ^h : 59 ^m 2 12 ^h : 59 ^m 0 20 ^h : 58 ^m 9 R°: 49 ^m															
	hG ☉		Dec		hG ☾		Dif							Civil	Náutico	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m	h m m			
0	178	28.5	+21	15.4	282	30.4	+6	47.1	60 N	21 04	22 19	** **	22 23 0	12 46	103					
1	193	28.5		15.0	297	01.3 ¹¹⁹	+7	03.6 ¹⁶⁵	58	20 48	21 50	** **	30 5	40	98					
2	208	28.4		14.6	311	32.2 ¹¹⁹		20.0 ¹⁶⁴	56	34	29	23 10	37 9	35	93					
3	223	28.4		14.2	326	03.1 ¹¹⁹		36.4 ¹⁶⁴	54	22	21 11	22 28	43 12	30	90					
4	238	28.3		13.8	340	34.0 ¹¹⁹	+7	52.7 ¹⁶³	52	11	20 56	22 02	48 15	26	87					
5	253	28.3	+21	13.3	355	04.8 ¹¹⁸	+8	09.0 ¹⁶³	50	20 02	20 44	21 41	22 53 18	12 22	84					
6	268	28.2	+21	12.9	9	35.6 ¹¹⁸	+8	25.2 ¹⁶²	45	19 43	20 18	21 04	23 03 24	12 14	78					
7	283	28.2		12.5	24	06.4 ¹¹⁸		41.4 ¹⁶²	40	27	19 58	20 38	12 28	07	73					
8	298	28.1		12.1	38	37.2 ¹¹⁸	+8	57.5 ¹⁶¹	35	13	42	18	19 32	12 01	69					
9	313	28.0		11.6	53	07.9 ¹¹⁷	+9	13.6 ¹⁶¹	30	19 02	29	20 01	26 35	11 56	65					
10	328	28.0		11.2	67	38.7 ¹¹⁸		29.6 ¹⁶⁰	20	18 42	19 06	19 35	38 40	47	59					
11	343	27.9	+21	10.8	82	09.4 ¹¹⁷	+9	45.6 ¹⁶⁰	10 N	18 25	18 48	19 15	23 48 45	11 39	54					
12	358	27.9	+21	10.4	96	40.0 ¹¹⁶	+10	01.4 ¹⁵⁸	0	18 10	18 32	18 58	23 57 51	11 32	49					
13	13	27.8		09.9	111	10.7 ¹¹⁷		17.3 ¹⁵⁹	10 S	17 54	17	43	** ** *	25	44					
14	28	27.8		09.5	125	41.3 ¹¹⁶		33.0 ¹⁵⁷	20	38	18 01	28	** ** *	17	39					
15	43	27.7		09.1	140	11.9 ¹¹⁶	+10	48.7 ¹⁵⁷	30	19	17 45	14	** ** *	08	34					
16	58	27.7		08.7	154	42.4 ¹¹⁵	+11	04.4 ¹⁵⁷	35	17 08	35	18 07	** ** *	11 03	30					
17	73	27.6	+21	08.2	169	12.9 ¹¹⁵	+11	19.9 ¹⁵⁵	40	16 55	17 25	17 59	** ** *	10 57	27					
18	88	27.6	+21	07.8	183	43.4 ¹¹⁵	+11	35.4 ¹⁵⁵	45	16 41	17 13	17 50	** ** *	10 51	22					
19	103	27.5		07.4	198	13.9 ¹¹⁵	+11	50.8 ¹⁵⁴	50	23	17 00	40	** ** *	43	16					
20	118	27.5		06.9	212	44.3 ¹¹⁴	+12	06.2 ¹⁵⁴	52	14	16 53	36	** ** *	39	14					
21	133	27.4		06.5	227	14.7 ¹¹⁴		21.5 ¹⁵³	54	16 05	46	31	** ** *	35	11					
22	148	27.4		06.1	241	45.0 ¹¹³		36.7 ¹⁵²	56	15 54	39	26	** ** *	31	8					
23	163	27.3		05.6	256	15.3 ¹¹³	+12	51.8 ¹⁵¹	58	42	30	20	** ** *	26	4					
24	178	27.3	+21	05.2	270	45.6 ¹¹³	+13	06.8 ¹⁵⁰	60 S	15 27	16 20	17 14	** ** *	10 21	**					
UT	ARIES				VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 4 ^h 20 ^m 6				Mag: -3.8 PMG: 10 ^h 11 ^m				Mag: +1.8 PMG: 14 ^h 17 ^m				Mag: -2.2 PMG: 18 ^h 47 ^m				Mag: +0.4 PMG: 13 ^h 19 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	294	40.8	207	26.0	+22	36.7	145	38.3	+13	47.1	77	34.1	-13	31.2	159	52.2	+17	54.9		
1	309	43.2	222	25.2		36.8	160	39.3		46.6	92	36.5		31.2	174	54.3		54.8		
2	324	45.7	237	24.4		37.0	175	40.2		46.0	107	38.9		31.2	189	56.5		54.7		
3	339	48.2	252	23.6		37.2	190	41.2		45.5	122	41.3		31.3	204	58.6		54.6		
4	354	50.6	267	22.8		37.3	205	42.2		44.9	137	43.6		31.3	220	00.8		54.5		
5	9	53.1	282	22.1	+22	37.5	220	43.2	+13	44.4	152	46.0	-13	31.3	235	02.9	+17	54.4		
6	24	55.6	297	21.3	+22	37.7	235	44.1	+13	43.8	167	48.4	-13	31.4	250	05.1	+17	54.4		
7	39	58.0	312	20.5		37.8	250	45.1		43.3	182	50.8		31.4	265	07.2		54.3		
8	55	00.5	327	19.7		38.0	265	46.1		42.8	197	53.2		31.4	280	09.4		54.2		
9	70	03.0	342	18.9		38.1	280	47.0		42.2	212	55.6		31.5	295	11.5		54.1		
10	85	05.4	357	18.1		38.3	295	48.0		41.7	227	58.0		31.5	310	13.7		54.0		
11	100	07.9	12	17.3	+22	38.5	310	49.0	+13	41.1	243	00.4	-13	31.5	325	15.8	+17	53.9		
12	115	10.3	27	16.5	+22	38.6	325	50.0	+13	40.6	258	02.7	-13	31.6	340	18.0	+17	53.8		
13	130	12.8	42	15.7		38.8	340	50.9		40.0	273	05.1		31.6	355	20.1		53.8		
14	145	15.3	57	14.9		38.9	355	51.9		39.5	288	07.5		31.7	10	22.3		53.7		
15	160	17.7	72	14.1		39.1	10	52.9		38.9	303	09.9		31.7	25	24.4		53.6		
16	175	20.2	87	13.3		39.2	25	53.9		38.4	318	12.3		31.7	40	26.6		53.5		
17	190	22.7	102	12.5	+22	39.4	40	54.8	+13	37.8	333	14.7	-13	31.8	55	28.7	+17	53.4		
18	205	25.1	117	11.7	+22	39.5	55	55.8	+13	37.3	348	17.1	-13	31.8	70	30.9	+17	53.3		
19	220	27.6	132	11.0		39.7	70	56.8		36.8	3	19.4		31.8	85	33.0		53.3		
20	235	30.1	147	10.2		39.8	85	57.7		36.2	18	21.8		31.9	100	35.1		53.2		
21	250	32.5	162	09.4		40.0	100	58.7		35.7	33	24.2		31.9	115	37.3		53.1		
22	265	35.0	177	08.6		40.1	115	59.7		35.1	48	26.6		32.0	130	39.4		53.0		
23	280	37.5	192	07.8		40.2	131	00.7		34.6	63	29.0		32.0	145	41.6		52.9		
24	295	39.9	207	07.0	+22	40.4	146	01.6	+13	34.0	78	31.4	-13	32.0	160	43.7	+17	52.8		
Dif	—		-8		+2		+10		-5		+24		0		+21		-1			

UT	SOL				 LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15 ^h 7 PMG: 12 ^h 06 ^m 2				Edad: 22 ^d 3 PHE { 4 ^h : 58 ^m 7 12 ^h : 58 ^m 5 20 ^h : 58 ^m 3 R°: 51 ^m												
	hG ☉		Dec		hG ☾		Dif										
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	178	27.3	+21	05.2	270	45.6	+13	06.8	60 N	** **	1 54	3 09	22 23	3	14 29	105	
1	193	27.2		04.8	285	15.8 ¹¹²		21.8 ¹⁵⁰	58	** **	2 23	25	35	9	18 99		
2	208	27.2		04.3	299	45.9 ¹¹¹		36.7 ¹⁴⁹	56	1 03	2 44	39	46	13	08 95		
3	223	27.1		03.9	314	16.1 ¹¹²	+13	51.5 ¹⁴⁸	54	1 44	3 02	3 51	22 55	17	14 00	90	
4	238	27.1		03.5	328	46.2 ¹¹¹	+14	06.3 ¹⁴⁸	52	2 11	16	4 01	23 03	20	13 53	86	
5	253	27.0	+21	03.0	343	16.2 ¹¹⁰	+14	20.9 ¹⁴⁶	50	2 31	3 29	4 11	23 11	23	13 46	84	
6	268	27.0	+21	02.6	357	46.2 ¹¹⁰	+14	35.5 ¹⁴⁶	45	3 08	3 55	4 30	23 27	28	13 32	77	
7	283	26.9		02.2	12	16.1 ¹⁰⁹	+14	50.0 ¹⁴⁵	40	35	4 14	46	40	33	20 73		
8	298	26.9		01.7	26	46.0 ¹⁰⁹	+15	04.4 ¹⁴⁴	35	3 55	30	4 59	23 51	37	10 69		
9	313	26.8		01.3	41	15.9 ¹⁰⁹		18.7 ¹⁴³	30	4 12	4 44	5 11	** ** *	**	13 01	66	
10	328	26.8		00.8	55	45.7 ¹⁰⁸		32.9 ¹⁴²	20	38	5 06	30	** ** *	**	12 46	61	
11	343	26.7	+21	00.4	70	15.5 ¹⁰⁸	+15	47.0 ¹⁴¹	10 N	4 58	5 24	5 47	** ** *	**	12 33	56	
12	358	26.7	+21	00.0	84	45.2 ¹⁰⁷	+16	01.0 ¹⁴⁰	0	5 15	5 40	6 03	** ** *	**	12 21	52	
13	13	26.6	+20	59.5	99	14.8 ¹⁰⁶		15.0 ¹⁴⁰	10 S	30	5 56	18	0 07	55	12 09	47	
14	28	26.6		59.1	113	44.4 ¹⁰⁶		28.8 ¹³⁸	20	44	6 11	35	18	60	11 56	43	
15	43	26.6		58.6	128	13.9 ¹⁰⁵		42.5 ¹³⁷	30	5 58	27	6 53	30	65	42 37		
16	58	26.5		58.2	142	43.4 ¹⁰⁵	+16	56.2 ¹³⁷	35	6 06	37	7 04	37	69	33 34		
17	73	26.5	+20	57.7	157	12.9 ¹⁰⁵	+17	09.7 ¹³⁵	40	6 14	6 47	7 17	0 45	73	11 24	30	
18	88	26.4	+20	57.3	171	42.2 ¹⁰³	+17	23.2 ¹³⁵	45	6 22	6 58	7 31	0 55	77	11 13	25	
19	103	26.4		56.9	186	11.6 ¹⁰⁴		36.5 ¹³³	50	32	7 12	49	1 06	84	10 59	20	
20	118	26.3		56.4	200	40.8 ¹⁰²	+17	49.8 ¹³³	52	36	19	7 58	11	87	53 17		
21	133	26.3		56.0	215	10.0 ¹⁰²	+18	02.9 ¹³¹	54	41	25	8 07	17	91	46 14		
22	148	26.2		55.5	229	39.2 ¹⁰²		16.0 ¹³¹	56	46	33	17	24	94	39 10		
23	163	26.2		55.1	244	08.3 ¹⁰¹		28.9 ¹²⁹	58	51	42	30	32	98	30 6		
24	178	26.1	+20	54.6	258	37.3 ¹⁰⁰	+18	41.7 ¹²⁸	60 S	6 57	7 51	8 44	1 40	105	10 20	1	

UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 4 ^h 16 ^m 6		Mag: -3.8 PMG: 10 ^h 12 ^m				Mag: +1.8 PMG: 14 ^h 15 ^m				Mag: -2.2 PMG: 18 ^h 43 ^m				Mag: +0.4 PMG: 13 ^h 15 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	295	39.9	207	07.0	+22	40.4	146	01.6	+13	34.0	78	31.4	-13	32.0	160	43.7	+17	52.8
1	310	42.4	222	06.2		40.5	161	02.6		33.5	93	33.7		32.1	175	45.9		52.7
2	325	44.8	237	05.4		40.7	176	03.6		32.9	108	36.1		32.1	190	48.0		52.7
3	340	47.3	252	04.6		40.8	191	04.6		32.4	123	38.5		32.1	205	50.2		52.6
4	355	49.8	267	03.8		40.9	206	05.5		31.8	138	40.9		32.2	220	52.3		52.5
5	10	52.2	282	03.0	+22	41.1	221	06.5	+13	31.3	153	43.3	-13	32.2	235	54.5	+17	52.4
6	25	54.7	297	02.2	+22	41.2	236	07.5	+13	30.7	168	45.7	-13	32.3	250	56.6	+17	52.3
7	40	57.2	312	01.4		41.3	251	08.4		30.2	183	48.0		32.3	265	58.8		52.2
8	55	59.6	327	00.6		41.5	266	09.4		29.6	198	50.4		32.3	281	00.9		52.1
9	71	02.1	341	59.8		41.6	281	10.4		29.1	213	52.8		32.4	296	03.1		52.1
10	86	04.6	356	59.0		41.7	296	11.4		28.5	228	55.2		32.4	311	05.2		52.0
11	101	07.0	11	58.2	+22	41.9	311	12.3	+13	28.0	243	57.6	-13	32.5	326	07.4	+17	51.9
12	116	09.5	26	57.4	+22	42.0	326	13.3	+13	27.4	258	59.9	-13	32.5	341	09.5	+17	51.8
13	131	12.0	41	56.6		42.1	341	14.3		26.9	274	02.3		32.5	356	11.7		51.7
14	146	14.4	56	55.8		42.2	356	15.3		26.3	289	04.7		32.6	11	13.8		51.6
15	161	16.9	71	55.0		42.4	11	16.2		25.8	304	07.1		32.6	26	16.0		51.5
16	176	19.3	86	54.2		42.5	26	17.2		25.2	319	09.5		32.6	41	18.1		51.5
17	191	21.8	101	53.4	+22	42.6	41	18.2	+13	24.7	334	11.8	-13	32.7	56	20.3	+17	51.4
18	206	24.3	116	52.6	+22	42.7	56	19.2	+13	24.1	349	14.2	-13	32.7	71	22.4	+17	51.3
19	221	26.7	131	51.8		42.9	71	20.1		23.6	4	16.6		32.8	86	24.6		51.2
20	236	29.2	146	51.0		43.0	86	21.1		23.0	19	19.0		32.8	101	26.7		51.1
21	251	31.7	161	50.2		43.1	101	22.1		22.5	34	21.3		32.8	116	28.9		51.0
22	266	34.1	176	49.4		43.2	116	23.1		21.9	49	23.7		32.9	131	31.0		50.9
23	281	36.6	191	48.6		43.3	131	24.0		21.4	64	26.1		32.9	146	33.2		50.9
24	296	39.1	206	47.8	+22	43.4	146	25.0	+13	20.8	79	28.5	-13	33.0	161	35.3	+17	50.8
Dif	—		-8		+1		+10		-5		+24		0		+21		-1	

UT	SOL				☾ LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 15 ^h 7				Edad: 23 ^d 3 PHE { 4 ^h : 58 ^m 1 12 ^h : 57 ^m 9 20 ^h : 57 ^m 8 R°: 53 ^m													
	PMG: 12 ^h 06 ^m 3				PMG: 7 ^h 00 ^m													
	hG ☉		Dec		hG ☾		Dif				Civil	Náutico	Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m m		h m m			
0	178	26.1	+20	54.6	258	37.3	+18	41.7	60 N	21 00	22 13	** **	22 26 6		16 14 107			
1	193	26.1		54.2	273	06.3 ¹⁰⁰	+18	54.4 ¹²⁷	58	20 44	21 45	** **	44 15		15 57 98			
2	208	26.1		53.7	287	35.2 ⁹⁹	+19	07.0 ¹²⁶	56	31	25	23 00	22 59 21		43 92			
3	223	26.0		53.3	302	04.1 ⁹⁹		19.5 ¹²⁵	54	19	21 08	22 23	23 12 25		30 88			
4	238	26.0		52.8	316	32.9 ⁹⁸		31.9 ¹²⁴	52	09	20 54	21 57	23 29		19 84			
5	253	25.9	+20	52.4	331	01.6 ⁹⁷	+19	44.2 ¹²³	50	20 00	20 41	21 38	23 34 31		15 10 81			
6	268	25.9	+20	51.9	345	30.3 ⁹⁷	+19	56.3 ¹²¹	45	19 41	20 16	21 02	23 55 37		14 49 76			
7	283	25.8		51.5	359	58.9 ⁹⁶	+20	08.4 ¹²¹	40	25	19 57	20 36	** ** *		33 71			
8	298	25.8		51.0	14	27.5 ⁹⁶		20.3 ¹¹⁹	35	12	41	16	** ** *		19 68			
9	313	25.8		50.6	28	55.9 ⁹⁴		32.1 ¹¹⁸	30	19 01	28	20 00	0 01 40		14 07 66			
10	328	25.7		50.1	43	24.4 ⁹⁵		43.8 ¹¹⁷	20	18 42	19 06	19 34	18 45		13 47 61			
11	343	25.7	+20	49.6	57	52.7 ⁹³	+20	55.4 ¹¹⁶	10 N	18 25	18 48	19 14	0 33 49		13 29 58			
12	358	25.6	+20	49.2	72	21.1 ⁹⁴	+21	06.8 ¹¹⁴	0	18 10	18 32	18 58	0 48 52		13 13 54			
13	13	25.6		48.7	86	49.3 ⁹²		18.1 ¹¹³	10 S	17 55	17	43	1 02 57		12 56 51			
14	28	25.5		48.3	101	17.5 ⁹²		29.3 ¹¹²	20	38	18 02	29	18 61		39 47			
15	43	25.5		47.8	115	45.6 ⁹¹		40.4 ¹¹¹	30	20	17 46	15	35 66		19 42			
16	58	25.5		47.4	130	13.7 ⁹¹	+21	51.3 ¹⁰⁹	35	17 09	37	08	46 69		12 07 40			
17	73	25.4	+20	46.9	144	41.7 ⁹⁰	+22	02.1 ¹⁰⁸	40	16 57	17 27	18 00	1 58 73		11 54 36			
18	88	25.4	+20	46.4	159	09.6 ⁸⁹	+22	12.8 ¹⁰⁷	45	16 43	17 15	17 51	2 12 77		11 38 32			
19	103	25.3		46.0	173	37.5 ⁸⁹		23.4 ¹⁰⁶	50	25	17 02	42	30 83		19 27			
20	118	25.3		45.5	188	05.3 ⁸⁸		33.8 ¹⁰⁴	52	17	16 55	38	38 86		10 24			
21	133	25.3		45.1	202	33.0 ⁸⁷		44.1 ¹⁰³	54	16 07	49	33	48 89		11 00 21			
22	148	25.2		44.6	217	00.7 ⁸⁷	+22	54.3 ¹⁰²	56	15 57	41	28	2 58 94		10 49 16			
23	163	25.2		44.1	231	28.3 ⁸⁶	+23	04.3 ¹⁰⁰	58	45	33	23	3 10 100		36 11			
24	178	25.1	+20	43.7	245	55.9 ⁸⁶	+23	14.2 ⁹⁹	60 S	15 31	16 23	17 17	3 25 107		10 21 3			
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 4 ^h 12 ^m 7		Mag: -3.8 PMG: 10 ^h 13 ^m				Mag: +1.8 PMG: 14 ^h 13 ^m				Mag: -2.2 PMG: 18 ^h 39 ^m				Mag: +0.4 PMG: 13 ^h 12 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	296	39.1	206	47.8	+22	43.4	146	25.0	+13	20.8	79	28.5	-13	33.0	161	35.3	+17	50.8
1	311	41.5	221	47.0		43.6	161	26.0		20.3	94	30.9		33.0	176	37.5		50.7
2	326	44.0	236	46.2		43.7	176	27.0		19.7	109	33.2		33.0	191	39.6		50.6
3	341	46.5	251	45.4		43.8	191	27.9		19.2	124	35.6		33.1	206	41.8		50.5
4	356	48.9	266	44.6		43.9	206	28.9		18.6	139	38.0		33.1	221	43.9		50.4
5	11	51.4	281	43.8	+22	44.0	221	29.9	+13	18.1	154	40.4	-13	33.2	236	46.1	+17	50.3
6	26	53.8	296	43.0	+22	44.1	236	30.9	+13	17.5	169	42.7	-13	33.2	251	48.2	+17	50.3
7	41	56.3	311	42.2		44.2	251	31.8		17.0	184	45.1		33.2	266	50.3		50.2
8	56	58.8	326	41.4		44.3	266	32.8		16.4	199	47.5		33.3	281	52.5		50.1
9	72	01.2	341	40.6		44.4	281	33.8		15.9	214	49.8		33.3	296	54.6		50.0
10	87	03.7	356	39.8		44.5	296	34.8		15.3	229	52.2		33.4	311	56.8		49.9
11	102	06.2	11	39.0	+22	44.6	311	35.7	+13	14.8	244	54.6	-13	33.4	326	58.9	+17	49.8
12	117	08.6	26	38.2	+22	44.7	326	36.7	+13	14.2	259	57.0	-13	33.5	342	01.1	+17	49.7
13	132	11.1	41	37.4		44.8	341	37.7		13.7	274	59.3		33.5	357	03.2		49.7
14	147	13.6	56	36.6		44.9	356	38.7		13.1	290	01.7		33.5	12	05.4		49.6
15	162	16.0	71	35.8		45.0	11	39.6		12.6	305	04.1		33.6	27	07.5		49.5
16	177	18.5	86	35.0		45.1	26	40.6		12.0	320	06.5		33.6	42	09.7		49.4
17	192	20.9	101	34.2	+22	45.2	41	41.6	+13	11.5	335	08.8	-13	33.7	57	11.8	+17	49.3
18	207	23.4	116	33.4	+22	45.3	56	42.6	+13	10.9	350	11.2	-13	33.7	72	14.0	+17	49.2
19	222	25.9	131	32.6		45.4	71	43.5		10.4	5	13.6		33.7	87	16.1		49.1
20	237	28.3	146	31.8		45.5	86	44.5		09.8	20	15.9		33.8	102	18.3		49.1
21	252	30.8	161	31.0		45.6	101	45.5		09.2	35	18.3		33.8	117	20.4		49.0
22	267	33.3	176	30.2		45.7	116	46.5		08.7	50	20.7		33.9	132	22.6		48.9
23	282	35.7	191	29.4		45.8	131	47.4		08.1	65	23.0		33.9	147	24.7		48.8
24	297	38.2	206	28.6	+22	45.9	146	48.4	+13	07.6	80	25.4	-13	34.0	162	26.9	+17	48.7
Dif	—		-8		+1		+10		-6		+24		0		+21		-1	

UT	SOL				☾ LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15 ^h 7 PMG: 12 ^h 06 ^m 4				Edad: 24 ^d 3 PHE { 4 ^h : 57/6 12 ^h : 57/4 20 ^h : 57/2 PMG: 7 ^h 53 ^m R°: 56 ^m					Náutico	Civil		Hora	R°	Hora	R°		
	hG ☉	Dec			hG ☾	Dif	Dec	Dif										
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	
0	178	25.1	+20	43.7	245	55.9	+23	14.2	60 N	** **	2 01	3 13	22 32	20	18 01	99		
1	193	25.1		43.2	260	23.4 85		24.0 98	58	** **	28	29	22 59	29	17 35	89		
2	208	25.1		42.7	274	50.9 85		33.6 96	56	1 13	2 48	42	23 20	34	17 15	83		
3	223	25.0		42.3	289	18.3 84		43.1 95	54	1 50	3 05	3 54		37 38	16 58	79		
4	238	25.0		41.8	303	45.6 83	+23	52.4 93	52	2 16	20	4 04	23 52	40	43 77			
5	253	25.0	+20	41.3	318	12.9 83	+24	01.6 92	50	2 35	3 32	4 13	** **	**	16 31	74		
6	268	24.9	+20	40.9	332	40.1 82	+24	10.7 91	45	3 11	3 57	4 32	** **	**	16 05	70		
7	283	24.9		40.4	347	07.2 81		19.6 89	40	37	4 16	4 48	0 13	40	15 44	68		
8	298	24.8		39.9	1	34.3 81		28.4 88	35	3 57	32	5 00		28 43	27 66			
9	313	24.8		39.5	16	01.4 81		37.0 86	30	4 13	4 45	12	0 41	45	15 13	63		
10	328	24.8		39.0	30	28.4 80		45.5 85	20	38	5 07	31	1 03	49	14 48	61		
11	343	24.7	+20	38.5	44	55.3 79	+24	53.8 83	10 N	4 58	5 25	5 47	1 22	53	14 27	58		
12	358	24.7	+20	38.1	59	22.2 79	+25	02.0 82	0	5 15	5 41	6 03	1 40	56	14 07	56		
13	13	24.7		37.6	73	49.0 78		10.1 81	10 S	30	5 56	18	1 59	58	13 47	54		
14	28	24.6		37.1	88	15.8 78		18.0 79	20	44	6 11	34	2 19	61	26 51			
15	43	24.6		36.7	102	42.5 77		25.7 77	30	5 57	27	6 52		41 65	13 01	48		
16	58	24.6		36.2	117	09.2 77		33.3 76	35	6 05	36	7 03	2 55	67	12 47	46		
17	73	24.5	+20	35.7	131	35.8 76	+25	40.8 75	40	6 12	6 46	7 15	3 11	70	12 30	44		
18	88	24.5	+20	35.2	146	02.4 76	+25	48.1 73	45	6 21	6 57	7 30	3 29	74	12 10	41		
19	103	24.5		34.8	160	28.9 75	+25	55.2 71	50	30	7 10	47	3 53	79	11 46	36		
20	118	24.4		34.3	174	55.4 75	+26	02.2 70	52	34	17	7 55	4 04	82	34 34			
21	133	24.4		33.8	189	21.8 74		09.1 69	54	39	23	8 04		17 85	21 30			
22	148	24.4		33.3	203	48.2 74		15.7 66	56	44	31	15		32 89	11 05	27		
23	163	24.3		32.9	218	14.6 74		22.3 66	58	49	39	27	4 50	95	10 47	20		
24	178	24.3	+20	32.4	232	40.9 73	+26	28.7 64	60 S	6 55	7 48	8 40	5 12	106	10 24	10		
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO					
	PMG 4 ^h 08 ^m 8			Mag: -3.8 PMG: 10 ^h 15 ^m			Mag: +1.8 PMG: 14 ^h 12 ^m			Mag: -2.2 PMG: 18 ^h 35 ^m			Mag: +0.4 PMG: 13 ^h 08 ^m					
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	297	38.2	206	28.6	+22	45.9	146	48.4	+13	07.6	80	25.4	-13	34.0	162	26.9	+17	48.7
1	312	40.7	221	27.8		46.0	161	49.4		07.0	95	27.8		34.0	177	29.0		48.6
2	327	43.1	236	27.0		46.0	176	50.4		06.5	110	30.2		34.0	192	31.2		48.5
3	342	45.6	251	26.2		46.1	191	51.3		05.9	125	32.5		34.1	207	33.3		48.5
4	357	48.1	266	25.4		46.2	206	52.3		05.4	140	34.9		34.1	222	35.4		48.4
5	12	50.5	281	24.6	+22	46.3	221	53.3	+13	04.8	155	37.3	-13	34.2	237	37.6	+17	48.3
6	27	53.0	296	23.8	+22	46.4	236	54.3	+13	04.3	170	39.6	-13	34.2	252	39.7	+17	48.2
7	42	55.4	311	22.9		46.5	251	55.2		03.7	185	42.0		34.3	267	41.9		48.1
8	57	57.9	326	22.1		46.5	266	56.2		03.1	200	44.4		34.3	282	44.0		48.0
9	73	00.4	341	21.3		46.6	281	57.2		02.6	215	46.7		34.3	297	46.2		47.9
10	88	02.8	356	20.5		46.7	296	58.2		02.0	230	49.1		34.4	312	48.3		47.9
11	103	05.3	11	19.7	+22	46.8	311	59.2	+13	01.5	245	51.5	-13	34.4	327	50.5	+17	47.8
12	118	07.8	26	18.9	+22	46.8	327	00.1	+13	00.9	260	53.8	-13	34.5	342	52.6	+17	47.7
13	133	10.2	41	18.1		46.9	342	01.1	+13	00.4	275	56.2		34.5	357	54.8		47.6
14	148	12.7	56	17.3		47.0	357	02.1	+12	59.8	290	58.6		34.6	12	56.9		47.5
15	163	15.2	71	16.5		47.1	12	03.1		59.3	306	00.9		34.6	27	59.1		47.4
16	178	17.6	86	15.7		47.1	27	04.0		58.7	321	03.3		34.6	43	01.2		47.3
17	193	20.1	101	14.9	+22	47.2	42	05.0	+12	58.1	336	05.6	-13	34.7	58	03.4	+17	47.2
18	208	22.6	116	14.1	+22	47.3	57	06.0	+12	57.6	351	08.0	-13	34.7	73	05.5	+17	47.2
19	223	25.0	131	13.3		47.3	72	07.0		57.0	6	10.4		34.8	88	07.7		47.1
20	238	27.5	146	12.5		47.4	87	08.0		56.5	21	12.7		34.8	103	09.8		47.0
21	253	29.9	161	11.7		47.5	102	08.9		55.9	36	15.1		34.9	118	11.9		46.9
22	268	32.4	176	10.9		47.5	117	09.9		55.4	51	17.5		34.9	133	14.1		46.8
23	283	34.9	191	10.0		47.6	132	10.9		54.8	66	19.8		35.0	148	16.2		46.7
24	298	37.3	206	09.2	+22	47.7	147	11.9	+12	54.2	81	22.2	-13	35.0	163	18.4	+17	46.6
Dif	—			-8 +1			+10 -6			+24 0			+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 4				Edad: 25 ^d 3 PHE { 4 ^h : 57'0 12 ^h : 56'9 SD: 15'6 20 ^h : 56'7 PMG: 8 ^h 49 ^m R°: 57 ^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	24.3	+20	32.4	232	40.9	+26	28.7	60 N	20 56	22 06	** **	22 52 51	19 40 68		
1	193	24.3		31.9	247	07.1		34.9	58	41	21 41	** **	23 28 54	19 04 65		
2	208	24.2		31.4	261	33.4		40.9	56	28	21	22 51	23 54 55	18 38 63		
3	223	24.2		30.9	275	59.6		46.8	54	17	21 04	22 17	** ** *	17 63		
4	238	24.2		30.5	290	25.7		52.6	52	20 07	20 51	21 53	** ** *	18 00 62		
5	253	24.1	+20	30.0	304	51.8	+26	58.2	50	19 58	20 39	21 34	0 05 42	17 45 62		
6	268	24.1	+20	29.5	319	17.9	+27	03.6	45	19 39	20 14	20 59	0 32 45	17 15 61		
7	283	24.1		29.0	333	44.0		08.9	40	24	19 55	34	0 53 48	16 52 60		
8	298	24.0		28.5	348	10.0		14.0	35	11	40	20 15	1 11 49	33 59		
9	313	24.0		28.1	2	36.0		18.9	30	19 00	27	19 59	26 51	16 16 60		
10	328	24.0		27.6	17	01.9		23.7	20	18 41	19 05	34	1 52 53	15 49 58		
11	343	23.9	+20	27.1	31	27.9	+27	28.3	10 N	18 25	18 48	19 14	2 15 55	15 25 58		
12	358	23.9	+20	26.6	45	53.8	+27	32.8	0	18 10	18 32	18 58	2 36 56	15 03 57		
13	13	23.9		26.1	60	19.7		37.1	10 S	17 55	17	43	2 57 58	14 41 56		
14	28	23.8		25.6	74	45.5		41.2	20	39	18 03	30	3 20 60	14 17 55		
15	43	23.8		25.1	89	11.4		45.1	30	21	17 47	16	3 46 62	13 49 55		
16	58	23.8		24.7	103	37.2		49.0	35	17 11	38	09	4 02 63	33 54		
17	73	23.8	+20	24.2	118	03.0	+27	52.6	40	16 59	17 28	18 01	4 21 64	13 14 53		
18	88	23.7	+20	23.7	132	28.8	+27	56.1	45	16 44	17 17	17 53	4 43 66	12 51 52		
19	103	23.7		23.2	146	54.6	+27	59.4	50	27	17 04	44	5 12 68	22 49		
20	118	23.7		22.7	161	20.4	+28	02.5	52	19	16 58	40	26 69	12 08 48		
21	133	23.6		22.2	175	46.2		05.5	54	10	51	36	5 42 72	11 51 47		
22	148	23.6		21.7	190	11.9		08.3	56	16 00	44	31	6 01 75	32 44		
23	163	23.6		21.2	204	37.7		11.0	58	15 48	36	26	25 79	11 07 40		
24	178	23.6	+20	20.7	219	03.4	+28	13.5	60 S	15 35	16 27	17 20	6 58 88	10 34 31		
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO							
	PMG: 4 ^h 04 ^m 8		Mag: -3.8 PMG: 10 ^h 16 ^m		Mag: +1.8 PMG: 14 ^h 10 ^m		Mag: -2.2 PMG: 18 ^h 32 ^m		Mag: +0.4 PMG: 13 ^h 05 ^m							
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄							
h	°	'	°	'	°	'	°	'	°	'						
0	298	37.3	206	09.2	147	11.9	81	22.2	163	18.4						
1	313	39.8	221	08.4		47.7	162	12.8		20.5						
2	328	42.3	236	07.6		47.8	177	13.8		22.7						
3	343	44.7	251	06.8		47.8	192	14.8		24.8						
4	358	47.2	266	06.0		47.9	207	15.8		27.0						
5	13	49.7	281	05.2	+22	47.9	222	16.7	+12	29.1						
6	28	52.1	296	04.4	+22	48.0	237	17.7	+12	31.3						
7	43	54.6	311	03.6		48.1	252	18.7		33.4						
8	58	57.1	326	02.8		48.1	267	19.7		35.6						
9	73	59.5	341	02.0		48.2	282	20.7		37.7						
10	89	02.0	356	01.2		48.2	297	21.6		39.9						
11	104	04.4	11	00.3	+22	48.3	312	22.6	+12	42.0						
12	119	06.9	25	59.5	+22	48.3	327	23.6	+12	44.1						
13	134	09.4	40	58.7		48.4	342	24.6		45.5						
14	149	11.8	55	57.9		48.4	357	25.6		45.4						
15	164	14.3	70	57.1		48.4	12	26.5		45.3						
16	179	16.8	85	56.3		48.5	27	27.5		45.3						
17	194	19.2	100	55.5	+22	48.5	42	28.5	+12	45.2						
18	209	21.7	115	54.7	+22	48.6	57	29.5	+12	45.1						
19	224	24.2	130	53.9		48.6	72	30.4		45.0						
20	239	26.6	145	53.1		48.6	87	31.4		44.9						
21	254	29.1	160	52.3		48.7	102	32.4		44.8						
22	269	31.6	175	51.4		48.7	117	33.4		44.7						
23	284	34.0	190	50.6		48.8	132	34.4		44.6						
24	299	36.5	205	49.8	+22	48.8	147	35.3	+12	44.6						
Dif	—		-8		0		+10		-6							

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 3 PHE { 4 ^h : 56 ^s /5 12 ^h : 56 ^s /3 20 ^h : 56 ^s /2 PMG: 9 ^h 46 ^m R°: 56 ^m															
	hG ☉		Dec		hG ☾		Dif			Dec			Dif		Hora		R°			
h	°	'	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m
0	178	23.6	+20	20.7	219	03.4	+28	13.5	23	60 N	** ** *	2 07	3 17	23 43	86	20 48	28			
1	193	23.5		20.2	233	29.1		15.8	23	58	** ** *	33	33	** ** *	**	20 09	37			
2	208	23.5		19.8	247	54.9		17.9	21	56	1 22	2 53	46	** ** *	**	19 41	41			
3	223	23.5		19.3	262	20.6		19.9	20	54	1 56	3 09	3 57	0 15	55	20 43				
4	238	23.5		18.8	276	46.4		21.8	19	52	2 20	23	4 07	32 56		19 02	45			
5	253	23.4	+20	18.3	291	12.1	+28	23.4	16	50	2 39	3 35	4 16	0 47	56	18 47	46			
6	268	23.4	+20	17.8	305	37.9	+28	24.9	15	45	3 14	3 59	4 34	1 17	57	18 16	49			
7	283	23.4		17.3	320	03.7		26.2	13	40	39	4 18	4 49	1 41	56	17 52	51			
8	298	23.3		16.8	334	29.4		27.4	12	35	3 58	33	5 02	2 00	57	32 52				
9	313	23.3		16.3	348	55.2		28.4	10	30	4 14	4 46	13	17 57		17 16	52			
10	328	23.3		15.8	3	21.0		29.2	8	20	39	5 08	32	2 45	57	16 47	54			
11	343	23.3	+20	15.3	17	46.8	+28	29.9	7	10 N	4 59	5 25	5 48	3 10	56	16 23	54			
12	358	23.2	+20	14.8	32	12.7	+28	30.4	5	0	5 15	5 41	6 03	3 32	57	16 00	55			
13	13	23.2		14.3	46	38.5		30.7	3	10 S	30	5 55	18	3 55	57	15 37	57			
14	28	23.2		13.8	61	04.4		30.9	2	20	43	6 10	34	4 20	56	15 12	58			
15	43	23.2		13.3	75	30.3		30.9	0	30	5 57	26	6 52	4 48	56	14 44	58			
16	58	23.2		12.8	89	56.2		30.8	1	35	6 04	35	7 02	5 05	56	27 59				
17	73	23.1	+20	12.3	104	22.2	+28	30.5	3	40	6 11	6 44	7 14	5 25	55	14 07	60			
18	88	23.1	+20	11.8	118	48.2	+28	30.0	5	45	6 19	6 55	7 28	5 49	55	13 43	60			
19	103	23.1		11.3	133	14.2		29.3	7	50	28	7 08	45	6 20	54	13 11	63			
20	118	23.1		10.8	147	40.2		28.5	8	52	32	14	7 53	35 54		12 56	63			
21	133	23.0		10.3	162	06.3		27.6	9	54	37	21	8 02	6 54	52	38 64				
22	148	23.0		09.8	176	32.4		26.5	11	56	41	28	12	7 16	51	12 16	65			
23	163	23.0		09.3	190	58.6		25.2	13	58	46	36	23	7 44	50	11 47	67			
24	178	23.0	+20	08.8	205	24.8	+28	23.7	15	60 S	6 52	7 45	8 36	8 26	45	11 05	73			

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 4 ^h 00 ^m 9		Mag: -3.8 PMG: 10 ^h 17 ^m		Mag: +1.8 PMG: 14 ^h 09 ^m		Mag: -2.2 PMG: 18 ^h 28 ^m		Mag: +0.4 PMG: 13 ^h 01 ^m									
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄									
h	°	'	°	'	°	'	°	'	°	'								
0	299	36.5	205	49.8	+22	48.8	147	35.3	+12	40.8	82	18.8	-13	36.1	164	09.9	+17	44.6
1	314	38.9	220	49.0		48.8	162	36.3		40.2	97	21.1		36.1	179	12.0		44.5
2	329	41.4	235	48.2		48.9	177	37.3		39.7	112	23.5		36.2	194	14.2		44.4
3	344	43.9	250	47.4		48.9	192	38.3		39.1	127	25.9		36.2	209	16.3		44.3
4	359	46.3	265	46.6		48.9	207	39.3		38.6	142	28.2		36.3	224	18.5		44.2
5	14	48.8	280	45.8	+22	48.9	222	40.2	+12	38.0	157	30.6	-13	36.3	239	20.6	+17	44.1
6	29	51.3	295	45.0	+22	49.0	237	41.2	+12	37.4	172	32.9	-13	36.4	254	22.8	+17	44.0
7	44	53.7	310	44.1		49.0	252	42.2		36.9	187	35.3		36.4	269	24.9		44.0
8	59	56.2	325	43.3		49.0	267	43.2		36.3	202	37.6		36.5	284	27.1		43.9
9	74	58.7	340	42.5		49.1	282	44.2		35.7	217	40.0		36.5	299	29.2		43.8
10	90	01.1	355	41.7		49.1	297	45.1		35.2	232	42.3		36.6	314	31.4		43.7
11	105	03.6	10	40.9	+22	49.1	312	46.1	+12	34.6	247	44.7	-13	36.6	329	33.5	+17	43.6
12	120	06.0	25	40.1	+22	49.1	327	47.1	+12	34.1	262	47.0	-13	36.7	344	35.7	+17	43.5
13	135	08.5	40	39.3		49.1	342	48.1		33.5	277	49.4		36.7	359	37.8		43.4
14	150	11.0	55	38.5		49.2	357	49.1		32.9	292	51.7		36.8	14	39.9		43.3
15	165	13.4	70	37.7		49.2	12	50.0		32.4	307	54.1		36.8	29	42.1		43.3
16	180	15.9	85	36.8		49.2	27	51.0		31.8	322	56.4		36.9	44	44.2		43.2
17	195	18.4	100	36.0	+22	49.2	42	52.0	+12	31.2	337	58.8	-13	36.9	59	46.4	+17	43.1
18	210	20.8	115	35.2	+22	49.2	57	53.0	+12	30.7	353	01.1	-13	37.0	74	48.5	+17	43.0
19	225	23.3	130	34.4		49.2	72	54.0		30.1	8	03.5		37.0	89	50.7		42.9
20	240	25.8	145	33.6		49.2	87	54.9		29.5	23	05.8		37.1	104	52.8		42.8
21	255	28.2	160	32.8		49.3	102	55.9		29.0	38	08.2		37.1	119	55.0		42.7
22	270	30.7	175	32.0		49.3	117	56.9		28.4	53	10.5		37.2	134	57.1		42.6
23	285	33.2	190	31.2		49.3	132	57.9		27.9	68	12.9		37.2	149	59.3		42.6
24	300	35.6	205	30.3	+22	49.3	147	58.9	+12	27.3	83	15.2	-13	37.3	165	01.4	+17	42.5
Dif	—		-8		0		+10		-6		+24		0		+21		-	

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 15 ^h 7			Edad: 27 ^d 3	PHE {	4 ^h : 56 ^o 0 12 ^h : 55 ^o 9 20 ^h : 55 ^o 7									
	PMG: 12 ^h 06 ^m 5								SD: 15 ^h 3		PMG: 10 ^h 42 ^m		R ^o : 54 ^m		
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R ^o	Hora	R ^o
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m	m	h m	m
0	178	23.0	+20 08.8	205	24.8	+28 23.7	16	60 N	20 52	22 00	** ** *	** ** *	21 16	10	
1	193	23.0	08.2	219	51.0	22.1	16	58	37	21 36	** ** *	0 22	77	20 46	19
2	208	22.9	07.7	234	17.3	20.4	17	56	25	17	22 43	0 49	73	22	25
3	223	22.9	07.2	248	43.6	18.5	19	54	14	21 01	22 11	1 10	71	20 03	29
4	238	22.9	06.7	263	10.0	16.4	21	52	20 04	20 47	21 48	28 69	19 47	32	
5	253	22.9	+20 06.2	277	36.4	+28 14.2	22	50	19 55	20 36	21 30	1 43	67	19 33	34
6	268	22.8	+20 05.7	292	02.9	+28 11.8	24	45	19 37	20 12	20 57	2 14	64	19 05	38
7	283	22.8	05.2	306	29.4	09.2	26	40	22	19 54	32	37 63	18 43	41	
8	298	22.8	04.7	320	56.0	06.5	27	35	19 10	38	20 13	2 57	61	24	43
9	313	22.8	04.2	335	22.6	03.7	28	30	18 59	26	19 57	3 14	60	18 08	45
10	328	22.8	03.7	349	49.3	+28 00.7	30	20	41	19 05	33	3 42	58	17 41	48
11	343	22.8	+20 03.1	4	16.0	+27 57.5	32	10 N	18 25	18 47	19 14	4 06	56	17 17	51
12	358	22.7	+20 02.6	18	42.9	+27 54.2	33	0	18 10	18 32	18 58	4 29	54	16 55	53
13	13	22.7	02.1	33	09.7	50.7	35	10 S	17 55	18	43	4 52	52	34	55
14	28	22.7	01.6	47	36.6	47.1	36	20	40	18 03	30	5 16	51	16 10	57
15	43	22.7	01.1	62	03.6	43.4	37	30	22	17 48	17	5 44	49	15 42	61
16	58	22.7	00.6	76	30.7	39.5	39	35	12	39	10	6 01	47	26	62
17	73	22.6	+20 00.1	90	57.8	+27 35.4	41	40	17 00	17 30	18 03	6 20	46	15 07	64
18	88	22.6	+19 59.5	105	25.0	+27 31.2	42	45	16 46	17 19	17 55	6 44	43	14 43	68
19	103	22.6	59.0	119	52.2	26.8	44	50	30	06	46	7 14	40	14 14	71
20	118	22.6	58.5	134	19.6	22.4	44	52	22	17 00	42	29 37	13 59	73	
21	133	22.6	58.0	148	47.0	17.7	47	54	13	16 54	38	7 46	35	42	76
22	148	22.6	57.5	163	14.4	12.9	48	56	16 03	47	33	8 07	32	13 21	80
23	163	22.5	57.0	177	42.0	08.0	49	58	15 52	39	29	8 34	26	12 54	86
24	178	22.5	+19 56.4	192	09.6	+27 03.0	50	60 S	15 39	16 30	17 23	9 11	15	12 18	96

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG: 3 ^h 57 ^m 0		Mag: -3.8 PMG: 10 ^h 19 ^m		Mag: +1.8 PMG: 14 ^h 07 ^m		Mag: -2.2 PMG: 18 ^h 24 ^m		Mag: +0.4 PMG: 12 ^h 58 ^m						
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'					
0	300	35.6	205	30.3	+22 49.3	147	58.9	+12 27.3	83	15.2	-13 37.3	165	01.4	+17 42.5	
1	315	38.1	220	29.5	49.3	162	59.8	26.7	98	17.6	37.3	180	03.5	42.4	
2	330	40.5	235	28.7	49.3	178	00.8	26.2	113	19.9	37.3	195	05.7	42.3	
3	345	43.0	250	27.9	49.3	193	01.8	25.6	128	22.3	37.4	210	07.8	42.2	
4	0	45.5	265	27.1	49.3	208	02.8	25.0	143	24.6	37.4	225	10.0	42.1	
5	15	47.9	280	26.3	+22 49.3	223	03.8	+12 24.5	158	27.0	-13 37.5	240	12.1	+17 42.0	
6	30	50.4	295	25.5	+22 49.3	238	04.7	+12 23.9	173	29.3	-13 37.5	255	14.3	+17 41.9	
7	45	52.9	310	24.7	49.3	253	05.7	23.3	188	31.7	37.6	270	16.4	41.9	
8	60	55.3	325	23.8	49.3	268	06.7	22.8	203	34.0	37.6	285	18.6	41.8	
9	75	57.8	340	23.0	49.3	283	07.7	22.2	218	36.3	37.7	300	20.7	41.7	
10	91	00.3	355	22.2	49.3	298	08.7	21.6	233	38.7	37.7	315	22.9	41.6	
11	106	02.7	10	21.4	+22 49.3	313	09.6	+12 21.1	248	41.0	-13 37.8	330	25.0	+17 41.5	
12	121	05.2	25	20.6	+22 49.3	328	10.6	+12 20.5	263	43.4	-13 37.8	345	27.1	+17 41.4	
13	136	07.7	40	19.8	49.3	343	11.6	19.9	278	45.7	37.9	0	29.3	41.3	
14	151	10.1	55	19.0	49.3	358	12.6	19.4	293	48.1	37.9	15	31.4	41.3	
15	166	12.6	70	18.1	49.3	13	13.6	18.8	308	50.4	38.0	30	33.6	41.2	
16	181	15.0	85	17.3	49.2	28	14.5	18.2	323	52.8	38.0	45	35.7	41.1	
17	196	17.5	100	16.5	+22 49.2	43	15.5	+12 17.7	338	55.1	-13 38.1	60	37.9	+17 41.0	
18	211	20.0	115	15.7	+22 49.2	58	16.5	+12 17.1	353	57.4	-13 38.1	75	40.0	+17 40.9	
19	226	22.4	130	14.9	49.2	73	17.5	16.5	8	59.8	38.2	90	42.2	40.8	
20	241	24.9	145	14.1	49.2	88	18.5	16.0	24	02.1	38.3	105	44.3	40.7	
21	256	27.4	160	13.3	49.2	103	19.5	15.4	39	04.5	38.3	120	46.4	40.6	
22	271	29.8	175	12.5	49.2	118	20.4	14.8	54	06.8	38.4	135	48.6	40.6	
23	286	32.3	190	11.6	49.1	133	21.4	14.3	69	09.1	38.4	150	50.7	40.5	
24	301	34.8	205	10.8	+22 49.1	148	22.4	+12 13.7	84	11.5	-13 38.5	165	52.9	+17 40.4	
Dif	—		-8	0		+10	-6		+23		-1	+21		-	

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: 28 ^d 3 PHE { SD: 15 ^h 1 PMG: 11 ^h 36 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	Rº	Hora
h	°	'	°	°	'	°	°	h m	h m	h m	h m m	h m m	h m m	
0	178	22.5	+19 56.4	192	09.6	+27 03.0	60 N	*** **	2 14	3 22	1 09 98	21 26 4		
1	193	22.5		206	37.3	+26 57.8	58	** *	38	36	1 39 89	21 05 9		
2	208	22.5		221	05.0		56	1 31	2 57	3 49	2 02 83	20 47 15		
3	223	22.5		235	32.9		54	2 02	3 13	4 00	21 79	32 18		
4	238	22.5		250	00.8		52	25	26	10	37 76	19 21		
5	253	22.5	+19 53.8	264	28.8	+26 35.6	50	2 43	3 38	4 18	2 50 74	20 07 24		
6	268	22.4	+19 53.3	278	56.9	+26 29.7	45	3 17	4 01	4 36	3 18 69	19 43 29		
7	283	22.4		293	25.1		40	3 41	20	4 51	40 65	24 32		
8	298	22.4		307	53.3		35	4 00	35	5 03	3 58 63	19 07 36		
9	313	22.4		322	21.7		30	16	4 48	14	4 14 60	18 53 39		
10	328	22.4		336	50.1	+26 04.8	20	40	5 09	32	4 40 57	29 43		
11	343	22.4	+19 50.7	351	18.6	+25 58.3	10 N	4 59	5 26	5 48	5 02 54	18 08 46		
12	358	22.4	+19 50.1	5	47.2	+25 51.6	0	5 15	5 41	6 03	5 23 51	17 48 50		
13	13	22.3		20	15.8		10 S	30	5 55	18	5 44 49	29 52		
14	28	22.3		34	44.6		20	43	6 10	33	6 07 45	17 07 56		
15	43	22.3		49	13.4		30	5 56	25	6 51	33 41	16 43 60		
16	58	22.3		63	42.4		35	6 03	34	7 01	6 48 39	28 63		
17	73	22.3	+19 47.5	78	11.4	+25 16.4	40	6 10	6 43	7 12	7 06 36	16 11 66		
18	88	22.3	+19 47.0	92	40.5	+25 09.0	45	6 18	6 54	7 26	7 27 33	15 51 69		
19	103	22.3		107	09.7	+25 01.4	50	26	7 06	43	7 54 28	25 74		
20	118	22.3		121	39.0	+24 53.8	52	30	12	50	8 06 26	15 12 77		
21	133	22.3		136	08.3		54	34	18	7 59	21 23	14 58 80		
22	148	22.2		150	37.8		56	39	25	8 09	8 39 18	41 85		
23	163	22.2		165	07.4		58	44	33	20	9 00 13	14 20 91		
24	178	22.2	+19 43.8	179	37.0	+24 22.0	60 S	6 49	7 42	8 33	9 26 5	13 54 99		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG 3 ^h 53 ^m 0		Mag: -3.8 PMG: 10 ^h 20 ^m		Mag: +1.8 PMG: 14 ^h 06 ^m		Mag: -2.2 PMG: 18 ^h 20 ^m		Mag: +0.4 PMG: 12 ^h 55 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	301	34.8	205	10.8	+22 49.1	148	22.4	+12 13.7	84	11.5	-13 38.5	165	52.9	+17 40.4
1	316	37.2	220	10.0	49.1	163	23.4	13.1	99	13.8	38.5	180	55.0	40.3
2	331	39.7	235	09.2	49.1	178	24.4	12.6	114	16.2	38.6	195	57.2	40.2
3	346	42.2	250	08.4	49.0	193	25.3	12.0	129	18.5	38.6	210	59.3	40.1
4	1	44.6	265	07.6	49.0	208	26.3	11.4	144	20.9	38.7	226	01.5	40.0
5	16	47.1	280	06.8	+22 49.0	223	27.3	+12 10.8	159	23.2	-13 38.7	241	03.6	+17 39.9
6	31	49.5	295	05.9	+22 49.0	238	28.3	+12 10.3	174	25.5	-13 38.8	256	05.8	+17 39.9
7	46	52.0	310	05.1	48.9	253	29.3	09.7	189	27.9	38.8	271	07.9	39.8
8	61	54.5	325	04.3	48.9	268	30.3	09.1	204	30.2	38.9	286	10.0	39.7
9	76	56.9	340	03.5	48.9	283	31.2	08.6	219	32.5	38.9	301	12.2	39.6
10	91	59.4	355	02.7	48.9	298	32.2	08.0	234	34.9	39.0	316	14.3	39.5
11	107	01.9	10	01.9	+22 48.8	313	33.2	+12 07.4	249	37.2	-13 39.0	331	16.5	+17 39.4
12	122	04.3	25	01.0	+22 48.8	328	34.2	+12 06.9	264	39.6	-13 39.1	346	18.6	+17 39.3
13	137	06.8	40	00.2	48.7	343	35.2	06.3	279	41.9	39.1	1	20.8	39.2
14	152	09.3	54	59.4	48.7	358	36.2	05.7	294	44.2	39.2	16	22.9	39.1
15	167	11.7	69	58.6	48.7	13	37.1	05.2	309	46.6	39.2	31	25.1	39.1
16	182	14.2	84	57.8	48.6	28	38.1	04.6	324	48.9	39.3	46	27.2	39.0
17	197	16.7	99	57.0	+22 48.6	43	39.1	+12 04.0	339	51.2	-13 39.3	61	29.3	+17 38.9
18	212	19.1	114	56.2	+22 48.6	58	40.1	+12 03.4	354	53.6	-13 39.4	76	31.5	+17 38.8
19	227	21.6	129	55.3	48.5	73	41.1	02.9	9	55.9	39.4	91	33.6	38.7
20	242	24.0	144	54.5	48.5	88	42.1	02.3	24	58.3	39.5	106	35.8	38.6
21	257	26.5	159	53.7	48.4	103	43.0	01.7	40	00.6	39.6	121	37.9	38.5
22	272	29.0	174	52.9	48.4	118	44.0	01.2	55	02.9	39.6	136	40.1	38.4
23	287	31.4	189	52.1	48.3	133	45.0	+12 00.6	70	05.3	39.7	151	42.2	38.4
24	302	33.9	204	51.3	+22 48.3	148	46.0	+12 00.0	85	07.6	-13 39.7	166	44.4	+17 38.3
Dif	—		-8		0	+10		-6	+23		-1	+21		-1

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15 ^h 7			Edad: 29 ^d 3	PHE {	4 ^h : 55 ^m 1 12 ^h : 55 ^m 0 20 ^h : 54 ^m 9 R°: 47 ^m			Final del crepúsculo			Salida de Luna		Puesta de Luna	
	PMG: 12 ^h 06 ^m 5								Civil			Náutico		Hora	
	hG ☉	Dec		hG ☾	Dif	Dec	Dif								
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m	h m	h m	m
0	178	22.2	+19 43.8	179	37.0	+24 22.0		60 N	20 47	21 54	** **	2 47 96	21 30 0		
1	193	22.2		194	06.8 ¹⁰⁸		13.8 ⁸²	58	33	31	23 25	3 08 89	14 6		
2	208	22.2		208	36.6 ¹⁰⁸	+24 05.4	84 ⁸⁴	56	21	21 12	22 34	25 85	21 02 9		
3	223	22.2		223	06.5 ¹⁰⁹	+23 57.0	84 ⁸⁴	54	11	20 57	22 05	40 80	20 50 13		
4	238	22.2		237	36.5 ¹¹⁰		48.4 ⁸⁶	52	20 01	44	21 44	3 53 77	40 16		
5	253	22.2	+19 41.1	252	06.6 ¹¹¹	+23 39.8	86 ⁸⁶	50	19 53	20 33	21 27	4 04 74	20 31 18		
6	268	22.2	+19 40.6	266	36.8 ¹¹²	+23 31.0	88 ⁸⁸	45	19 35	20 10	20 54	4 27 69	20 12 23		
7	283	22.2		281	07.1 ¹¹³		22.1 ⁸⁹	40	21	19 52	30	4 45 65	19 56 27		
8	298	22.2		295	37.5 ¹¹⁴		13.1 ⁹⁰	35	19 09	37	20 11	5 01 62	43 30		
9	313	22.2		310	08.0 ¹¹⁵	+23 04.1	90 ⁹⁰	30	18 58	24	19 56	14 59	32 33		
10	328	22.2		324	38.5 ¹¹⁵	+22 54.9	92 ⁹²	20	40	19 04	32	37 54	19 12 37		
11	343	22.1	+19 37.9	339	09.2 ¹¹⁷	+22 45.6	93 ⁹³	10 N	18 24	18 47	19 13	5 56 51	18 54 42		
12	358	22.1	+19 37.3	353	39.9 ¹¹⁷	+22 36.2	94 ⁹⁴	0	18 10	18 32	18 58	6 14 48	18 38 45		
13	13	22.1		8	10.8 ¹¹⁹		26.7 ⁹⁵	10 S	17 56	18	44	33 43	21 49		
14	28	22.1		22	41.7 ¹¹⁹		17.1 ⁹⁶	20	41	18 04	31	6 52 40	18 03 54		
15	43	22.1		37	12.7 ¹²⁰	+22 07.4	97 ⁹⁷	30	23	17 49	18	7 14 36	17 43 58		
16	58	22.1		51	43.8 ¹²¹	+21 57.7	97 ⁹⁷	35	13	40	11	27 33	31 61		
17	73	22.1	+19 34.6	66	15.0 ¹²²	+21 47.8	99 ⁹⁹	40	17 02	17 31	18 04	7 42 30	17 17 64		
18	88	22.1	+19 34.1	80	46.3 ¹²³	+21 37.9	99 ⁹⁹	45	16 49	17 21	17 57	8 00 25	17 00 69		
19	103	22.1		95	17.7 ¹²⁴		27.8 ¹⁰¹	50	32	08	48	22 20	16 39 74		
20	118	22.1		109	49.2 ¹²⁵		17.7 ¹⁰¹	52	25	17 03	44	32 18	29 77		
21	133	22.1		124	20.7 ¹²⁵	+21 07.4	103 ¹⁰³	54	16	16 57	40	44 15	18 80		
22	148	22.1		138	52.4 ¹²⁷	+20 57.1	103 ¹⁰³	56	16 07	50	36	8 57 11	16 06 83		
23	163	22.1		153	24.1 ¹²⁷		46.7 ¹⁰⁴	58	15 56	42	31	9 13 6	15 51 88		
24	178	22.1	+19 30.8	167	55.9 ¹²⁸	+20 36.2	105 ¹⁰⁵	60 S	15 43	16 34	17 26	9 31 1	15 33 94		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 3 ^h 49 ^m 1		Mag: -3.8 PMG: 10 ^h 21 ^m		Mag: +1.8 PMG: 14 ^h 04 ^m		Mag: -2.2 PMG: 18 ^h 17 ^m		Mag: +0.4 PMG: 12 ^h 51 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	302	33.9	204	51.3	148	46.0	85	07.6	166	44.4
1	317	36.4	219	50.4	163	47.0	100	09.9	181	46.5
2	332	38.8	234	49.6	178	48.0	115	12.3	196	48.6
3	347	41.3	249	48.8	193	48.9	130	14.6	211	50.8
4	2	43.8	264	48.0	208	49.9	145	16.9	226	52.9
5	17	46.2	279	47.2	223	50.9	160	19.3	241	55.1
6	32	48.7	294	46.4	238	51.9	175	21.6	256	57.2
7	47	51.2	309	45.6	253	52.9	190	23.9	271	59.4
8	62	53.6	324	44.7	268	53.9	205	26.3	287	01.5
9	77	56.1	339	43.9	283	54.8	220	28.6	302	03.7
10	92	58.5	354	43.1	298	55.8	235	30.9	317	05.8
11	108	01.0	9	42.3	313	56.8	250	33.2	332	07.9
12	123	03.5	24	41.5	328	57.8	265	35.6	347	10.1
13	138	05.9	39	40.7	343	58.8	280	37.9	2	12.2
14	153	08.4	54	39.8	358	59.8	295	40.2	17	14.4
15	168	10.9	69	39.0	14	00.7	310	42.6	32	16.5
16	183	13.3	84	38.2	29	01.7	325	44.9	47	18.7
17	198	15.8	99	37.4	44	02.7	340	47.2	62	20.8
18	213	18.3	114	36.6	59	03.7	355	49.6	77	22.9
19	228	20.7	129	35.8	74	04.7	10	51.9	92	25.1
20	243	23.2	144	34.9	89	05.7	25	54.2	107	27.2
21	258	25.6	159	34.1	104	06.6	40	56.5	122	29.4
22	273	28.1	174	33.3	119	07.6	55	58.9	137	31.5
23	288	30.6	189	32.5	134	08.6	71	01.2	152	33.7
24	303	33.0	204	31.7	149	09.6	86	03.5	167	35.8
Dif	—		-8	-1	+10	-6	+23	-1	+21	-1

UT	SOL				● LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 15'7 PMG: 12 ^h 06 ^m 5				Edad: 0 ^d 8 PHE { 4 ^h : 54'7 12 ^h : 54'6 20 ^h : 54'5 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	178	22.1	+19	30.8	167	55.9	+20	36.2	60 N	** *	2 20	3 26	4 23	91	21 30	0				
1	193	22.1		30.3	182	27.9 ¹³⁰		25.7 ¹⁰⁵	58	0 49	2 43	40	37	86	20	3				
2	208	22.1		29.7	196	59.9 ¹³⁰		15.0 ¹⁰⁷	56	1 39	3 01	3 53	4 50	81	11	6				
3	223	22.1		29.2	211	32.0 ¹³¹	+20	04.3 ¹⁰⁷	54	2 08	17	4 03	5 00	78	21 03	9				
4	238	22.1		28.6	226	04.1 ¹³¹	+19	53.4 ¹⁰⁹	52	30	29	12	10	75	20 56	12				
5	253	22.1	+19	28.1	240	36.4 ¹³³	+19	42.6 ¹⁰⁸	50	2 47	3 41	4 21	5 18	73	20 49	14				
6	268	22.1	+19	27.5	255	08.7 ¹³³	+19	31.6 ¹¹⁰	45	3 20	4 04	4 38	5 36	67	20 35	19				
7	283	22.1		27.0	269	41.2 ¹³⁵		20.5 ¹¹¹	40	3 43	22	4 53	5 50	64	23	23				
8	298	22.1		26.4	284	13.7 ¹³⁵	+19	09.4 ¹¹¹	35	4 02	36	5 05	6 03	59	13	26				
9	313	22.1		25.8	298	46.3 ¹³⁶	+18	58.2 ¹¹²	30	17	4 49	15	13	57	20 05	29				
10	328	22.1		25.3	313	19.0 ¹³⁷		46.9 ¹¹³	20	4 41	5 09	33	31	52	19 49	34				
11	343	22.1	+19	24.7	327	51.8 ¹³⁸	+18	35.6 ¹¹³	10 N	5 00	5 26	5 49	6 47	48	19 36	38				
12	358	22.1	+19	24.2	342	24.6 ¹³⁸	+18	24.2 ¹¹⁴	0	5 16	5 41	6 03	7 02	43	19 23	42				
13	13	22.1		23.6	356	57.5 ¹³⁹		12.7 ¹¹⁵	10 S	29	5 55	17	16	40	19 10	47				
14	28	22.1		23.1	11	30.6 ¹⁴¹	+18	01.1 ¹¹⁶	20	42	6 09	32	32	35	18 57	50				
15	43	22.1		22.5	26	03.6 ¹⁴⁰	+17	49.5 ¹¹⁶	30	5 55	24	49	7 50	30	41	56				
16	58	22.1		22.0	40	36.8 ¹⁴²		37.8 ¹¹⁷	35	6 02	32	6 59	8 00	28	32	58				
17	73	22.1	+19	21.4	55	10.1 ¹⁴³	+17	26.0 ¹¹⁸	40	6 08	6 41	7 11	8 12	24	18 21	62				
18	88	22.1	+19	20.9	69	43.4 ¹⁴³	+17	14.2 ¹¹⁸	45	6 16	6 52	7 24	8 25	21	18 09	66				
19	103	22.1		20.3	84	16.8 ¹⁴⁴	+17	02.3 ¹¹⁹	50	24	7 04	40	42	16	17 53	72				
20	118	22.1		19.7	98	50.3 ¹⁴⁵	+16	50.4 ¹¹⁹	52	28	10	48	50	13	46	74				
21	133	22.1		19.2	113	23.8 ¹⁴⁵		38.3 ¹²¹	54	32	16	7 56	8 59	10	38	77				
22	148	22.1		18.6	127	57.5 ¹⁴⁷		26.3 ¹²⁰	56	36	22	8 05	9 08	8	29	80				
23	163	22.1		18.1	142	31.2 ¹⁴⁷		14.1 ¹²²	58	41	30	16	19	4	19	84				
24	178	22.1	+19	17.5	157	05.0 ¹⁴⁸	+16	01.9 ¹²²	60 S	6 46	7 38	8 28	9 32	0	17 07	88				
UT	ARIES				VENUS				MARTE				JÚPITER				SATURNO			
	PMG 3 ^h 45 ^m 2				Mag: -3.8 PMG: 10 ^h 22 ^m				Mag: +1.8 PMG: 14 ^h 02 ^m				Mag: -2.2 PMG: 18 ^h 13 ^m				Mag: +0.4 PMG: 12 ^h 48 ^m			
	hG ♈		Dec		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	303	33.0	204	31.7	+22	46.8	149	09.6	+11	46.3	86	03.5	-13	41.0	167	35.8	+17	36.2		
1	318	35.5	219	30.9		46.7	164	10.6		45.7	101	05.8		41.1	182	38.0		36.1		
2	333	38.0	234	30.1		46.7	179	11.6		45.1	116	08.2		41.1	197	40.1		36.0		
3	348	40.4	249	29.2		46.6	194	12.6		44.5	131	10.5		41.2	212	42.2		35.9		
4	3	42.9	264	28.4		46.5	209	13.5		44.0	146	12.8		41.2	227	44.4		35.8		
5	18	45.4	279	27.6	+22	46.4	224	14.5	+11	43.4	161	15.2	-13	41.3	242	46.5	+17	35.7		
6	33	47.8	294	26.8	+22	46.3	239	15.5	+11	42.8	176	17.5	-13	41.4	257	48.7	+17	35.6		
7	48	50.3	309	26.0		46.3	254	16.5		42.2	191	19.8		41.4	272	50.8		35.5		
8	63	52.8	324	25.2		46.2	269	17.5		41.7	206	22.1		41.5	287	53.0		35.5		
9	78	55.2	339	24.3		46.1	284	18.5		41.1	221	24.5		41.5	302	55.1		35.4		
10	93	57.7	354	23.5		46.0	299	19.4		40.5	236	26.8		41.6	317	57.3		35.3		
11	109	00.1	9	22.7	+22	45.9	314	20.4	+11	39.9	251	29.1	-13	41.6	332	59.4	+17	35.2		
12	124	02.6	24	21.9	+22	45.8	329	21.4	+11	39.4	266	31.4	-13	41.7	348	01.5	+17	35.1		
13	139	05.1	39	21.1		45.7	344	22.4		38.8	281	33.7		41.8	3	03.7		35.0		
14	154	07.5	54	20.3		45.7	359	23.4		38.2	296	36.1		41.8	18	05.8		34.9		
15	169	10.0	69	19.4		45.6	14	24.4		37.6	311	38.4		41.9	33	08.0		34.8		
16	184	12.5	84	18.6		45.5	29	25.4		37.0	326	40.7		41.9	48	10.1		34.7		
17	199	14.9	99	17.8	+22	45.4	44	26.3	+11	36.5	341	43.0	-13	42.0	63	12.3	+17	34.7		
18	214	17.4	114	17.0	+22	45.3	59	27.3	+11	35.9	356	45.4	-13	42.0	78	14.4	+17	34.6		
19	229	19.9	129	16.2		45.2	74	28.3		35.3	11	47.7		42.1	93	16.5		34.5		
20	244	22.3	144	15.4		45.1	89	29.3		34.7	26	50.0		42.2	108	18.7		34.4		
21	259	24.8	159	14.5		45.0	104	30.3		34.2	41	52.3		42.2	123	20.8		34.3		
22	274	27.3	174	13.7		44.9	119	31.3		33.6	56	54.6		42.3	138	23.0		34.2		
23	289	29.7	189	12.9		44.8	134	32.3		33.0	71	57.0		42.3	153	25.1		34.1		
24	304	32.2	204	12.1	+22	44.7	149	33.2	+11	32.4	86	59.3	-13	42.4	168	27.3	+17	34.0		
Dif	—		-8		-1		+10		-6		+23		-1		+21		-			

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15 ^h 7			Edad: 1 ^d 8	PHE { 4 ^h : 54/4 12 ^h : 54/3 20 ^h : 54/3									
	PMG: 12 ^h 06 ^m 5					SD: 14 ^h 8			PMG: 13 ^h 56 ^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
0	178	22.1	+19 17.5	157	05.0	+16 01.9		60 N	20 43	21 47	** **	5 54 85	21 30 **	
1	193	22.1		171	38.8 ¹⁴⁸	+15 49.7 ¹²²		58	29	25	23 09	6 03 82	23 2	
2	208	22.1		186	12.8 ¹⁵⁰		37.4 ¹²³	56	17	21 08	22 26	11 78	17 5	
3	223	22.1		200	46.8 ¹⁵⁰		25.0 ¹²⁴	54	20 07	20 53	22 00	18 76	12 8	
4	238	22.1		215	20.8 ¹⁵⁰		12.6 ¹²⁴	52	19 58	41	21 39	25 73	08 9	
5	253	22.1	+19 14.7	229	55.0 ¹⁵²	+15 00.1 ¹²⁵		50	19 50	20 30	21 23	6 31 70	21 03 12	
6	268	22.1	+19 14.1	244	29.2 ¹⁵²	+14 47.6 ¹²⁵		45	19 33	20 07	20 51	6 43 66	20 54 16	
7	283	22.1		259	03.4 ¹⁵²		35.0 ¹²⁶	40	19	19 50	28	6 54 61	46 21	
8	298	22.1		273	37.8 ¹⁵⁴		22.4 ¹²⁶	35	19 07	35	20 09	7 02 58	39 24	
9	313	22.1		288	12.2 ¹⁵⁴	+14 09.7 ¹²⁷		30	18 57	23	19 55	10 55	34 26	
10	328	22.1		302	46.7 ¹⁵⁵	+13 57.0 ¹²⁷		20	39	19 03	31	23 50	23 32	
11	343	22.1	+19 11.3	317	21.2 ¹⁵⁵	+13 44.2 ¹²⁸		10 N	18 24	18 46	19 13	7 35 45	20 14 36	
12	358	22.1	+19 10.7	331	55.8 ¹⁵⁶	+13 31.4 ¹²⁸		0	18 10	18 32	18 57	7 45 41	20 05 40	
13	13	22.1		346	30.4 ¹⁵⁶		18.5 ¹²⁹	10 S	17 56	18	44	7 56 37	19 57 44	
14	28	22.2		1	05.2 ¹⁵⁸	+13 05.6 ¹²⁹		20	41	18 05	31	8 07 33	47 49	
15	43	22.2		15	39.9 ¹⁵⁷	+12 52.6 ¹³⁰		30	24	17 50	19	20 28	37 54	
16	58	22.2		30	14.8 ¹⁵⁹		39.6 ¹³⁰	35	15	42	12	28 24	30 57	
17	73	22.2	+19 07.9	44	49.7 ¹⁵⁹	+12 26.6 ¹³⁰		40	17 04	17 33	18 06	8 36 22	19 23 61	
18	88	22.2	+19 07.3	59	24.6 ¹⁵⁹	+12 13.5 ¹³¹		45	16 51	17 23	17 58	8 46 18	19 15 64	
19	103	22.2		73	59.7 ¹⁶¹	+12 00.4 ¹³¹		50	35	11	50	8 58 13	05 69	
20	118	22.2		88	34.7 ¹⁶⁰	+11 47.2 ¹³²		52	27	17 05	47	9 03 11	19 00 72	
21	133	22.2		103	09.8 ¹⁶¹		34.0 ¹³²	54	19	16 59	43	09 8	18 55 74	
22	148	22.2		117	45.0 ¹⁶²		20.8 ¹³²	56	16 10	53	39	16 5	49 77	
23	163	22.2		132	20.2 ¹⁶²	+11 07.5 ¹³³		58	15 59	45	34	23 3	43 80	
24	178	22.2	+19 03.9	146	55.5 ¹⁶³	+10 54.2 ¹³³		60 S	15 47	16 37	17 30	9 32 **	18 35 84	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 3 ^h 41 ^m 2		Mag: -3.8 PMG: 10 ^h 24 ^m		Mag: +1.8 PMG: 14 ^h 01 ^m		Mag: -2.1 PMG: 18 ^h 09 ^m		Mag: +0.4 PMG: 12 ^h 44 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	304	32.2	204	12.1	149	33.2	86	59.3	168	27.3
1	319	34.6	219	11.3	164	34.2	102	01.6	183	29.4
2	334	37.1	234	10.5	179	35.2	117	03.9	198	31.6
3	349	39.6	249	09.6	194	36.2	132	06.2	213	33.7
4	4	42.0	264	08.8	209	37.2	147	08.6	228	35.8
5	19	44.5	279	08.0	224	38.2	162	10.9	243	38.0
6	34	47.0	294	07.2	239	39.2	177	13.2	258	40.1
7	49	49.4	309	06.4	254	40.1	192	15.5	273	42.3
8	64	51.9	324	05.6	269	41.1	207	17.8	288	44.4
9	79	54.4	339	04.7	284	42.1	222	20.2	303	46.6
10	94	56.8	354	03.9	299	43.1	237	22.5	318	48.7
11	109	59.3	9	03.1	314	44.1	252	24.8	333	50.8
12	125	01.7	24	02.3	329	45.1	267	27.1	348	53.0
13	140	04.2	39	01.5	344	46.1	282	29.4	3	55.1
14	155	06.7	54	00.7	359	47.0	297	31.7	18	57.3
15	170	09.1	68	59.9	14	48.0	312	34.1	33	59.4
16	185	11.6	83	59.0	29	49.0	327	36.4	49	01.6
17	200	14.1	98	58.2	44	50.0	342	38.7	64	03.7
18	215	16.5	113	57.4	59	51.0	357	41.0	79	05.8
19	230	19.0	128	56.6	74	52.0	12	43.3	94	08.0
20	245	21.5	143	55.8	89	53.0	27	45.6	109	10.1
21	260	23.9	158	55.0	104	54.0	42	48.0	124	12.3
22	275	26.4	173	54.1	119	54.9	57	50.3	139	14.4
23	290	28.9	188	53.3	134	55.9	72	52.6	154	16.6
24	305	31.3	203	52.5	149	56.9	87	54.9	169	18.7
Dif	—		-8	-1	+10	-6	+23	-1	+21	-1

UT	SOL				● LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15 ^h 7 PMG: 12 ^h 06 ^m 5				Edad: 2 ^d 8 PHE { 4 ^h : 54 ^m 2 12 ^h : 54 ^m 2 20 ^h : 54 ^m 1 R°: 39 ^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	03.9	146	55.5	+10	54.2	60 N	**	**	2 27	3 31	7 19	83	21 28	**	
1	193	22.2		03.3	161	30.9 ¹⁶⁴		40.9 ¹³³	58	1 05	2 48	44	25	79	25	2		
2	208	22.3		02.7	176	06.2 ¹⁶³		27.5 ¹³⁴	56	1 47	3 06	3 56	29	76	22	4		
3	223	22.3		02.1	190	41.7 ¹⁶⁵		14.1 ¹³⁴	54	2 14	20	4 06	34	73	20			
4	238	22.3		01.6	205	17.1 ¹⁶⁴	+10	00.6 ¹³⁵	52		34	33	15	38	70	17	9	
5	253	22.3	+19	01.0	219	52.7 ¹⁶⁶	+9	47.1 ¹³⁵	50	2 51	3 44	4 23	7 41	68	21 15	11		
6	268	22.3	+19	00.4	234	28.2 ¹⁶⁵	+9	33.6 ¹³⁵	45	3 23	4 06	4 41	7 49	63	21 10	16		
7	283	22.3	+18	59.8	249	03.9 ¹⁶⁷		20.1 ¹³⁵	40	3 46	24	4 54	7 55	59	07	19		
8	298	22.3		59.3	263	39.5 ¹⁶⁶	+9	06.5 ¹³⁶	35	4 04	38	5 06	8 00	56	03	22		
9	313	22.3		58.7	278	15.2 ¹⁶⁷	+8	52.9 ¹³⁶	30		19	4 50	16	05	53	21	00	25
10	328	22.3		58.1	292	51.0 ¹⁶⁸		39.3 ¹³⁶	20	4 42	5 10	34	13	48	20	55	30	
11	343	22.4	+18	57.5	307	26.7 ¹⁶⁷	+8	25.6 ¹³⁷	10 N	5 00	5 27	5 49	8 20	43	20	50	35	
12	358	22.4	+18	56.9	322	02.6 ¹⁶⁹	+8	11.9 ¹³⁷	0	5 16	5 41	6 03	8 26	40	20	45	39	
13	13	22.4		56.4	336	38.4 ¹⁶⁸	+7	58.2 ¹³⁷	10 S		29	5 55	17	33	35	41	43	
14	28	22.4		55.8	351	14.3 ¹⁶⁹		44.5 ¹³⁷	20		42	6 08	32	40	31	36	48	
15	43	22.4		55.2	5	50.2 ¹⁶⁹		30.7 ¹³⁸	30	5 54	23	48	48	26	31	52		
16	58	22.4		54.6	20	26.2 ¹⁷⁰		17.0 ¹³⁷	35	6 00	31	6 58	52	23	27	56		
17	73	22.4	+18	54.0	35	02.2 ¹⁷⁰	+7	03.2 ¹³⁸	40	6 07	6 40	7 09	8 58	19	20	24	59	
18	88	22.4	+18	53.4	49	38.2 ¹⁷⁰	+6	49.3 ¹³⁹	45	6 14	6 50	7 22	9 04	15	20	19	63	
19	103	22.5		52.9	64	14.3 ¹⁷¹		35.5 ¹³⁸	50		22	7 02	37	11	11	14	68	
20	118	22.5		52.3	78	50.4 ¹⁷¹		21.6 ¹³⁹	52		26	07	45	14	9	12	70	
21	133	22.5		51.7	93	26.5 ¹⁷¹	+6	07.7 ¹³⁹	54		29	13	7 53	17	7	09	73	
22	148	22.5		51.1	108	02.7 ¹⁷²	+5	53.8 ¹³⁹	56		33	19	8 02	21	5	06	75	
23	163	22.5		50.5	122	38.9 ¹⁷²		39.9 ¹³⁹	58		38	27	12	26	1	20	03	78
24	178	22.5	+18	49.9	137	15.1 ¹⁷²	+5	26.0 ¹³⁹	60 S	6 43	7 35	8 24	9 31	**	19	59	82	
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG 3 ^h 37 ^m 3		Mag: -3.8 PMG: 10 ^h 25 ^m				Mag: +1.8 PMG: 13 ^h 59 ^m				Mag: -2.1 PMG: 18 ^h 06 ^m				Mag: +0.4 PMG: 12 ^h 41 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	305	31.3	203	52.5	+22	41.9	149	56.9	+11	18.5	87	54.9	-13	43.8	169	18.7	+17	31.9
1	320	33.8	218	51.7		41.8	164	57.9		17.9	102	57.2		43.9	184	20.8		31.8
2	335	36.2	233	50.9		41.6	179	58.9		17.4	117	59.5		43.9	199	23.0		31.7
3	350	38.7	248	50.1		41.5	194	59.9		16.8	133	01.8		44.0	214	25.1		31.6
4	5	41.2	263	49.2		41.4	210	00.9		16.2	148	04.1		44.0	229	27.3		31.6
5	20	43.6	278	48.4	+22	41.2	225	01.9	+11	15.6	163	06.5	-13	44.1	244	29.4	+17	31.5
6	35	46.1	293	47.6	+22	41.1	240	02.8	+11	15.0	178	08.8	-13	44.2	259	31.6	+17	31.4
7	50	48.6	308	46.8		41.0	255	03.8		14.5	193	11.1		44.2	274	33.7		31.3
8	65	51.0	323	46.0		40.8	270	04.8		13.9	208	13.4		44.3	289	35.8		31.2
9	80	53.5	338	45.2		40.7	285	05.8		13.3	223	15.7		44.3	304	38.0		31.1
10	95	56.0	353	44.4		40.5	300	06.8		12.7	238	18.0		44.4	319	40.1		31.0
11	110	58.4	8	43.5	+22	40.4	315	07.8	+11	12.1	253	20.3	-13	44.5	334	42.3	+17	30.9
12	126	00.9	23	42.7	+22	40.3	330	08.8	+11	11.5	268	22.6	-13	44.5	349	44.4	+17	30.8
13	141	03.4	38	41.9		40.1	345	09.8		11.0	283	24.9		44.6	4	46.6		30.8
14	156	05.8	53	41.1		40.0	0	10.7		10.4	298	27.3		44.6	19	48.7		30.7
15	171	08.3	68	40.3		39.8	15	11.7		09.8	313	29.6		44.7	34	50.8		30.6
16	186	10.7	83	39.5		39.7	30	12.7		09.2	328	31.9		44.8	49	53.0		30.5
17	201	13.2	98	38.6	+22	39.5	45	13.7	+11	08.6	343	34.2	-13	44.8	64	55.1	+17	30.4
18	216	15.7	113	37.8	+22	39.4	60	14.7	+11	08.0	358	36.5	-13	44.9	79	57.3	+17	30.3
19	231	18.1	128	37.0		39.2	75	15.7		07.5	13	38.8		44.9	94	59.4		30.2
20	246	20.6	143	36.2		39.1	90	16.7		06.9	28	41.1		45.0	110	01.6		30.1
21	261	23.1	158	35.4		38.9	105	17.7		06.3	43	43.4		45.1	125	03.7		30.0
22	276	25.5	173	34.6		38.8	120	18.6		05.7	58	45.7		45.1	140	05.8		30.0
23	291	28.0	188	33.8		38.6	135	19.6		05.1	73	48.0		45.2	155	08.0		29.9
24	306	30.5	203	32.9	+22	38.5	150	20.6	+11	04.5	88	50.3	-13	45.3	170	10.1	+17	29.8
Dif	—		-8		-1		+10		-6		+23		-1		+21		-1	

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna	Puesta de Luna						
	SD: 15 ^h 8		Edad: 3 ^d 8	PHE { 4 ^h : 54 ^m 1 12 ^h : 54 ^m 1 20 ^h : 54 ^m 1	PMG: 12 ^h 06 ^m 5	PMG: 15 ^h 15 ^m			Rº: 39 ^m									
	hG ☉	Dec								hG ☾	Dif	Dec	Dif	Civil	Náutico	Hora	Rº	Hora
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	h	m	
0	178	22.5	+18	49.9	137	15.1	+5 26.0	60 N	20 38	21 41	** **	8 42 81	21 27 **					
1	193	22.6		49.3	151	51.3 ¹⁷²	+5 12.0 ¹⁴⁰	58	25	20	22 56	44 77	27 1					
2	208	22.6		48.8	166	27.6 ¹⁷³	+4 58.1 ¹³⁹	56	14	21 03	22 19	45 75	26 5					
3	223	22.6		48.2	181	03.9 ¹⁷³	44.1 ¹⁴⁰	54	20 04	20 49	21 54	47 72	26 7					
4	238	22.6		47.6	195	40.2 ¹⁷³	30.1 ¹⁴⁰	52	19 55	37	34	48 70	26 9					
5	253	22.6	+18	47.0	210	16.5 ¹⁷³	+4 16.1 ¹⁴⁰	50	19 47	20 26	21 18	8 49 68	21 26 11					
6	268	22.6	+18	46.4	224	52.8 ¹⁷³	+4 02.1 ¹⁴⁰	45	19 31	20 05	20 48	8 52 63	21 26 15					
7	283	22.7		45.8	239	29.2 ¹⁷⁴	+3 48.0 ¹⁴¹	40	17	19 48	25	54 59	26 19					
8	298	22.7		45.2	254	05.6 ¹⁷⁴	34.0 ¹⁴⁰	35	19 06	34	20 08	56 56	25 23					
9	313	22.7		44.6	268	42.0 ¹⁷⁴	19.9 ¹⁴¹	30	18 56	22	19 53	8 58 52	25 25					
10	328	22.7		44.0	283	18.4 ¹⁷⁴	+3 05.8 ¹⁴¹	20	38	19 02	30	9 01 47	25 30					
11	343	22.7	+18	43.4	297	54.8 ¹⁷⁴	+2 51.8 ¹⁴⁰	10 N	18 24	18 46	19 12	9 03 43	21 25 34					
12	358	22.7	+18	42.8	312	31.3 ¹⁷⁵	+2 37.7 ¹⁴¹	0	18 10	18 32	18 57	9 06 38	21 24 39					
13	13	22.8		42.3	327	07.7 ¹⁷⁴	23.6 ¹⁴¹	10 S	17 56	19	44	08 35	24 43					
14	28	22.8		41.7	341	44.2 ¹⁷⁵	+2 09.5 ¹⁴¹	20	42	18 05	32	11 30	24 47					
15	43	22.8		41.1	356	20.7 ¹⁷⁵	+1 55.4 ¹⁴¹	30	26	17 51	20	14 25	23 53					
16	58	22.8		40.5	10	57.2 ¹⁷⁵	41.3 ¹⁴¹	35	16	43	14	15 22	23 56					
17	73	22.8	+18	39.9	25	33.7 ¹⁷⁵	+1 27.1 ¹⁴²	40	17 05	17 34	18 07	9 17 19	21 23 59					
18	88	22.9	+18	39.3	40	10.2 ¹⁷⁵	+1 13.0 ¹⁴¹	45	16 53	17 25	18 00	9 19 15	21 22 63					
19	103	22.9		38.7	54	46.7 ¹⁷⁵	+0 58.9 ¹⁴¹	50	37	13	17 52	22 11	22 68					
20	118	22.9		38.1	69	23.2 ¹⁷⁵	44.8 ¹⁴¹	52	30	08	49	23 9	22 70					
21	133	22.9		37.5	83	59.7 ¹⁷⁵	30.6 ¹⁴²	54	22	17 02	45	24 7	22 72					
22	148	23.0		36.9	98	36.2 ¹⁷⁵	16.5 ¹⁴¹	56	13	16 56	42	26 4	21 75					
23	163	23.0		36.3	113	12.7 ¹⁷⁵	+0 02.4 ¹⁴¹	58	16 03	49	37	27 2	21 78					
24	178	23.0	+18	35.7	127	49.3 ¹⁷⁶	-0 11.8 ¹⁴²	60 S	15 52	16 41	17 33	9 29 **	21 21 81					
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 3 ^h 33 ^m 4		Mag: -3.8 PMG: 10 ^h 26 ^m			Mag: +1.8 PMG: 13 ^h 58 ^m			Mag: -2.1 PMG: 18 ^h 02 ^m			Mag: +0.3 PMG: 12 ^h 38 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	306	30.5	203	32.9	+22	38.5	150	20.6	+11	04.5	88	50.3	-13	45.3	170	10.1	+17	29.8
1	321	32.9	218	32.1		38.3	165	21.6		04.0	103	52.6		45.3	185	12.3		29.7
2	336	35.4	233	31.3		38.1	180	22.6		03.4	118	54.9		45.4	200	14.4		29.6
3	351	37.8	248	30.5		38.0	195	23.6		02.8	133	57.3		45.4	215	16.6		29.5
4	6	40.3	263	29.7		37.8	210	24.6		02.2	148	59.6		45.5	230	18.7		29.4
5	21	42.8	278	28.9	+22	37.7	225	25.6	+11	01.6	164	01.9	-13	45.6	245	20.8	+17	29.3
6	36	45.2	293	28.1	+22	37.5	240	26.6	+11	01.0	179	04.2	-13	45.6	260	23.0	+17	29.2
7	51	47.7	308	27.2		37.3	255	27.5	+11	00.5	194	06.5		45.7	275	25.1		29.2
8	66	50.2	323	26.4		37.2	270	28.5	+10	59.9	209	08.8		45.8	290	27.3		29.1
9	81	52.6	338	25.6		37.0	285	29.5		59.3	224	11.1		45.8	305	29.4		29.0
10	96	55.1	353	24.8		36.8	300	30.5		58.7	239	13.4		45.9	320	31.6		28.9
11	111	57.6	8	24.0	+22	36.7	315	31.5	+10	58.1	254	15.7	-13	45.9	335	33.7	+17	28.8
12	127	00.0	23	23.2	+22	36.5	330	32.5	+10	57.5	269	18.0	-13	46.0	350	35.8	+17	28.7
13	142	02.5	38	22.4		36.3	345	33.5		56.9	284	20.3		46.1	5	38.0		28.6
14	157	05.0	53	21.5		36.1	0	34.5		56.4	299	22.6		46.1	20	40.1		28.5
15	172	07.4	68	20.7		36.0	15	35.5		55.8	314	24.9		46.2	35	42.3		28.4
16	187	09.9	83	19.9		35.8	30	36.4		55.2	329	27.2		46.3	50	44.4		28.4
17	202	12.3	98	19.1	+22	35.6	45	37.4	+10	54.6	344	29.5	-13	46.3	65	46.6	+17	28.3
18	217	14.8	113	18.3	+22	35.4	60	38.4	+10	54.0	359	31.8	-13	46.4	80	48.7	+17	28.2
19	232	17.3	128	17.5		35.3	75	39.4		53.4	14	34.1		46.4	95	50.8		28.1
20	247	19.7	143	16.7		35.1	90	40.4		52.8	29	36.4		46.5	110	53.0		28.0
21	262	22.2	158	15.8		34.9	105	41.4		52.3	44	38.7		46.6	125	55.1		27.9
22	277	24.7	173	15.0		34.7	120	42.4		51.7	59	41.0		46.6	140	57.3		27.8
23	292	27.1	188	14.2		34.5	135	43.4		51.1	74	43.3		46.7	155	59.4		27.7
24	307	29.6	203	13.4	+22	34.4	150	44.4	+10	50.5	89	45.6	-13	46.8	171	01.6	+17	27.6
Dif	—		-8	-2			+10	-6			+23	-1			+21		-1	

UT	SOL			 LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15 ^h 8			Edad: 4 ^d 8	PHE { 4 ^h : 54 ^m 1 12 ^h : 54 ^m 2 20 ^h : 54 ^m 2 R°: 39 ^m										
	PMG: 12 ^h 06 ^m 4														
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	178	23.0	+18	35.7	127	49.3	-0 11.8	60 N	** **	2 33	3 35	10 03	82	21 25	**
1	193	23.0		35.1	142	25.8 ¹⁷⁵	25.9 ¹⁴¹	58	1 18	2 54	3 49	01 79		28 2	
2	208	23.0		34.5	157	02.3 ¹⁷⁵	40.0 ¹⁴¹	56	1 55	3 10	4 00	10 00	76	31 4	
3	223	23.1		33.9	171	38.8 ¹⁷⁵	-0 54.2 ¹⁴²	54	2 20	24	10	9 59	73	33	
4	238	23.1		33.3	186	15.3 ¹⁷⁵	-1 08.3 ¹⁴¹	52	39	36	18	58 70		35 10	
5	253	23.1	+18	32.7	200	51.8 ¹⁷⁵	-1 22.4 ¹⁴¹	50	2 55	3 47	4 26	9 57	68	21 37	12
6	268	23.1	+18	32.1	215	28.3 ¹⁷⁵	-1 36.6 ¹⁴²	45	3 26	4 09	4 43	9 55	63	21 41	16
7	283	23.2		31.5	230	04.8 ¹⁷⁵	-1 50.7 ¹⁴¹	40	3 48	26	4 56	53 60		45 20	
8	298	23.2		30.9	244	41.3 ¹⁷⁵	-2 04.8 ¹⁴¹	35	4 06	40	5 08	52 56		48 23	
9	313	23.2		30.3	259	17.7 ¹⁷⁴	18.9 ¹⁴¹	30	20	4 52	18	50 53		50 26	
10	328	23.2		29.7	273	54.2 ¹⁷⁵	33.0 ¹⁴¹	20	4 43	5 11	35	48 48		55 31	
11	343	23.3	+18	29.1	288	30.6 ¹⁷⁴	-2 47.1 ¹⁴¹	10 N	5 01	5 27	5 49	9 46	44	21 59	36
12	358	23.3	+18	28.5	303	07.1 ¹⁷⁵	-3 01.2 ¹⁴¹	0	5 16	5 41	6 03	9 44	39	22 03	40
13	13	23.3		27.8	317	43.5 ¹⁷⁴	15.3 ¹⁴¹	10 S	29	5 54	16	43 35		07 44	
14	28	23.3		27.2	332	19.9 ¹⁷⁴	29.3 ¹⁴⁰	20	41	6 08	31	41 30		11 49	
15	43	23.4		26.6	346	56.3 ¹⁷⁴	43.4 ¹⁴¹	30	53	22	47	39 25		16 54	
16	58	23.4		26.0	1	32.6 ¹⁷³	-3 57.5 ¹⁴¹	35	5 59	29	6 56	37 23		19 56	
17	73	23.4	+18	25.4	16	09.0 ¹⁷⁴	-4 11.5 ¹⁴⁰	40	6 05	6 38	7 07	9 36	19	22 22	60
18	88	23.4	+18	24.8	30	45.3 ¹⁷³	-4 25.5 ¹⁴⁰	45	6 12	6 48	7 19	9 34	16	22 25	65
19	103	23.5		24.2	45	21.6 ¹⁷³	39.5 ¹⁴⁰	50	20	6 59	35	33 11		30 69	
20	118	23.5		23.6	59	57.9 ¹⁷³	-4 53.6 ¹⁴¹	52	23	7 04	42	32 9		32 71	
21	133	23.5		23.0	74	34.2 ¹⁷³	-5 07.5 ¹³⁹	54	27	10	50	31 7		34 74	
22	148	23.6		22.4	89	10.4 ¹⁷²	21.5 ¹⁴⁰	56	31	16	7 58	30 4		36 77	
23	163	23.6		21.7	103	46.6 ¹⁷²	35.5 ¹⁴⁰	58	35	23	8 08	29 1		39 80	
24	178	23.6	+18	21.1	118	22.8 ¹⁷²	-5 49.4 ¹³⁹	60 S	6 39	7 31	8 20	9 27	**	22 42	84

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 3 ^h 29 ^m 5		Mag: -3.8 PMG: 10 ^h 28 ^m		Mag: +1.8 PMG: 13 ^h 56 ^m		Mag: -2.1 PMG: 17 ^h 58 ^m		Mag: +0.3 PMG: 12 ^h 34 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	307	29.6	203	13.4	+22	34.4	150	44.4	+10	50.5
1	322	32.1	218	12.6		34.2	165	45.3		49.9
2	337	34.5	233	11.8		34.0	180	46.3		49.3
3	352	37.0	248	11.0		33.8	195	47.3		48.7
4	7	39.4	263	10.2		33.6	210	48.3		48.1
5	22	41.9	278	09.3	+22	33.4	225	49.3	+10	47.6
6	37	44.4	293	08.5	+22	33.2	240	50.3	+10	47.0
7	52	46.8	308	07.7		33.0	255	51.3		46.4
8	67	49.3	323	06.9		32.9	270	52.3		45.8
9	82	51.8	338	06.1		32.7	285	53.3		45.2
10	97	54.2	353	05.3		32.5	300	54.3		44.6
11	112	56.7	8	04.5	+22	32.3	315	55.2	+10	44.0
12	127	59.2	23	03.7	+22	32.1	330	56.2	+10	43.4
13	143	01.6	38	02.8		31.9	345	57.2		42.9
14	158	04.1	53	02.0		31.7	0	58.2		42.3
15	173	06.6	68	01.2		31.5	15	59.2		41.7
16	188	09.0	83	00.4		31.3	31	00.2		41.1
17	203	11.5	97	59.6	+22	31.1	46	01.2	+10	40.5
18	218	13.9	112	58.8	+22	30.9	61	02.2	+10	39.9
19	233	16.4	127	58.0		30.7	76	03.2		39.3
20	248	18.9	142	57.2		30.4	91	04.2		38.7
21	263	21.3	157	56.4		30.2	106	05.1		38.1
22	278	23.8	172	55.5		30.0	121	06.1		37.5
23	293	26.3	187	54.7		29.8	136	07.1		37.0
24	308	28.7	202	53.9	+22	29.6	151	08.1	+10	36.4
Dif	—		-8		-2		+10		-6	
								+23		-1
									+21	-1

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna											
	SD: 15 ^h 8			Edad: 5 ^d 8	PHE { 4 ^h : 54/3 12 ^h : 54/4 20 ^h : 54/5	Final del crepúsculo			Salida de Luna		Puesta de Luna													
	PMG: 12 ^h 06 ^m 4					Civil			Náutico		Hora R°		Hora R°											
	hG ☉	Dec		hG ☾	Dif	Dec	Dif																	
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m									
0	178	23.6	+18	21.1	118	22.8	-5 49.4	60 N	20 33	21 34	** **	11 25	86	21 24	**									
1	193	23.6		20.5	132	58.9 ¹⁷¹	-6 03.3 ¹³⁹	58	21	21 14	22 44	20 82		30 3										
2	208	23.7		19.9	147	35.0 ¹⁷¹		56	10	20 58	22 11	16 78		35 6										
3	223	23.7		19.3	162	11.1 ¹⁷¹		54	20 00	45	21 48	12 75		40 9										
4	238	23.7		18.7	176	47.2 ¹⁷¹		52	19 52	33	29	08 73		45 11										
5	253	23.8	+18	18.1	191	23.2 ¹⁷⁰	-6 58.9 ¹³⁹	50	19 44	20 23	21 14	11 05	71	21 49	13									
6	268	23.8	+18	17.5	205	59.2 ¹⁷⁰	-7 12.7 ¹³⁸	45	19 28	20 02	20 45	10 58	66	21 57	19									
7	283	23.8		16.8	220	35.1 ¹⁶⁹		40	15	19 45	23	53 61		22 05	22									
8	298	23.9		16.2	235	11.1 ¹⁷⁰		35	19 04	32	20 05	48 57		11 26										
9	313	23.9		15.6	249	46.9 ¹⁶⁸	-7 54.1 ¹³⁸	30	18 54	20	19 51	43 55		16 29										
10	328	23.9		15.0	264	22.8 ¹⁶⁹	-8 07.8 ¹³⁷	20	38	19 01	29	36 49		26 34										
11	343	23.9	+18	14.4	278	58.6 ¹⁶⁸	-8 21.6 ¹³⁸	10 N	18 23	18 45	19 11	10 30	45	22 35	38									
12	358	24.0	+18	13.7	293	34.3 ¹⁶⁷	-8 35.3 ¹³⁷	0	18 10	18 32	18 57	10 23	41	22 43	42									
13	13	24.0		13.1	308	10.0 ¹⁶⁷	-8 48.9 ¹³⁶	10 S	17 57	19	44	18 36		22 51	46									
14	28	24.0		12.5	322	45.7 ¹⁶⁷	-9 02.6 ¹³⁷	20	43	18 06	32	11 33		23 00	50									
15	43	24.1		11.9	337	21.3 ¹⁶⁶		30	27	17 52	21	04 27		10 55										
16	58	24.1		11.3	351	56.9 ¹⁶⁶		35	18	44	15	10 00	24	15 59										
17	73	24.1	+18	10.6	6	32.4 ¹⁶⁵	-9 43.4 ¹³⁶	40	17 07	17 36	18 09	9 55	21	23 22	62									
18	88	24.2	+18	10.0	21	07.9 ¹⁶⁵	-9 56.9 ¹³⁵	45	16 55	17 27	18 02	9 50	17	23 30	66									
19	103	24.2		09.4	35	43.4 ¹⁶⁵	-10 10.4 ¹³⁵	50	40	16	17 55	44 12		39 71										
20	118	24.2		08.8	50	18.7 ¹⁶³		52	33	10	52	41 10		43 74										
21	133	24.3		08.2	64	54.1 ¹⁶⁴		54	26	17 05	48	38 8		48 77										
22	148	24.3		07.5	79	29.3 ¹⁶²	-10 50.8 ¹³⁵	56	17	16 59	45	34 6		53 80										
23	163	24.4		06.9	94	04.6 ¹⁶³	-11 04.1 ¹³³	58	16 07	52	41	30 3		23 59	84									
24	178	24.4	+18	06.3	108	39.7 ¹⁶¹	-11 17.5 ¹³⁴	60 S	15 56	16 45	17 36	9 26	**	** **	**									
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO												
	PMG: 3 ^h 25 ^m 5		Mag: -3.8 PMG: 10 ^h 29 ^m			Mag: +1.8 PMG: 13 ^h 55 ^m			Mag: -2.1 PMG: 17 ^h 55 ^m			Mag: +0.3 PMG: 12 ^h 31 ^m												
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		hG ♅	Dec								
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'								
0	308	28.7	202	53.9	+22	29.6	151	08.1	+10	36.4	90	40.7	-13	48.3	171	53.0	+17	25.5						
1	323	31.2	217	53.1		29.4	166	09.1		35.8	105	43.0		48.4	186	55.1		25.4						
2	338	33.7	232	52.3		29.2	181	10.1		35.2	120	45.3		48.5	201	57.3		25.3						
3	353	36.1	247	51.5		29.0	196	11.1		34.6	135	47.6		48.5	216	59.4		25.2						
4	8	38.6	262	50.7		28.8	211	12.1		34.0	150	49.9		48.6	232	01.5		25.1						
5	23	41.1	277	49.9	+22	28.5	226	13.1	+10	33.4	165	52.2	-13	48.7	247	03.7	+17	25.0						
6	38	43.5	292	49.1	+22	28.3	241	14.1	+10	32.8	180	54.5	-13	48.7	262	05.8	+17	25.0						
7	53	46.0	307	48.2		28.1	256	15.1		32.2	195	56.8		48.8	277	08.0		24.9						
8	68	48.4	322	47.4		27.9	271	16.0		31.6	210	59.1		48.9	292	10.1		24.8						
9	83	50.9	337	46.6		27.7	286	17.0		31.1	226	01.4		48.9	307	12.3		24.7						
10	98	53.4	352	45.8		27.4	301	18.0		30.5	241	03.6		49.0	322	14.4		24.6						
11	113	55.8	7	45.0	+22	27.2	316	19.0	+10	29.9	256	05.9	-13	49.1	337	16.5	+17	24.5						
12	128	58.3	22	44.2	+22	27.0	331	20.0	+10	29.3	271	08.2	-13	49.1	352	18.7	+17	24.4						
13	144	00.8	37	43.4		26.8	346	21.0		28.7	286	10.5		49.2	7	20.8		24.3						
14	159	03.2	52	42.6		26.5	1	22.0		28.1	301	12.8		49.3	22	23.0		24.2						
15	174	05.7	67	41.8		26.3	16	23.0		27.5	316	15.1		49.3	37	25.1		24.2						
16	189	08.2	82	41.0		26.1	31	24.0		26.9	331	17.4		49.4	52	27.3		24.1						
17	204	10.6	97	40.1	+22	25.9	46	25.0	+10	26.3	346	19.7	-13	49.5	67	29.4	+17	24.0						
18	219	13.1	112	39.3	+22	25.6	61	26.0	+10	25.7	1	22.0	-13	49.5	82	31.5	+17	23.9						
19	234	15.5	127	38.5		25.4	76	27.0		25.1	16	24.3		49.6	97	33.7		23.8						
20	249	18.0	142	37.7		25.2	91	27.9		24.5	31	26.5		49.7	112	35.8		23.7						
21	264	20.5	157	36.9		24.9	106	28.9		24.0	46	28.8		49.7	127	38.0		23.6						
22	279	22.9	172	36.1		24.7	121	29.9		23.4	61	31.1		49.8	142	40.1		23.5						
23	294	25.4	187	35.3		24.4	136	30.9		22.8	76	33.4		49.9	157	42.3		23.4						
24	309	27.9	202	34.5	+22	24.2	151	31.9	+10	22.2	91	35.7	-13	49.9	172	44.4	+17	23.3						
Dif	—		-8			-2	+10			-6			+23			-1			+21			-1		

UT	SOL				 LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15 ^h 8 PMG: 12 ^h 06 ^m 3				Edad: 6 ^d 8 PHE { 4 ^h : 54 ^m 6 12 ^h : 54 ^m 7 20 ^h : 54 ^m 9 PMG: 17 ^h 15 ^m R°: 44 ^m												
	hG ☉		Dec		hG ☾ Dif		Dec Dif			Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	178	24.4	+18	06.3	108	39.7	-11	17.5	60 N	** **	2	39	3	40	12	51	91
1	193	24.4		05.7	123	14.8 ¹⁶¹		30.8 ¹³³	58	1	29	2	59	3	53	42	87
2	208	24.5		05.0	137	49.9 ¹⁶¹		44.1 ¹³³	56	2	02	3	15	4	03	34	83
3	223	24.5		04.4	152	24.9 ¹⁶⁰	-11	57.3 ¹³²	54		25		28	13		27	79
4	238	24.5		03.8	166	59.8 ¹⁵⁹	-12	10.5 ¹³²	52		44		40	21		21	76
5	253	24.6	+18	03.2	181	34.7 ¹⁵⁹	-12	23.7 ¹³²	50	2	59	3	50	4	29	12	16
6	268	24.6	+18	02.5	196	09.5 ¹⁵⁸	-12	36.8 ¹³¹	45	3	29	4	11	4	45	12	04
7	283	24.6		01.9	210	44.2 ¹⁵⁷	-12	49.9 ¹³¹	40	3	50		28	4	58	11	54
8	298	24.7		01.3	225	18.9 ¹⁵⁷	-13	02.9 ¹³⁰	35	4	08		41	5	09	45	61
9	313	24.7	+18	00.6	239	53.5 ¹⁵⁶		16.0 ¹³¹	30		22	4	53	19		38	57
10	328	24.8	+18	00.0	254	28.1 ¹⁵⁶		28.9 ¹²⁹	20	4	44	5	12	35		25	53
11	343	24.8	+17	59.4	269	02.5 ¹⁵⁴	-13	41.8 ¹²⁹	10 N	5	01	5	27	5	50	11	15
12	358	24.8	+17	58.7	283	37.0 ¹⁵⁵	-13	54.7 ¹²⁹	0	5	16	5	41	6	03	11	04
13	13	24.9		58.1	298	11.3 ¹⁵³	-14	07.6 ¹²⁹	10 S		28	5	54	16		10	54
14	28	24.9		57.5	312	45.6 ¹⁵³		20.3 ¹²⁷	20		40	6	07	30		44	35
15	43	24.9		56.9	327	19.7 ¹⁵¹		33.1 ¹²⁸	30		52		20	46		31	31
16	58	25.0		56.2	341	53.9 ¹⁵²		45.8 ¹²⁷	35	5	57		28	6	55	24	28
17	73	25.0	+17	55.6	356	27.9 ¹⁵⁰	-14	58.4 ¹²⁶	40	6	04	6	36	7	05	10	16
18	88	25.1	+17	55.0	11	01.9 ¹⁵⁰	-15	11.0 ¹²⁶	45	6	10	6	46	7	17	10	07
19	103	25.1		54.3	25	35.7 ¹⁴⁸		23.6 ¹²⁶	50		17	6	56	32		9	56
20	118	25.1		53.7	40	09.6 ¹⁴⁹		36.0 ¹²⁴	52	21	7	01	39			51	13
21	133	25.2		53.0	54	43.3 ¹⁴⁷	-15	48.5 ¹²⁵	54	24		07	46			46	10
22	148	25.2		52.4	69	16.9 ¹⁴⁶	-16	00.9 ¹²⁴	56	27		13	7	55		40	7
23	163	25.3		51.8	83	50.5 ¹⁴⁶		13.2 ¹²³	58	31		19	8	04		33	3
24	178	25.3	+17	51.1	98	24.0 ¹⁴⁵	-16	25.5 ¹²³	60 S	6	35	7	27	8	15	9	25

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO					
	PMG: 3 ^h 21 ^m 6		Mag: -3.8 PMG: 10 ^h 30 ^m			Mag: +1.8 PMG: 13 ^h 53 ^m			Mag: -2.1 PMG: 17 ^h 51 ^m			Mag: +0.3 PMG: 12 ^h 27 ^m					
	hG ♈		hG ♀		Dec	hG ♂		Dec	hG ♃		Dec	hG ♄		Dec			
h	°	'	°	'	°	°	'	°	'	°	'	°	'	°	'		
0	309	27.9	202	34.5	+22	24.2	151	31.9	+10	22.2	91	35.7	-13	49.9	172	44.4	
1	324	30.3	217	33.7		24.0	166	32.9		21.6	106	38.0		50.0	187	46.5	
2	339	32.8	232	32.9		23.7	181	33.9		21.0	121	40.3		50.1	202	48.7	
3	354	35.3	247	32.1		23.5	196	34.9		20.4	136	42.5		50.1	217	50.8	
4	9	37.7	262	31.3		23.2	211	35.9		19.8	151	44.8		50.2	232	53.0	
5	24	40.2	277	30.4	+22	23.0	226	36.9	+10	19.2	166	47.1	-13	50.3	247	55.1	
6	39	42.7	292	29.6	+22	22.8	241	37.9	+10	18.6	181	49.4	-13	50.3	262	57.2	
7	54	45.1	307	28.8		22.5	256	38.9		18.0	196	51.7		50.4	277	59.4	
8	69	47.6	322	28.0		22.3	271	39.9		17.4	211	54.0		50.5	293	01.5	
9	84	50.0	337	27.2		22.0	286	40.8		16.8	226	56.3		50.5	308	03.7	
10	99	52.5	352	26.4		21.8	301	41.8		16.2	241	58.5		50.6	323	05.8	
11	114	55.0	7	25.6	+22	21.5	316	42.8	+10	15.6	257	00.8	-13	50.7	338	08.0	
12	129	57.4	22	24.8	+22	21.3	331	43.8	+10	15.1	272	03.1	-13	50.7	353	10.1	
13	144	59.9	37	24.0		21.0	346	44.8		14.5	287	05.4		50.8	8	12.2	
14	160	02.4	52	23.2		20.8	1	45.8		13.9	302	07.7		50.9	23	14.4	
15	175	04.8	67	22.4		20.5	16	46.8		13.3	317	10.0		51.0	38	16.5	
16	190	07.3	82	21.6		20.2	31	47.8		12.7	332	12.2		51.0	53	18.7	
17	205	09.8	97	20.8	+22	20.0	46	48.8	+10	12.1	347	14.5	-13	51.1	68	20.8	
18	220	12.2	112	20.0	+22	19.7	61	49.8	+10	11.5	2	16.8	-13	51.2	83	23.0	
19	235	14.7	127	19.1		19.5	76	50.8		10.9	17	19.1		51.2	98	25.1	
20	250	17.1	142	18.3		19.2	91	51.8		10.3	32	21.4		51.3	113	27.2	
21	265	19.6	157	17.5		19.0	106	52.8		09.7	47	23.6		51.4	128	29.4	
22	280	22.1	172	16.7		18.7	121	53.7		09.1	62	25.9		51.4	143	31.5	
23	295	24.5	187	15.9		18.4	136	54.7		08.5	77	28.2		51.5	158	33.7	
24	310	27.0	202	15.1	+22	18.2	151	55.7	+10	07.9	92	30.5	-13	51.6	173	35.8	
Dif	—		-8		-3		+10		-6		+23		-1		+21		-1

UT	SOL			 LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8			Edad: 7 ^d 8	PHE { 4 ^h : 55 ^h :1 12 ^h : 55 ^h :3 20 ^h : 55 ^h :5 R°: 49 ^m									
	PMG: 12 ^h 06 ^m 3													
	hG ☉		Dec	hG ☾ Dif		Dec Dif			Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	°	h m	h m	h m	h m	m	h m	m
0	178	25.3	+17 51.1	98	24.0	-16 25.5	60 N	20 28	21 27	23 27	14 22	99	21 23	1
1	193	25.4	50.5	112	57.4 ¹⁴⁴	37.7 ¹²²	58	16	21 09	22 34	14 09	91	37	9
2	208	25.4	49.9	127	30.7 ¹⁴³	-16 49.9 ¹²²	56	20 06	20 54	22 04	13 57	86	21 50	14
3	223	25.4	49.2	142	03.9 ¹⁴²	-17 02.0 ¹²¹	54	19 57	41	21 42	46	83	22 01	18
4	238	25.5	48.6	156	37.0 ¹⁴¹	14.0 ¹²⁰	52	49	29	24	37	79	11	21
5	253	25.5	+17 47.9	171	10.1 ¹⁴¹	-17 26.0 ¹²⁰	50	19 41	20 20	21 10	13 29	76	22 20	23
6	268	25.6	+17 47.3	185	43.0 ¹³⁹	-17 37.9 ¹¹⁹	45	19 26	19 59	20 41	13 12	70	22 38	29
7	283	25.6	46.7	200	15.9 ¹³⁹	-17 49.8 ¹¹⁹	40	13	43	20	12 58	66	22 54	32
8	298	25.7	46.0	214	48.7 ¹³⁸	-18 01.6 ¹¹⁸	35	19 02	30	20 03	46	63	23 07	35
9	313	25.7	45.4	229	21.4 ¹³⁷	13.3 ¹¹⁷	30	18 53	19	19 50	35	61	18	38
10	328	25.7	44.7	243	53.9 ¹³⁵	25.0 ¹¹⁷	20	37	19 00	28	18 55		37	43
11	343	25.8	+17 44.1	258	26.4 ¹³⁵	-18 36.5 ¹¹⁵	10 N	18 23	18 45	19 11	12 02	52	23 55	46
12	358	25.8	+17 43.5	272	58.8 ¹³⁴	-18 48.1 ¹¹⁶	0	18 10	18 31	18 57	11 48	48	***	***
13	13	25.9	42.8	287	31.1 ¹³³	-18 59.5 ¹¹⁴	10 S	17 57	19	44	34	44	***	***
14	28	25.9	42.2	302	03.3 ¹³²	-19 10.9 ¹¹⁴	20	43	18 06	33	19	40	***	***
15	43	26.0	41.5	316	35.4 ¹³¹	22.2 ¹¹³	30	28	17 53	22	11 02	35	0 05	59
16	58	26.0	40.9	331	07.4 ¹³⁰	33.5 ¹¹³	35	19	46	16	10 52	33	14	62
17	73	26.1	+17 40.2	345	39.4 ¹³⁰	-19 44.6 ¹¹¹	40	17 09	17 38	18 10	10 41	29	0 24	65
18	88	26.1	+17 39.6	0	11.2 ¹²⁸	-19 55.7 ¹¹¹	45	16 57	17 29	18 04	10 28	25	0 36	69
19	103	26.2	38.9	14	42.9 ¹²⁷	-20 06.7 ¹¹⁰	50	43	18	17 57	12 20	50	50	75
20	118	26.2	38.3	29	14.5 ¹²⁶	17.7 ¹¹⁰	52	36	13	54	10 04	18	0 57	78
21	133	26.3	37.7	43	45.9 ¹²⁴	28.5 ¹⁰⁸	54	29	08	51	9 56	15	1 05	80
22	148	26.3	37.0	58	17.3 ¹²⁴	39.3 ¹⁰⁸	56	21	17 02	47	47	11	13	84
23	163	26.3	36.4	72	48.6 ¹²³	-20 50.0 ¹⁰⁷	58	11	16 56	44	36	7	23	88
24	178	26.4	+17 35.7	87	19.8 ¹²²	-21 00.6 ¹⁰⁶	60 S	16 01	16 49	17 40	9 25	1	1 34	94

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 3 ^h 17 ^m 7		Mag: -3.8 PMG: 10 ^h 32 ^m		Mag: +1.8 PMG: 13 ^h 51 ^m		Mag: -2.1 PMG: 17 ^h 47 ^m		Mag: +0.3 PMG: 12 ^h 24 ^m					
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄					
h	°	'	°	'	°	'	°	'	°	'				
0	310	27.0	202	15.1	+22 18.2	151	55.7	+10 07.9	92	30.5	-13 51.6	173	35.8	+17 21.2
1	325	29.5	217	14.3	17.9	166	56.7	07.3	107	32.8	51.7	188	37.9	21.1
2	340	31.9	232	13.5	17.6	181	57.7	06.7	122	35.1	51.7	203	40.1	21.0
3	355	34.4	247	12.7	17.4	196	58.7	06.1	137	37.3	51.8	218	42.2	20.9
4	10	36.9	262	11.9	17.1	211	59.7	05.5	152	39.6	51.9	233	44.4	20.8
5	25	39.3	277	11.1	+22 16.8	227	00.7	+10 04.9	167	41.9	-13 51.9	248	46.5	+17 20.7
6	40	41.8	292	10.3	+22 16.5	242	01.7	+10 04.3	182	44.2	-13 52.0	263	48.7	+17 20.6
7	55	44.3	307	09.5	16.3	257	02.7	03.7	197	46.4	52.1	278	50.8	20.6
8	70	46.7	322	08.7	16.0	272	03.7	03.1	212	48.7	52.1	293	52.9	20.5
9	85	49.2	337	07.9	15.7	287	04.7	02.5	227	51.0	52.2	308	55.1	20.4
10	100	51.6	352	07.1	15.4	302	05.7	02.0	242	53.3	52.3	323	57.2	20.3
11	115	54.1	7	06.3	+22 15.2	317	06.7	+10 01.4	257	55.6	-13 52.4	338	59.4	+17 20.2
12	130	56.6	22	05.5	+22 14.9	332	07.7	+10 00.8	272	57.8	-13 52.4	354	01.5	+17 20.1
13	145	59.0	37	04.7	14.6	347	08.6	+10 00.2	288	00.1	52.5	9	03.7	20.0
14	161	01.5	52	03.9	14.3	2	09.6	+9 59.6	303	02.4	52.6	24	05.8	19.9
15	176	04.0	67	03.1	14.0	17	10.6	59.0	318	04.7	52.6	39	07.9	19.8
16	191	06.4	82	02.3	13.8	32	11.6	58.4	333	06.9	52.7	54	10.1	19.7
17	206	08.9	97	01.4	+22 13.5	47	12.6	+9 57.8	348	09.2	-13 52.8	69	12.2	+17 19.7
18	221	11.4	112	00.6	+22 13.2	62	13.6	+9 57.2	3	11.5	-13 52.9	84	14.4	+17 19.6
19	236	13.8	126	59.8	12.9	77	14.6	56.6	18	13.8	52.9	99	16.5	19.5
20	251	16.3	141	59.0	12.6	92	15.6	56.0	33	16.0	53.0	114	18.6	19.4
21	266	18.8	156	58.2	12.3	107	16.6	55.4	48	18.3	53.1	129	20.8	19.3
22	281	21.2	171	57.4	12.0	122	17.6	54.8	63	20.6	53.1	144	22.9	19.2
23	296	23.7	186	56.6	11.8	137	18.6	54.2	78	22.9	53.2	159	25.1	19.1
24	311	26.1	201	55.8	+22 11.5	152	19.6	+9 53.6	93	25.1	-13 53.3	174	27.2	+17 19.0
Dif	—		-8		-3	+10		-6	+23		-1	+21		-1

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15'8 PMG: 12 ^h 06 ^m 2			Edad: 8 ^d 8 SD: 15'1 PMG: 18 ^h 48 ^m PHE { 4 ^h : 55'7 12 ^h : 56'0 20 ^h : 56'2 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	178	26.4	+17	35.7	87	19.8	-21	00.6	60 N	0 46	2 46	3 45	16 01	104	21 24	8		
1	193	26.4		35.1	101	50.9 ¹²¹		11.1 ¹⁰⁵	58	1 39	3 04	3 57	15 40	94	21 46	17		
2	208	26.5		34.4	116	21.8 ¹¹⁹		21.6 ¹⁰⁵	56	2 09	19	4 07		23 88	22 04	23		
3	223	26.5		33.8	130	52.7 ¹¹⁹		31.9 ¹⁰³	54	31	32	16	15 09	83	19	27		
4	238	26.6		33.1	145	23.4 ¹¹⁷		42.2 ¹⁰³	52	2 49	44	24	14 56	80	32	31		
5	253	26.6	+17	32.5	159	54.0 ¹¹⁶	-21	52.4 ¹⁰²	50	3 03	3 53	4 32	14 45	77	22 43	34		
6	268	26.7	+17	31.8	174	24.6 ¹¹⁶	-22	02.5 ¹⁰¹	45	3 32	4 14	4 47	14 22	72	23 07	38		
7	283	26.7		31.1	188	55.0 ¹¹⁴		12.4 ⁹⁹	40	3 53	30	5 00	14 04	68		26 42		
8	298	26.8		30.5	203	25.3 ¹¹³		22.3 ⁹⁹	35	4 09	43	11	13 49	65		42 45		
9	313	26.8		29.8	217	55.5 ¹¹²		32.1 ⁹⁸	30	23	4 54	20		36 62	23 56	47		
10	328	26.9		29.2	232	25.5 ¹¹⁰		41.9 ⁹⁸	20	4 45	5 13	36	13 13	59	** ** *	**		
11	343	26.9	+17	28.5	246	55.5 ¹¹⁰	-22	51.5 ⁹⁶	10 N	5 02	5 28	5 50	12 54	56	** ** *	**		
12	358	27.0	+17	27.9	261	25.3 ¹⁰⁸	-23	01.0 ⁹⁵	0	5 16	5 41	6 03	12 36	53	0 11	50		
13	13	27.0		27.2	275	55.1 ¹⁰⁸		10.4 ⁹⁴	10 S	28	5 53	15	12 18	50		27 53		
14	28	27.1		26.6	290	24.7 ¹⁰⁶		19.7 ⁹³	20	39	6 06	29	11 59	47	0 44	57		
15	43	27.2		25.9	304	54.2 ¹⁰⁵		28.9 ⁹²	30	50	19	44	37	43	1 04	61		
16	58	27.2		25.3	319	23.6 ¹⁰⁴		38.0 ⁹¹	35	5 56	26	6 53	25	40		16 64		
17	73	27.3	+17	24.6	333	52.8 ¹⁰²	-23	47.0 ⁹⁰	40	6 02	6 34	7 03	11 10	37	1 29	68		
18	88	27.3	+17	23.9	348	22.0 ¹⁰²	-23	55.9 ⁸⁹	45	6 08	6 43	7 15	10 53	34	1 45	72		
19	103	27.4		23.3	2	51.0 ¹⁰⁰	-24	04.6 ⁸⁷	50	15	54	29	32	28	2 05	77		
20	118	27.4		22.6	17	19.9 ⁹⁹		13.3 ⁸⁷	52	18	6 58	35	22	26		15 79		
21	133	27.5		22.0	31	48.7 ⁹⁸		21.8 ⁸⁵	54	21	7 04	43	10 11	22		25 83		
22	148	27.5		21.3	46	17.4 ⁹⁷		30.3 ⁸⁵	56	24	09	7 51	9 58	18		37 87		
23	163	27.6		20.6	60	46.0 ⁹⁶		38.6 ⁸³	58	28	16	8 00	43	13	2 51	93		
24	178	27.6	+17	20.0	75	14.4 ⁹⁴	-24	46.8 ⁸²	60 S	6 32	7 23	8 10	9 26	5	3 08	101		
UT	ARIES			VENUS			MARTE			JÚPITER				SATURNO				
	PMG 3 ^h 13 ^m 7			Mag: -3.8 PMG: 10 ^h 33 ^m			Mag: +1.8 PMG: 13 ^h 50 ^m			Mag: -2.1 PMG: 17 ^h 44 ^m				Mag: +0.3 PMG: 12 ^h 20 ^m				
	hG ♈		Dec	hG ♀		Dec	hG ♂		Dec	hG ♃		Dec	hG ♄		Dec			
h	°	'	°	'	°	'	°	'	°	h	m	°	'	°	'	°	'	
0	311	26.1	201	55.8	+22	11.5	152	19.6	+9	53.6	93	25.1	-13	53.3	174	27.2	+17	19.0
1	326	28.6	216	55.0		11.2	167	20.6		53.0	108	27.4		53.4	189	29.4		18.9
2	341	31.1	231	54.2		10.9	182	21.6		52.4	123	29.7		53.4	204	31.5		18.8
3	356	33.5	246	53.4		10.6	197	22.6		51.8	138	32.0		53.5	219	33.6		18.8
4	11	36.0	261	52.6		10.3	212	23.6		51.2	153	34.2		53.6	234	35.8		18.7
5	26	38.5	276	51.8	+22	10.0	227	24.5	+9	50.6	168	36.5	-13	53.6	249	37.9	+17	18.6
6	41	40.9	291	51.0	+22	09.7	242	25.5	+9	50.0	183	38.8	-13	53.7	264	40.1	+17	18.5
7	56	43.4	306	50.2		09.4	257	26.5		49.4	198	41.0		53.8	279	42.2		18.4
8	71	45.9	321	49.4		09.1	272	27.5		48.8	213	43.3		53.9	294	44.3		18.3
9	86	48.3	336	48.6		08.8	287	28.5		48.2	228	45.6		53.9	309	46.5		18.2
10	101	50.8	351	47.8		08.5	302	29.5		47.6	243	47.9		54.0	324	48.6		18.1
11	116	53.3	6	47.0	+22	08.2	317	30.5	+9	47.0	258	50.1	-13	54.1	339	50.8	+17	18.0
12	131	55.7	21	46.2	+22	07.9	332	31.5	+9	46.4	273	52.4	-13	54.2	354	52.9	+17	17.9
13	146	58.2	36	45.4		07.6	347	32.5		45.8	288	54.7		54.2	9	55.1		17.8
14	162	00.6	51	44.6		07.3	2	33.5		45.2	303	56.9		54.3	24	57.2		17.8
15	177	03.1	66	43.8		06.9	17	34.5		44.6	318	59.2		54.4	39	59.3		17.7
16	192	05.6	81	43.0		06.6	32	35.5		44.0	334	01.5		54.4	55	01.5		17.6
17	207	08.0	96	42.2	+22	06.3	47	36.5	+9	43.4	349	03.7	-13	54.5	70	03.6	+17	17.5
18	222	10.5	111	41.4	+22	06.0	62	37.5	+9	42.8	4	06.0	-13	54.6	85	05.8	+17	17.4
19	237	13.0	126	40.6		05.7	77	38.5		42.2	19	08.3		54.7	100	07.9		17.3
20	252	15.4	141	39.8		05.4	92	39.5		41.6	34	10.6		54.7	115	10.1		17.2
21	267	17.9	156	39.0		05.1	107	40.5		41.0	49	12.8		54.8	130	12.2		17.1
22	282	20.4	171	38.2		04.8	122	41.5		40.4	64	15.1		54.9	145	14.3		17.0
23	297	22.8	186	37.4		04.4	137	42.5		39.8	79	17.4		55.0	160	16.5		16.9
24	312	25.3	201	36.6	+22	04.1	152	43.4	+9	39.2	94	19.6	-13	55.0	175	18.6	+17	16.9
Dif	—			-8 -3			+10 -6			+23 -1				+21 -1				

UT	SOL			LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 15 ^h 8 PMG: 12 ^h 06 ^m 1			Edad: 9 ^d 8 PHE { 4 ^h : 56 ^m 5 12 ^h : 56 ^m 8 20 ^h : 57 ^m 1 R°: 59 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m m	h m m	h m m	h m m	
0	178	27.6	+17	20.0	75	14.4	-24	46.8	60 N	20 23	21 21	23 07	17 45 96	21 32 26		
1	193	27.7		19.3	89	42.8	94	-24	54.9	58	12	21 03	22 24	17 14 85	22 03 38	
2	208	27.7		18.7	104	11.0	92	-25	02.8	56	20 02	20 49	21 57	16 51 79	27 42	
3	223	27.8		18.0	118	39.1	91		10.7	54	19 53	36	36	32 76	22 46 46	
4	238	27.9		17.3	133	07.1	90		18.4	52	45	26	19	16 74	23 03 47	
5	253	27.9	+17	16.7	147	34.9	88	-25	26.0	50	19 38	20 16	21 05	16 02 72	23 17 49	
6	268	28.0	+17	16.0	162	02.7	88	-25	33.5	45	19 23	19 56	20 38	15 34 69	23 45 52	
7	283	28.0		15.3	176	30.3	86		40.8	40	11	41	17	15 12 67	** ** ** *	
8	298	28.1		14.7	190	57.8	85		48.0	35	19 00	28	20 01	14 54 65	** ** ** *	
9	313	28.1		14.0	205	25.2	84	-25	55.1	30	18 51	19 17	19 48	38 64	** ** ** *	
10	328	28.2		13.4	219	52.5	83	-26	02.1	20	36	18 59	26	14 12 61	0 20 50	
11	343	28.3	+17	12.7	234	19.6	81	-26	08.9	10 N	18 22	18 44	19 10	13 50 59	0 41 53	
12	358	28.3	+17	12.0	248	46.7	81	-26	15.6	0	18 10	18 31	18 56	13 29 57	1 01 55	
13	13	28.4		11.4	263	13.6	79		22.1	10 S	17 57	19	44	13 08 56	20 58	
14	28	28.4		10.7	277	40.4	78		28.5	20	44	18 07	34	12 46 53	1 41 60	
15	43	28.5		10.0	292	07.1	77		34.8	30	29	17 54	23	20 51	2 05 64	
16	58	28.5		09.4	306	33.7	76		40.9	35	21	47	17	12 05 49	20 65	
17	73	28.6	+17	08.7	321	00.2	75	-26	46.9	40	17 11	17 39	18 12	11 47 48	2 37 67	
18	88	28.7	+17	08.0	335	26.6	74	-26	52.8	45	16 59	17 31	18 06	11 27 45	2 57 70	
19	103	28.7		07.3	349	52.8	72	-26	58.4	50	46	21	17 59	11 00 42	3 22 75	
20	118	28.8		06.7	4	19.0	72	-27	04.0	56	39	16	57	10 48 39	34 77	
21	133	28.8		06.0	18	45.0	70		09.4	54	32	11	54	33 37	3 48 80	
22	148	28.9		05.3	33	11.0	70		14.6	52	24	17 05	50	10 16 33	4 04 85	
23	163	29.0		04.7	47	36.8	68		19.7	51	15	16 59	47	9 56 27	24 90	
24	178	29.0	+17	04.0	62	02.5	67	-27	24.7	50	16 05	16 53	17 43	9 31 16	4 49 101	
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 3 ^h 09 ^m 8			Mag: -3.8 PMG: 10 ^h 34 ^m			Mag: +1.8 PMG: 13 ^h 48 ^m			Mag: -2.1 PMG: 17 ^h 40 ^m			Mag: +0.3 PMG: 12 ^h 17 ^m			
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	312	25.3	201	36.6	+22	04.1	152	43.4	+9	39.2	94	19.6	-13	55.0	175	18.6
1	327	27.7	216	35.8		03.8	167	44.4		38.6	109	21.9		55.1	190	20.8
2	342	30.2	231	35.0		03.5	182	45.4		38.0	124	24.2		55.2	205	22.9
3	357	32.7	246	34.2		03.2	197	46.4		37.4	139	26.4		55.3	220	25.0
4	12	35.1	261	33.4		02.8	212	47.4		36.8	154	28.7		55.3	235	27.2
5	27	37.6	276	32.7	+22	02.5	227	48.4	+9	36.2	169	31.0	-13	55.4	250	29.3
6	42	40.1	291	31.9	+22	02.2	242	49.4	+9	35.6	184	33.2	-13	55.5	265	31.5
7	57	42.5	306	31.1		01.9	257	50.4		35.0	199	35.5		55.6	280	33.6
8	72	45.0	321	30.3		01.5	272	51.4		34.4	214	37.8		55.6	295	35.8
9	87	47.5	336	29.5		01.2	287	52.4		33.8	229	40.0		55.7	310	37.9
10	102	49.9	351	28.7		00.9	302	53.4		33.2	244	42.3		55.8	325	40.0
11	117	52.4	6	27.9	+22	00.5	317	54.4	+9	32.6	259	44.5	-13	55.8	340	42.2
12	132	54.9	21	27.1	+22	00.2	332	55.4	+9	32.0	274	46.8	-13	55.9	355	44.3
13	147	57.3	36	26.3	+21	59.9	347	56.4		31.4	289	49.1		56.0	10	46.5
14	162	59.8	51	25.5		59.5	2	57.4		30.8	304	51.3		56.1	25	48.6
15	178	02.2	66	24.7		59.2	17	58.4		30.2	319	53.6		56.1	40	50.7
16	193	04.7	81	23.9		58.9	32	59.4		29.6	334	55.9		56.2	55	52.9
17	208	07.2	96	23.1	+21	58.5	48	00.4	+9	29.0	349	58.1	-13	56.3	70	55.0
18	223	09.6	111	22.3	+21	58.2	63	01.4	+9	28.4	5	00.4	-13	56.4	85	57.2
19	238	12.1	126	21.5		57.9	78	02.4		27.8	20	02.7		56.4	100	59.3
20	253	14.6	141	20.7		57.5	93	03.4		27.2	35	04.9		56.5	116	01.5
21	268	17.0	156	19.9		57.2	108	04.4		26.5	50	07.2		56.6	131	03.6
22	283	19.5	171	19.1		56.8	123	05.3		25.9	65	09.4		56.7	146	05.7
23	298	22.0	186	18.3		56.5	138	06.3		25.3	80	11.7		56.8	161	07.9
24	313	24.4	201	17.5	+21	56.1	153	07.3	+9	24.7	95	14.0	-13	56.8	176	10.0
Dif	—		-8		-3		+10		-6		+23		-1		+21	

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15 ^h 8			Edad: 10 ^d 8	PHE { 4 ^h : 57 ^m .4 12 ^h : 57 ^m .7 20 ^h : 58 ^m .0	SD: 15 ^h 6				R°: 61 ^m								
	PMG: 12 ^h 06 ^m 0					PMG: 20 ^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	178	29.0	+17	04.0	62	02.5	-27	24.7	60 N	1	06	2	52	3	50	19	21	
1	193	29.1		03.3	76	28.1		29.5	58	1	49	3	09	4	01	18	39	
2	208	29.2		02.6	90	53.6		34.1	56	2	16		24	11		18	10	
3	223	29.2		02.0	105	19.0		38.6	54		37		36	20		17	48	
4	238	29.3		01.3	119	44.3		42.9	52	2	53		47	28		30	60	
5	253	29.3	+17	00.6	134	09.5	-27	47.1	50	3	07	3	57	4	35	17	14	
6	268	29.4	+16	59.9	148	34.6	-27	51.1	45	3	35	4	16	4	50	16	43	
7	283	29.5		59.3	162	59.6		54.9	40	3	55		32	5	02	16	19	
8	298	29.5		58.6	177	24.6	-27	58.6	37	4	11		45	12		15	59	
9	313	29.6		57.9	191	49.4	-28	02.1	35	30		25	4	56	21	42	61	
10	328	29.7		57.2	206	14.1		05.4	33	20		5	13	37		15	13	
11	343	29.7	+16	56.6	220	38.7	-28	08.6	32	10 N	5	02	5	28	5	50	14	49
12	358	29.8	+16	55.9	235	03.3	-28	11.6	30	0	5	16	5	41	6	03	14	26
13	13	29.9		55.2	249	27.7		14.4	28	10 S		28	5	53	15		14	04
14	28	29.9		54.5	263	52.1		17.1	27	20		38	6	05	28		13	39
15	43	30.0		53.8	278	16.4		19.6	25	30		49		18	43		13	11
16	58	30.0		53.2	292	40.6		21.9	23	35	5	54		25	6	51	12	54
17	73	30.1	+16	52.5	307	04.7	-28	24.0	21	40	6	00	6	32	7	01	12	35
18	88	30.2	+16	51.8	321	28.8	-28	26.0	20	45	6	06	6	41	7	12	12	12
19	103	30.2		51.1	335	52.7		27.8	18	50		12		51	26		11	42
20	118	30.3		50.4	350	16.6		29.4	16	52		15	6	55	32		27	57
21	133	30.4		49.8	4	40.4		30.8	14	54		18	7	00	39		11	10
22	148	30.4		49.1	19	04.2		32.0	12	56		21		06	47		10	49
23	163	30.5		48.4	33	27.9		33.1	11	58		24		12	7	56	10	23
24	178	30.6	+16	47.7	47	51.5	-28	34.0	9	60 S	6	28	7	18	8	06	9	47

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 3 ^h 05 ^m .9		Mag: -3.8 PMG: 10 ^h 35 ^m			Mag: +1.8 PMG: 13 ^h 47 ^m			Mag: -2.1 PMG: 17 ^h 36 ^m			Mag: +0.3 PMG: 12 ^h 14 ^m						
	hG ♈		hG ♀		Dec	hG ♂		Dec	hG ♃		Dec	hG ♄		Dec				
h	°	'	°	'	°	°	'	°	'	°	'	°	'	°				
0	313	24.4	201	17.5	+21	56.1	153	07.3	+9	24.7	95	14.0	-13	56.8	176	10.0	+17	14.7
1	328	26.9	216	16.8		55.8	168	08.3		24.1	110	16.2		56.9	191	12.2		14.6
2	343	29.4	231	16.0		55.4	183	09.3		23.5	125	18.5		57.0	206	14.3		14.5
3	358	31.8	246	15.2		55.1	198	10.3		22.9	140	20.7		57.1	221	16.5		14.4
4	13	34.3	261	14.4		54.7	213	11.3		22.3	155	23.0		57.1	236	18.6		14.3
5	28	36.7	276	13.6	+21	54.4	228	12.3	+9	21.7	170	25.3	-13	57.2	251	20.7	+17	14.2
6	43	39.2	291	12.8	+21	54.0	243	13.3	+9	21.1	185	27.5	-13	57.3	266	22.9	+17	14.1
7	58	41.7	306	12.0		53.7	258	14.3		20.5	200	29.8		57.4	281	25.0		14.0
8	73	44.1	321	11.2		53.3	273	15.3		19.9	215	32.0		57.4	296	27.2		14.0
9	88	46.6	336	10.4		53.0	288	16.3		19.3	230	34.3		57.5	311	29.3		13.9
10	103	49.1	351	09.6		52.6	303	17.3		18.7	245	36.6		57.6	326	31.4		13.8
11	118	51.5	6	08.8	+21	52.3	318	18.3	+9	18.1	260	38.8	-13	57.7	341	33.6	+17	13.7
12	133	54.0	21	08.0	+21	51.9	333	19.3	+9	17.5	275	41.1	-13	57.7	356	35.7	+17	13.6
13	148	56.5	36	07.2		51.5	348	20.3		16.9	290	43.3		57.8	11	37.9		13.5
14	163	58.9	51	06.5		51.2	3	21.3		16.3	305	45.6		57.9	26	40.0		13.4
15	179	01.4	66	05.7		50.8	18	22.3		15.7	320	47.8		58.0	41	42.2		13.3
16	194	03.9	81	04.9		50.5	33	23.3		15.1	335	50.1		58.0	56	44.3		13.2
17	209	06.3	96	04.1	+21	50.1	48	24.3	+9	14.5	350	52.4	-13	58.1	71	46.4	+17	13.1
18	224	08.8	111	03.3	+21	49.7	63	25.3	+9	13.9	5	54.6	-13	58.2	86	48.6	+17	13.0
19	239	11.2	126	02.5		49.4	78	26.3		13.2	20	56.9		58.3	101	50.7		13.0
20	254	13.7	141	01.7		49.0	93	27.3		12.6	35	59.1		58.4	116	52.9		12.9
21	269	16.2	156	00.9		48.6	108	28.3		12.0	51	01.4		58.4	131	55.0		12.8
22	284	18.6	171	00.1		48.3	123	29.3		11.4	66	03.6		58.5	146	57.1		12.7
23	299	21.1	185	59.4		47.9	138	30.3		10.8	81	05.9		58.6	161	59.3		12.6
24	314	23.6	200	58.6	+21	47.5	153	31.3	+9	10.2	96	08.1	-13	58.7	177	01.4	+17	12.5
Dif	—		-8		-4		+10		-6		+23		-1		+21		-1	

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15'8 PMG: 12 ^h 05 ^m 9			Edad: 11 ^d 8 PHE { SD: 15'8 PMG: 21 ^h 42 ^m 4 ^h : 58'3 12 ^h : 58'6 20 ^h : 58'9 R°: 62 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m
0	178	30.6	+16 47.7	47	51.5	-28 34.0	6	60 N	20 18	21 14	22 52	20 15 17	23 14 112	
1	193	30.6	47.0	62	15.0 45	34.6	6	58	20 07	20 58	22 15	19 36 29	23 52 100	
2	208	30.7	46.3	76	38.5 45	35.2	3	56	19 58	44	21 50	19 09 36	*** ** **	
3	223	30.8	45.7	91	01.9 44	35.5	3	54	49	32	30	18 47 40	*** ** **	
4	238	30.9	45.0	105	25.3 44	35.6	1	52	42	21	14	30 43	*** ** **	
5	253	30.9	+16 44.3	119	48.6 43	-28 35.6	0	50	19 35	20 12	21 01	18 14 46	0 06 67	
6	268	31.0	+16 43.6	134	11.9 43	-28 35.3	3	45	19 20	19 53	20 35	17 44 49	0 37 66	
7	283	31.1	42.9	148	35.1 42	34.9	4	40	19 08	38	20 15	20 52	1 01 66	
8	298	31.1	42.2	162	58.2 41	34.3	6	35	18 58	26	19 59	17 00 54	21 65	
9	313	31.2	41.5	177	21.4 42	33.5	8	30	50	19 15	46	16 43 56	1 38 65	
10	328	31.3	40.9	191	44.4 40	32.5	10	20	34	18 58	25	16 15 58	2 07 64	
11	343	31.3	+16 40.2	206	07.5 41	-28 31.3	12	10 N	18 21	18 43	19 09	15 50 60	2 32 63	
12	358	31.4	+16 39.5	220	30.5 40	-28 29.9	14	0	18 09	18 31	18 56	15 27 62	2 55 62	
13	13	31.5	38.8	234	53.4 39	28.3	16	10 S	17 57	19	45	15 04 64	3 18 61	
14	28	31.6	38.1	249	16.4 40	26.6	17	20	45	18 08	34	14 40 66	3 43 60	
15	43	31.6	37.4	263	39.3 39	24.6	20	30	30	17 55	24	14 11 68	4 11 59	
16	58	31.7	36.7	278	02.1 38	22.4	22	35	22	49	19	13 54 70	28 58	
17	73	31.8	+16 36.0	292	25.0 39	-28 20.1	23	40	17 13	17 41	18 13	13 35 71	4 48 57	
18	88	31.8	+16 35.3	306	47.8 38	-28 17.6	25	45	17 02	17 33	18 08	13 11 73	5 12 55	
19	103	31.9	34.6	321	10.6 38	14.8	28	50	16 48	23	18 02	12 40 76	4 43 53	
20	118	32.0	33.9	335	33.4 38	11.9	29	52	42	19	17 59	24 78	5 59 51	
21	133	32.1	33.3	349	56.2 38	08.8	31	54	35	14	56	12 07 79	6 17 49	
22	148	32.1	32.6	4	18.9 37	05.4	34	56	28	09	54	11 45 83	6 38 47	
23	163	32.2	31.9	18	41.7 38	-28 01.9	35	58	19	17 03	50	11 17 87	7 06 43	
24	178	32.3	+16 31.2	33	04.4 37	-27 58.2	37	60 S	16 09	16 56	17 47	10 37 97	7 46 33	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG: 3 ^h 01 ^m 9		Mag: -3.8 PMG: 10 ^h 37 ^m		Mag: +1.8 PMG: 13 ^h 45 ^m		Mag: -2.1 PMG: 17 ^h 33 ^m		Mag: +0.3 PMG: 12 ^h 10 ^m						
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'					
0	314	23.6	200	58.6	+21 47.5	153 31.3	+9 10.2	96 08.1	-13 58.7	177 01.4	+17 12.5				
1	329	26.0	215	57.8	47.1	168 32.3	09.6	111 10.4	58.7	192 03.6	12.4				
2	344	28.5	230	57.0	46.8	183 33.3	09.0	126 12.7	58.8	207 05.7	12.3				
3	359	31.0	245	56.2	46.4	198 34.2	08.4	141 14.9	58.9	222 07.9	12.2				
4	14	33.4	260	55.4	46.0	213 35.2	07.8	156 17.2	59.0	237 10.0	12.1				
5	29	35.9	275	54.6	+21 45.6	228 36.2	+9 07.2	171 19.4	-13 59.1	252 12.1	+17 12.1				
6	44	38.4	290	53.8	+21 45.3	243 37.2	+9 06.6	186 21.7	-13 59.1	267 14.3	+17 12.0				
7	59	40.8	305	53.1	44.9	258 38.2	06.0	201 23.9	59.2	282 16.4	11.9				
8	74	43.3	320	52.3	44.5	273 39.2	05.4	216 26.2	59.3	297 18.6	11.8				
9	89	45.7	335	51.5	44.1	288 40.2	04.8	231 28.4	59.4	312 20.7	11.7				
10	104	48.2	350	50.7	43.7	303 41.2	04.1	246 30.7	59.4	327 22.8	11.6				
11	119	50.7	5	49.9	+21 43.4	318 42.2	+9 03.5	261 32.9	-13 59.5	342 25.0	+17 11.5				
12	134	53.1	20	49.1	+21 43.0	333 43.2	+9 02.9	276 35.2	-13 59.6	357 27.1	+17 11.4				
13	149	55.6	35	48.3	42.6	348 44.2	02.3	291 37.4	59.7	12 29.3	11.3				
14	164	58.1	50	47.6	42.2	3 45.2	01.7	306 39.7	59.8	27 31.4	11.2				
15	180	00.5	65	46.8	41.8	18 46.2	01.1	321 41.9	59.8	42 33.6	11.1				
16	195	03.0	80	46.0	41.4	33 47.2	+9 00.5	336 44.2	-13 59.9	57 35.7	11.1				
17	210	05.5	95	45.2	+21 41.0	48 48.2	+8 59.9	351 46.4	-14 00.0	72 37.8	+17 11.0				
18	225	07.9	110	44.4	+21 40.6	63 49.2	+8 59.3	6 48.7	-14 00.1	87 40.0	+17 10.9				
19	240	10.4	125	43.6	40.2	78 50.2	58.7	21 50.9	00.2	102 42.1	10.8				
20	255	12.9	140	42.8	39.9	93 51.2	58.1	36 53.2	00.2	117 44.3	10.7				
21	270	15.3	155	42.1	39.5	108 52.2	57.5	51 55.4	00.3	132 46.4	10.6				
22	285	17.8	170	41.3	39.1	123 53.2	56.9	66 57.7	00.4	147 48.6	10.5				
23	300	20.2	185	40.5	38.7	138 54.2	56.2	81 59.9	00.5	162 50.7	10.4				
24	315	22.7	200	39.7	+21 38.3	153 55.2	+8 55.6	97 02.2	-14 00.6	177 52.8	+17 10.3				
Dif	—		-8		-4	+10		-6		+23		-1		+21	-1

UT	SOL				LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna				
	SD: 15 ^h 8 PMG: 12 ^h 05 ^m 8				Edad: 12 ^d 8 PHE { 4 ^h : 59 ^m 2 12 ^h : 59 ^m 5 20 ^h : 59 ^m 8 R°: 60 ^m																
	hG ☉		Dec		hG ☾		Dif		Dec			Dif			Náutico	Civil	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	
0	178	32.3	+16	31.2	33	04.4	-27	58.2	39	58	60 N	1	21	2	58	3	54	20	32	4	*** ** *
1	193	32.4		30.5	47	27.2	38	54.3	39	58		1	58	3	15	4	05	20	05	15	*** ** *
2	208	32.4		29.8	61	49.9	37	50.2	41	56		2	23		29	15		19	45	20	0 19 93
3	223	32.5		29.1	76	12.6	37	45.9	43	54			42		40	23		27	26		40 89
4	238	32.6		28.4	90	35.4	38	41.4	45	52		2	58	3	51	31		13	29		0 58 85
5	253	32.7	+16	27.7	104	58.1	37	-27	36.7	47	50	3	11	4	00	4	38	19	00	32	1 13 83
6	268	32.7	+16	27.0	119	20.9	38	-27	31.8	49	45	3	38	4	19	4	52	18	33	38	1 43 79
7	283	32.8		26.3	133	43.6	37		26.8	50	40	3	57		34	5	04	18	12	42	2 07 75
8	298	32.9		25.6	148	06.4	38		21.5	53	35	4	13		46	14		17	54	46	26 73
9	313	33.0		24.9	162	29.2	38		16.0	55	30		26		4	57	22	39	49		2 43 70
10	328	33.0		24.2	176	52.0	38		10.4	56	20	4	47	5	14	37		17	13	53	3 11 67
11	343	33.1	+16	23.5	191	14.8	38	-27	04.5	59	10 N	5	03	5	28	5	50	16	50	57	3 35 64
12	358	33.2	+16	22.8	205	37.7	39	-26	58.5	60	0	5	16	5	41	6	02	16	29	61	3 57 61
13	13	33.3		22.1	220	00.6	39		52.2	63	10 S		27	5	52	14		16	08	64	4 19 59
14	28	33.3		21.4	234	23.5	39		45.8	64	20		38	6	04	27		15	46	67	4 43 56
15	43	33.4		20.7	248	46.4	39		39.2	66	30		48		16	41		19	73		5 10 52
16	58	33.5		20.0	263	09.4	40		32.4	68	35		53		23	49		15	04	75	26 50
17	73	33.6	+16	19.3	277	32.4	40	-26	25.4	70	40	5	58	6	30	6	58	14	46	78	5 45 47
18	88	33.7	+16	18.6	291	55.4	40	-26	18.2	72	45	6	03	6	38	7	09	14	24	82	6 07 44
19	103	33.7		17.9	306	18.5	41		10.8	74	50		09		48	22		13	56	88	36 38
20	118	33.8		17.2	320	41.6	41	-26	03.3	75	52		12		52	28		42	91		6 50 36
21	133	33.9		16.5	335	04.7	41	-25	55.5	78	54		14	6	57	35		26	95		7 06 32
22	148	34.0		15.8	349	27.9	42		47.6	79	56		17	7	02	43		13	08	99	25 28
23	163	34.1		15.1	3	51.2	43		39.5	81	58		20		08	7	51	12	44	107	7 49 21
24	178	34.1	+16	14.4	18	14.5	43	-25	31.2	83	60 S	6	24	7	14	8	01	12	14	117	8 19 11

UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG 2 ^h 58 ^m 0		Mag: -3.8 PMG: 10 ^h 38 ^m				Mag: +1.8 PMG: 13 ^h 43 ^m				Mag: -2.1 PMG: 17 ^h 29 ^m				Mag: +0.3 PMG: 12 ^h 07 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	315	22.7	200	39.7	+21	38.3	153	55.2	+8	55.6	97	02.2	-14	00.6	177	52.8	+17	10.3
1	330	25.2	215	38.9		37.9	168	56.2		55.0	112	04.4		00.6	192	55.0		10.2
2	345	27.6	230	38.1		37.5	183	57.2		54.4	127	06.7		00.7	207	57.1		10.1
3	0	30.1	245	37.4		37.1	198	58.2		53.8	142	08.9		00.8	222	59.3		10.1
4	15	32.6	260	36.6		36.7	213	59.2		53.2	157	11.2		00.9	238	01.4		10.0
5	30	35.0	275	35.8	+21	36.3	229	00.2	+8	52.6	172	13.4	-14	00.9	253	03.5	+17	09.9
6	45	37.5	290	35.0	+21	35.9	244	01.2	+8	52.0	187	15.7	-14	01.0	268	05.7	+17	09.8
7	60	40.0	305	34.2		35.5	259	02.2		51.4	202	17.9		01.1	283	07.8		09.7
8	75	42.4	320	33.5		35.0	274	03.2		50.8	217	20.2		01.2	298	10.0		09.6
9	90	44.9	335	32.7		34.6	289	04.2		50.2	232	22.4		01.3	313	12.1		09.5
10	105	47.3	350	31.9		34.2	304	05.2		49.5	247	24.6		01.3	328	14.3		09.4
11	120	49.8	5	31.1	+21	33.8	319	06.2	+8	48.9	262	26.9	-14	01.4	343	16.4	+17	09.3
12	135	52.3	20	30.3	+21	33.4	334	07.2	+8	48.3	277	29.1	-14	01.5	358	18.5	+17	09.2
13	150	54.7	35	29.6		33.0	349	08.2		47.7	292	31.4		01.6	13	20.7		09.1
14	165	57.2	50	28.8		32.6	4	09.2		47.1	307	33.6		01.7	28	22.8		09.1
15	180	59.7	65	28.0		32.2	19	10.2		46.5	322	35.9		01.8	43	25.0		09.0
16	196	02.1	80	27.2		31.8	34	11.2		45.9	337	38.1		01.8	58	27.1		08.9
17	211	04.6	95	26.4	+21	31.3	49	12.2	+8	45.3	352	40.4	-14	01.9	73	29.3	+17	08.8
18	226	07.1	110	25.7	+21	30.9	64	13.2	+8	44.7	7	42.6	-14	02.0	88	31.4	+17	08.7
19	241	09.5	125	24.9		30.5	79	14.2		44.1	22	44.8		02.1	103	33.5		08.6
20	256	12.0	140	24.1		30.1	94	15.2		43.4	37	47.1		02.2	118	35.7		08.5
21	271	14.5	155	23.3		29.7	109	16.2		42.8	52	49.3		02.2	133	37.8		08.4
22	286	16.9	170	22.5		29.2	124	17.2		42.2	67	51.6		02.3	148	40.0		08.3
23	301	19.4	185	21.8		28.8	139	18.2		41.6	82	53.8		02.4	163	42.1		08.2
24	316	21.8	200	21.0	+21	28.4	154	19.2	+8	41.0	97	56.1	-14	02.5	178	44.3	+17	08.1
Dif	—		-8		-4		+10		-6		+22		-1		+21		-	

UT	SOL			☉ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 15'8 PMG: 12 ^h 05 ^m 7			Edad: 13 ^d 8 PHE { 4 ^h : 60'0 12 ^h : 60'2 20 ^h : 60'4 R°: 57 ^m											
	hG ☉	Dec		hG ☾	Dif				Civil	Náutico	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	h m	h m	h m	h m	h m	h m	h m	h m
0	178	34.1	+16	14.4	18	14.5	-25	31.2	60 N	20 13	21 08	22 38	20 36	2	1 07 120
1	193	34.2		13.7	32	37.8	43	22.7	58	20 02	20 52	22 06	20	7	32 111
2	208	34.3		13.0	47	01.2	44	14.0	56	19 53	39	21 43	20 05	13	1 52 104
3	223	34.4		12.2	61	24.7	45	-25	05.2	54	45	27	19 53	17	2 09 99
4	238	34.5		11.5	75	48.2	45	-24	56.1	52	38	17	42	20	23 95
5	253	34.5	+16	10.8	90	11.7	45	-24	46.9	50	19 31	20 09	19 32	23	2 36 91
6	268	34.6	+16	10.1	104	35.4	47	-24	37.6	45	19 17	19 50	19 11	30	3 02 84
7	283	34.7		09.4	118	59.0	46	28.0	40	19 06	36	20 12	18 54	35	22 80
8	298	34.8		08.7	133	22.8	48	18.3	35	18 56	24	19 56	40	39	39 76
9	313	34.9		08.0	147	46.6	48	-24	08.4	30	48	19 13	44	28	3 53 73
10	328	35.0		07.3	162	10.5	49	-23	58.3	20	33	18 57	24	18 06	4 18 68
11	343	35.0	+16	06.6	176	34.4	49	-23	48.1	10 N	18 21	18 43	19 08	17 47	4 39 63
12	358	35.1	+16	05.9	190	58.4	50	-23	37.6	0	18 09	18 31	18 56	17 30	5 48 60
13	13	35.2		05.2	205	22.5	51	27.1	10 S	17 58	19	45	17 12	63	5 18 55
14	28	35.3		04.4	219	46.6	51	16.3	20	45	18 08	35	16 53	68	5 39 50
15	43	35.4		03.7	234	10.8	52	-23	05.4	30	31	17 56	25	32	6 02 46
16	58	35.5		03.0	248	35.1	53	-22	54.3	35	24	50	20	19	16 42
17	73	35.5	+16	02.3	262	59.5	54	-22	43.1	40	17 14	17 43	18 15	16 04	6 32 38
18	88	35.6	+16	01.6	277	23.9	54	-22	31.7	45	17 04	17 35	18 10	15 46	6 51 34
19	103	35.7		00.9	291	48.4	55	20.2	50	16 51	26	04	24	92	7 14 28
20	118	35.8	+16	00.2	306	13.0	56	-22	08.4	52	45	22	18 02	13	26 24
21	133	35.9	+15	59.4	320	37.6	56	-21	56.6	54	39	17	17 59	15 01	38 21
22	148	36.0		58.7	335	02.4	58	44.6	56	31	12	57	14 47	105	7 53 16
23	163	36.1		58.0	349	27.2	58	32.4	58	23	07	54	31	110	8 10 11
24	178	36.1	+15	57.3	3	52.1	59	-21	20.1	60 S	16 14	17 00	17 51	14 11	8 30 4
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG: 2 ^h 54 ^m 1		Mag: -3.8 PMG: 10 ^h 39 ^m		Mag: +1.8 PMG: 13 ^h 42 ^m		Mag: -2.1 PMG: 17 ^h 26 ^m		Mag: +0.3 PMG: 12 ^h 03 ^m						
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'					
0	316	21.8	200	21.0	154	19.2	97	56.1	178	44.3					
1	331	24.3	215	20.2	169	20.1	112	58.3	193	46.4					
2	346	26.8	230	19.4	184	21.1	128	00.5	208	48.5					
3	1	29.2	245	18.7	199	22.1	143	02.8	223	50.7					
4	16	31.7	260	17.9	214	23.1	158	05.0	238	52.8					
5	31	34.2	275	17.1	229	24.1	173	07.3	253	55.0					
6	46	36.6	290	16.3	244	25.1	188	09.5	268	57.1					
7	61	39.1	305	15.6	259	26.1	203	11.7	283	59.3					
8	76	41.6	320	14.8	274	27.1	218	14.0	299	01.4					
9	91	44.0	335	14.0	289	28.1	233	16.2	314	03.5					
10	106	46.5	350	13.2	304	29.1	248	18.5	329	05.7					
11	121	49.0	5	12.5	319	30.1	263	20.7	344	07.8					
12	136	51.4	20	11.7	334	31.1	278	22.9	359	10.0					
13	151	53.9	35	10.9	349	32.1	293	25.2	14	12.1					
14	166	56.3	50	10.1	4	33.1	308	27.4	29	14.2					
15	181	58.8	65	09.4	19	34.1	323	29.7	44	16.4					
16	197	01.3	80	08.6	34	35.1	338	31.9	59	18.5					
17	212	03.7	95	07.8	49	36.1	353	34.1	74	20.7					
18	227	06.2	110	07.0	64	37.1	8	36.4	89	22.8					
19	242	08.7	125	06.3	79	38.1	23	38.6	104	25.0					
20	257	11.1	140	05.5	94	39.1	38	40.8	119	27.1					
21	272	13.6	155	04.7	109	40.1	53	43.1	134	29.2					
22	287	16.1	170	03.9	124	41.1	68	45.3	149	31.4					
23	302	18.5	185	03.2	139	42.1	83	47.6	164	33.5					
24	317	21.0	200	02.4	154	43.1	98	49.8	179	35.7					
Dif	—		-8		+10		+22		+21						
			-4		-6		-1		-1						

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna						
	SD: 15 ^h 8			Edad: 14 ^d 8	PHE	4 ^h : 60 ^m 6 12 ^h : 60 ^m 7 20 ^h : 60 ^m 8				Náutico	Civil		Hora	R°	Hora	R°					
	PMG: 12 ^h 05 ^m 5					SD: 16 ^h 5 PMG: *** **m R°: ***m															
	hG ☉	Dec		hG ☾	Dif	Dec		Dif													
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m				
0	178	36.1	+15	57.3	3	52.1	-21	20.1	60 N	1	34	3	59	20	38	**	3	07	116		
1	193	36.2		56.6	18	17.0	-21	07.6	58	2	06	20	4	10	27	4		23	109		
2	208	36.3		55.9	32	42.1	-20	55.0	56	29	33	19	18	8				36	104		
3	223	36.4		55.2	47	07.2		42.2	54	2	48	45	27	10	12			48	100		
4	238	36.5		54.4	61	32.4		29.3	52	3	03	3	54	34	20	02	15	3	58	96	
5	253	36.6	+15	53.7	75	57.7	-20	16.3	50	3	15	4	03	4	40	19	55	19	4	07	93
6	268	36.7	+15	53.0	90	23.1	-20	03.1	45	3	41	4	22	4	54	19	41	24	4	26	86
7	283	36.7		52.3	104	48.5	-19	49.8	40	4	00	36	5	06	29	29		42	80		
8	298	36.8		51.6	119	14.1		36.4	35	15	48	15	19	33				4	55	76	
9	313	36.9		50.8	133	39.7		22.8	30	28	4	58	24	19	10	37		5	06	73	
10	328	37.0		50.1	148	05.4	-19	09.1	20	4	48	5	15	38	18	54	44		26	66	
11	343	37.1	+15	49.4	162	31.2	-18	55.2	10 N	5	03	5	29	5	51	18	40	49	5	42	61
12	358	37.2	+15	48.7	176	57.0	-18	41.2	0	5	16	5	41	6	02	18	27	55	5	58	55
13	13	37.3		48.0	191	23.0		27.1	10 S	27	5	52	14	15	59				6	13	51
14	28	37.4		47.2	205	49.0	-18	12.9	20	37	6	03	26	18	01	64		29	46		
15	43	37.5		46.5	220	15.1	-17	58.6	30	46	14	39	17	45	71				48	39	
16	58	37.6		45.8	234	41.3		44.1	35	51	21	47	35	75				6	58	36	
17	73	37.6	+15	45.1	249	07.6	-17	29.5	40	5	56	6	28	6	56	17	24	80	7	10	32
18	88	37.7	+15	44.3	263	34.0	-17	14.8	45	6	01	6	36	7	07	17	12	85	7	25	27
19	103	37.8		43.6	278	00.4	-17	00.0	50	06	45	19	16	56	92				42	21	
20	118	37.9		42.9	292	26.9	-16	45.1	52	09	49	25	49	95					50	18	
21	133	38.0		42.2	306	53.5		30.1	54	11	53	31	41	98					7	59	14
22	148	38.1		41.4	321	20.2	-16	15.0	56	14	6	58	38	32	102				8	09	11
23	163	38.2		40.7	335	47.0	-15	59.7	58	16	7	03	46	21	107				21	6	
24	178	38.3	+15	40.0	350	13.8	-15	44.4	60 S	6	19	7	09	7	56	16	09	113	8	34	0

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 2 ^h 50 ^m 1		Mag: -3.8 PMG: 10 ^h 40 ^m		Mag: +1.8 PMG: 13 ^h 40 ^m		Mag: -2.1 PMG: 17 ^h 22 ^m		Mag: +0.3 PMG: 12 ^h 00 ^m									
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	317	21.0	200	02.4	+21	17.9	154	43.1	+8	26.3	98	49.8	-14	04.4	179	35.7	+17	06.0
1	332	23.5	215	01.6		17.4	169	44.1		25.7	113	52.0		04.5	194	37.8		05.9
2	347	25.9	230	00.9		17.0	184	45.1		25.1	128	54.3		04.6	209	40.0		05.8
3	2	28.4	245	00.1		16.5	199	46.1		24.5	143	56.5		04.7	224	42.1		05.7
4	17	30.8	259	59.3		16.1	214	47.1		23.8	158	58.7		04.8	239	44.2		05.6
5	32	33.3	274	58.6	+21	15.6	229	48.1	+8	23.2	174	01.0	-14	04.9	254	46.4	+17	05.5
6	47	35.8	289	57.8	+21	15.2	244	49.1	+8	22.6	189	03.2	-14	04.9	269	48.5	+17	05.4
7	62	38.2	304	57.0		14.7	259	50.1		22.0	204	05.4		05.0	284	50.7		05.3
8	77	40.7	319	56.2		14.3	274	51.1		21.4	219	07.7		05.1	299	52.8		05.2
9	92	43.2	334	55.5		13.8	289	52.1		20.8	234	09.9		05.2	314	55.0		05.1
10	107	45.6	349	54.7		13.3	304	53.1		20.2	249	12.1		05.3	329	57.1		05.0
11	122	48.1	4	53.9	+21	12.9	319	54.1	+8	19.5	264	14.4	-14	05.4	344	59.2	+17	05.0
12	137	50.6	19	53.2	+21	12.4	334	55.1	+8	18.9	279	16.6	-14	05.5	0	01.4	+17	04.9
13	152	53.0	34	52.4		11.9	349	56.1		18.3	294	18.8		05.5	15	03.5		04.8
14	167	55.5	49	51.6		11.5	4	57.1		17.7	309	21.1		05.6	30	05.7		04.7
15	182	58.0	64	50.9		11.0	19	58.1		17.1	324	23.3		05.7	45	07.8		04.6
16	198	00.4	79	50.1		10.6	34	59.1		16.5	339	25.5		05.8	60	09.9		04.5
17	213	02.9	94	49.3	+21	10.1	50	00.1	+8	15.9	354	27.8	-14	05.9	75	12.1	+17	04.4
18	228	05.3	109	48.6	+21	09.6	65	01.1	+8	15.2	9	30.0	-14	06.0	90	14.2	+17	04.3
19	243	07.8	124	47.8		09.1	80	02.1		14.6	24	32.2		06.0	105	16.4		04.2
20	258	10.3	139	47.0		08.7	95	03.1		14.0	39	34.5		06.1	120	18.5		04.1
21	273	12.7	154	46.3		08.2	110	04.1		13.4	54	36.7		06.2	135	20.7		04.0
22	288	15.2	169	45.5		07.7	125	05.1		12.8	69	38.9		06.3	150	22.8		03.9
23	303	17.7	184	44.7		07.3	140	06.1		12.2	84	41.2		06.4	165	24.9		03.9
24	318	20.1	199	44.0	+21	06.8	155	07.1	+8	11.5	99	43.4	-14	06.5	180	27.1	+17	03.8
Dif	—		-8		-5		+10		-6		+22		-1		+21		-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 4			Edad: 15 ^d 8 PHE { 4 ^h : 60'9 12 ^h : 60'9 20 ^h : 61'0 SD: 16'6 PMG: 0 ^h 41 ^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	h m	h m	h m					
0	178	38.3	+15	40.0	350	13.8	-15	44.4	60 N	20 07	21 01	22 26	20 37	**	5 03	110			
1	193	38.4		39.3	4	40.8	80	28.9	58	19 57	20 46	21 57	31	4	12	105			
2	208	38.5		38.5	19	07.8	80	-15	13.4	56	49	34	36	26	7	20	101		
3	223	38.6		37.8	33	34.8	80	-14	57.7	54	41	23	18	22	10	28	97		
4	238	38.7		37.1	48	02.0	82	42.0	52	34	13	21 04	17	13	34	94			
5	253	38.8	+15	36.3	62	29.2	82	-14	26.2	50	19 28	20 05	20 52	20 14	15	5	40	90	
6	268	38.8	+15	35.6	76	56.5	83	-14	10.3	45	19 15	19 47	20 27	20 05	21	5	52	84	
7	283	38.9		34.9	91	23.9	84	-13	54.3	40	19 04	33	20 09	19 58	26	6	02	79	
8	298	39.0		34.2	105	51.4	85	38.2	35	18 54	21	19 54	52	30		11	74		
9	313	39.1		33.4	120	18.9	85	22.0	30	46	19 11	42	47	34		19	70		
10	328	39.2		32.7	134	46.6	87	-13	05.7	20	32	18 55	22	38	40	32	63		
11	343	39.3	+15	32.0	149	14.2	86	-12	49.4	10 N	18 20	18 42	19 07	19 29	46	6	43	58	
12	358	39.4	+15	31.2	163	42.0	88	-12	33.0	0	18 09	18 30	18 55	19 22	51	6	53	53	
13	13	39.5		30.5	178	09.8	88	-12	16.5	10 S	17 58	19	45	14	57	7	04	47	
14	28	39.6		29.8	192	37.7	89	-11	59.9	20	46	18 09	35	19	05	63	15	41	
15	43	39.7		29.0	207	05.7	90	43.3	30	33	17 57	26	18	56	69	27	35		
16	58	39.8		28.3	221	33.7	90	26.6	35	25	51	21	50	74		34	32		
17	73	39.9	+15	27.6	236	01.8	91	-11	09.8	40	17 16	17 45	18 17	18	44	78	7	42	28
18	88	40.0	+15	26.8	250	30.0	92	-10	53.0	45	17 06	17 37	18 12	18	37	82	7	52	22
19	103	40.1		26.1	264	58.2	92	36.1	50	16 54	28	07	28	89		8	03	16	
20	118	40.2		25.4	279	26.6	94	19.1	52	48	24	05	24	92		08	14		
21	133	40.3		24.6	293	54.9	93	-10	02.1	54	42	20	02	19	95	13	11		
22	148	40.4		23.9	308	23.4	95	-9	45.0	56	35	15	18	00	14	99	20	7	
23	163	40.5		23.1	322	51.8	94	27.9	58	27	10	17 57	08	103		27	3		
24	178	40.6	+15	22.4	337	20.4	96	-9	10.7	60 S	16 19	17 05	17 55	18	02	107	8	34	0

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 2 ^h 46 ^m 2		Mag: -3.8 PMG: 10 ^h 42 ^m		Mag: +1.8 PMG: 13 ^h 39 ^m		Mag: -2.1 PMG: 17 ^h 19 ^m		Mag: +0.3 PMG: 11 ^h 56 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	318	20.1	199	44.0	+21	06.8	155	07.1	+8	11.5	99	43.4	-14	06.5	180	27.1	+17	03.8
1	333	22.6	214	43.2		06.3	170	08.1		10.9	114	45.6		06.5	195	29.2		03.7
2	348	25.1	229	42.4		05.8	185	09.1		10.3	129	47.8		06.6	210	31.4		03.6
3	3	27.5	244	41.7		05.3	200	10.1		09.7	144	50.1		06.7	225	33.5		03.5
4	18	30.0	259	40.9		04.9	215	11.1		09.1	159	52.3		06.8	240	35.7		03.4
5	33	32.4	274	40.2	+21	04.4	230	12.1	+8	08.5	174	54.5	-14	06.9	255	37.8	+17	03.3
6	48	34.9	289	39.4	+21	03.9	245	13.1	+8	07.8	189	56.8	-14	07.0	270	39.9	+17	03.2
7	63	37.4	304	38.6		03.4	260	14.1		07.2	204	59.0		07.1	285	42.1		03.1
8	78	39.8	319	37.9		02.9	275	15.1		06.6	220	01.2		07.1	300	44.2		03.0
9	93	42.3	334	37.1		02.5	290	16.1		06.0	235	03.4		07.2	315	46.4		02.9
10	108	44.8	349	36.3		02.0	305	17.1		05.4	250	05.7		07.3	330	48.5		02.8
11	123	47.2	4	35.6	+21	01.5	320	18.1	+8	04.8	265	07.9	-14	07.4	345	50.7	+17	02.8
12	138	49.7	19	34.8	+21	01.0	335	19.1	+8	04.1	280	10.1	-14	07.5	0	52.8	+17	02.7
13	153	52.2	34	34.1	+21	00.5	350	20.1		03.5	295	12.3		07.6	15	54.9		02.6
14	168	54.6	49	33.3	+21	00.0	5	21.1		02.9	310	14.6		07.7	30	57.1		02.5
15	183	57.1	64	32.5	+20	59.5	20	22.1		02.3	325	16.8		07.7	45	59.2		02.4
16	198	59.6	79	31.8		59.0	35	23.1		01.7	340	19.0		07.8	61	01.4		02.3
17	214	02.0	94	31.0	+20	58.5	50	24.1	+8	01.1	355	21.3	-14	07.9	76	03.5	+17	02.2
18	229	04.5	109	30.3	+20	58.0	65	25.1	+8	00.4	10	23.5	-14	08.0	91	05.7	+17	02.1
19	244	06.9	124	29.5		57.5	80	26.1	+7	59.8	25	25.7		08.1	106	07.8		02.0
20	259	09.4	139	28.7		57.0	95	27.1		59.2	40	27.9		08.2	121	09.9		01.9
21	274	11.9	154	28.0		56.5	110	28.1		58.6	55	30.2		08.3	136	12.1		01.8
22	289	14.3	169	27.2		56.1	125	29.1		58.0	70	32.4		08.3	151	14.2		01.8
23	304	16.8	184	26.5		55.6	140	30.1		57.4	85	34.6		08.4	166	16.4		01.7
24	319	19.3	199	25.7	+20	55.0	155	31.1	+7	56.7	100	36.8	-14	08.5	181	18.5	+17	01.6
Dif	—		-8	-5		+10	-6			+22		-1		+21		-1		

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15 ^h /8			Edad: 16 ^d 8 PHE	4 ^h : 60 ^m /9 12 ^h : 60 ^m /9 20 ^h : 60 ^m /8			R°: 51 ^m			Hora		R°	Hora		R°
	hG ☉	Dec			hG ☾	Dif		Dec	Dif		Náutico	Civil				
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	m	
0	178	40.6	+15	22.4	337	20.4	-9	10.7	60 N	1 45	3 10	4 04	20 36	**	6 53 106	
1	193	40.7		21.7	351	49.0	96	-8	53.5 ¹⁷²	58	2 14	25	14	35	2 6 57 102	
2	208	40.8		20.9	6	17.7	97		36.2 ¹⁷³	56	36	38	23	33	6 7 01 98	
3	223	40.9		20.2	20	46.4	97		18.9 ¹⁷³	54	2 53	49	30	32	9 05 94	
4	238	41.0		19.5	35	15.2	98	-8	01.5 ¹⁷⁴	52	3 07	3 58	37	30	12 08 90	
5	253	41.1	+15	18.7	49	44.0	98	-7	44.1 ¹⁷⁴	50	3 19	4 07	4 43	20 29	15 7 10 88	
6	268	41.2	+15	18.0	64	12.9	99	-7	26.6 ¹⁷⁵	45	3 44	4 24	4 57	20 26	21 7 16 82	
7	283	41.3		17.2	78	41.9	100	-7	09.1 ¹⁷⁵	40	4 02	38	5 07	24 25	21 77	
8	298	41.4		16.5	93	10.9	100	-6	51.6 ¹⁷⁵	35	17	50	17	22 29	25 73	
9	313	41.5		15.8	107	39.9	100		34.0 ¹⁷⁶	30	29	4 59	25	21 32	29 69	
10	328	41.6		15.0	122	09.0	101	-6	16.4 ¹⁷⁶	20	4 48	5 16	39	18 39	35 62	
11	343	41.7	+15	14.3	136	38.2	102	-5	58.8 ¹⁷⁶	10 N	5 03	5 29	5 51	20 15	45 7 41 56	
12	358	41.8	+15	13.5	151	07.4	102	-5	41.1 ¹⁷⁷	0	5 15	5 40	6 02	20 13	50 7 46 51	
13	13	41.9		12.8	165	36.6	102		23.5 ¹⁷⁶	10 S	26	5 51	13	11 55	51 45	
14	28	42.0		12.0	180	05.9	103	-5	05.8 ¹⁷⁷	20	35	6 02	24	08 61	7 56 40	
15	43	42.1		11.3	194	35.2	103	-4	48.0 ¹⁷⁸	30	44	13	38	05 68	8 02 34	
16	58	42.2		10.6	209	04.6	104		30.3 ¹⁷⁷	35	49	19	45	04 71	06 29	
17	73	42.3	+15	09.8	223	34.0	104	-4	12.5 ¹⁷⁸	40	5 53	6 25	6 54	20 02	76 8 10 25	
18	88	42.4	+15	09.1	238	03.4	104	-3	54.8 ¹⁷⁷	45	5 58	6 33	7 04	19 59	81 8 14 21	
19	103	42.5		08.3	252	32.9	105		37.0 ¹⁷⁸	50	6 03	41	16	57 87	19 15	
20	118	42.6		07.6	267	02.4	105		19.2 ¹⁷⁸	52	05	45	21	56 90	22 12	
21	133	42.7		06.8	281	32.0	106	-3	01.3 ¹⁷⁹	54	07	50	27	54 93	24 10	
22	148	42.8		06.1	296	01.6	106	-2	43.5 ¹⁷⁸	56	10	54	34	53 96	27 7	
23	163	42.9		05.3	310	31.2	106		25.7 ¹⁷⁸	58	12	6 59	42	51 101	30 3	
24	178	43.0	+15	04.6	325	00.8	106	-2	07.9 ¹⁷⁸	60 S	6 15	7 05	7 50	19 49	105 8 34 **	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 2 ^h 42 ^m 3		Mag: -3.8 PMG: 10 ^h 43 ^m		Mag: +1.8 PMG: 13 ^h 37 ^m		Mag: -2.1 PMG: 17 ^h 15 ^m		Mag: +0.4 PMG: 11 ^h 53 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	319	19.3	199	25.7	+20	55.0	155	31.1	+7	56.7
1	334	21.7	214	24.9		54.5	170	32.1		56.1
2	349	24.2	229	24.2		54.0	185	33.1		55.5
3	4	26.7	244	23.4		53.5	200	34.1		54.9
4	19	29.1	259	22.7		53.0	215	35.1		54.3
5	34	31.6	274	21.9	+20	52.5	230	36.1	+7	53.6
6	49	34.0	289	21.2	+20	52.0	245	37.1	+7	53.0
7	64	36.5	304	20.4		51.5	260	38.1		52.4
8	79	39.0	319	19.7		51.0	275	39.1		51.8
9	94	41.4	334	18.9		50.5	290	40.1		51.2
10	109	43.9	349	18.1		50.0	305	41.1		50.5
11	124	46.4	4	17.4	+20	49.5	320	42.1	+7	49.9
12	139	48.8	19	16.6	+20	49.0	335	43.1	+7	49.3
13	154	51.3	34	15.9		48.4	350	44.1		48.7
14	169	53.8	49	15.1		47.9	5	45.1		48.1
15	184	56.2	64	14.4		47.4	20	46.1		47.5
16	199	58.7	79	13.6		46.9	35	47.1		46.8
17	215	01.2	94	12.9	+20	46.4	50	48.1	+7	46.2
18	230	03.6	109	12.1	+20	45.9	65	49.1	+7	45.6
19	245	06.1	124	11.4		45.3	80	50.1		45.0
20	260	08.5	139	10.6		44.8	95	51.1		44.4
21	275	11.0	154	09.9		44.3	110	52.1		43.7
22	290	13.5	169	09.1		43.8	125	53.1		43.1
23	305	15.9	184	08.4		43.2	140	54.1		42.5
24	320	18.4	199	07.6	+20	42.7	155	55.1	+7	41.9
Dif	—		-8		-5		+10		-6	
								+22		-1
									+21	-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 0				Edad: 17 ^d 8 PHE { 4 ^h : 60/7 12 ^h : 60/5 20 ^h : 60/4 R°: 50 ^m													
	hG ☉		Dec		hG ☾		Dif				Civil	Náutico	Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m	h m	m	h m	m	
0	178	43.0	+15	04.6	325	00.8	-2	07.9	60 N	20 02	20 55	22 15	20 35	**		8 39	104	
1	193	43.1		03.8	339	30.5 ¹⁰⁷	-1	50.0 ¹⁷⁹	58	19 52	40	21 49	37	3		39	100	
2	208	43.2		03.1	354	00.2 ¹⁰⁷		32.2 ¹⁷⁸	56	44	28	29	39	6		39	96	
3	223	43.3		02.4	8	30.0 ¹⁰⁸	-1	14.3 ¹⁷⁹	54	37	18	21 12	41	9		39	92	
4	238	43.4		01.6	22	59.7 ¹⁰⁷	-0	56.5 ¹⁷⁸	52	30	09	20 59	42	13		38	90	
5	253	43.5	+15	00.9	37	29.5 ¹⁰⁸	-0	38.7 ¹⁷⁸	50	19 24	20 01	20 47	20 44	15		8 38	87	
6	268	43.6	+15	00.1	51	59.4 ¹⁰⁹	-0	20.9 ¹⁷⁸	45	19 12	19 44	20 24	20 47	20		8 38	81	
7	283	43.7	+14	59.4	66	29.2 ¹⁰⁸	-0	03.1 ¹⁷⁸	40	19 01	30	20 06	49	25		38	75	
8	298	43.8		58.6	80	59.0 ¹⁰⁸	+0	14.7 ¹⁷⁸	35	18 52	19	19 51	51	30		38	71	
9	313	44.0		57.9	95	28.9 ¹⁰⁹		32.5 ¹⁷⁸	30	44	19 10	40	53	33		38	67	
10	328	44.1		57.1	109	58.8 ¹⁰⁹	+0	50.3 ¹⁷⁸	20	31	18 54	21	20 57	39		37	61	
11	343	44.2	+14	56.3	124	28.7 ¹⁰⁹	+1	08.1 ¹⁷⁸	10 N	18 19	18 41	19 06	21 00	44		8 37	55	
12	358	44.3	+14	55.6	138	58.7 ¹¹⁰	+1	25.8 ¹⁷⁷	0	18 08	18 30	18 55	21 03	50		8 37	49	
13	13	44.4		54.8	153	28.6 ¹⁰⁹	+1	43.5 ¹⁷⁷	10 S	17 58	19	45	06	55		36	45	
14	28	44.5		54.1	167	58.6 ¹¹⁰	+2	01.2 ¹⁷⁷	20	47	18 09	35	09	61		36	39	
15	43	44.6		53.3	182	28.5 ¹⁰⁹		18.9 ¹⁷⁷	30	34	17 59	27	13	67		36	32	
16	58	44.7		52.6	196	58.5 ¹¹⁰		36.6 ¹⁷⁷	35	26	53	23	15	71		35	29	
17	73	44.8	+14	51.8	211	28.5 ¹¹⁰	+2	54.2 ¹⁷⁶	40	17 18	17 46	18 18	21 18	75		8 35	25	
18	88	44.9	+14	51.1	225	58.5 ¹¹⁰	+3	11.8 ¹⁷⁶	45	17 08	17 39	18 14	21 20	81		8 35	20	
19	103	45.0		50.3	240	28.5 ¹¹⁰		29.3 ¹⁷⁵	50	16 57	31	09	24	86		34	15	
20	118	45.1		49.6	254	58.5 ¹¹⁰	+3	46.9 ¹⁷⁶	52	51	27	07	26	89		34	12	
21	133	45.2		48.8	269	28.5 ¹¹⁰	+4	04.4 ¹⁷⁵	54	46	23	05	27	93		34	9	
22	148	45.4		48.1	283	58.5 ¹¹⁰		21.8 ¹⁷⁴	56	39	19	03	29	96		34	6	
23	163	45.5		47.3	298	28.5 ¹¹⁰		39.3 ¹⁷⁵	58	32	14	18 01	32	99		33	3	
24	178	45.6	+14	46.5	312	58.5 ¹¹⁰	+4	56.6 ¹⁷³	60 S	16 23	17 09	17 58	21 34	104		8 33	**	
UT	ARIES		VENUS		MARTE		JÚPITER				SATURNO							
	PMG: 2 ^h 38 ^m 3		Mag: -3.8 PMG: 10 ^h 44 ^m		Mag: +1.8 PMG: 13 ^h 35 ^m		Mag: -2.0 PMG: 17 ^h 11 ^m				Mag: +0.4 PMG: 11 ^h 50 ^m							
	hG ♈		hG ♀		hG ♂		hG ♃		Dec		hG ♄		Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	320	18.4	199	07.6	+20	42.7	155	55.1	+7	41.9	101	30.1	-14	10.6	182	09.9	+16	59.4
1	335	20.9	214	06.8		42.2	170	56.2		41.3	116	32.3		10.7	197	12.1		59.3
2	350	23.3	229	06.1		41.7	185	57.2		40.6	131	34.6		10.8	212	14.2		59.2
3	5	25.8	244	05.3		41.1	200	58.2		40.0	146	36.8		10.9	227	16.4		59.1
4	20	28.3	259	04.6		40.6	215	59.2		39.4	161	39.0		11.0	242	18.5		59.0
5	35	30.7	274	03.9	+20	40.1	231	00.2	+7	38.8	176	41.2	-14	11.1	257	20.7	+16	58.9
6	50	33.2	289	03.1	+20	39.5	246	01.2	+7	38.1	191	43.4	-14	11.1	272	22.8	+16	58.8
7	65	35.7	304	02.4		39.0	261	02.2		37.5	206	45.6		11.2	287	24.9		58.7
8	80	38.1	319	01.6		38.5	276	03.2		36.9	221	47.9		11.3	302	27.1		58.6
9	95	40.6	334	00.9		37.9	291	04.2		36.3	236	50.1		11.4	317	29.2		58.6
10	110	43.0	349	00.1		37.4	306	05.2		35.7	251	52.3		11.5	332	31.4		58.5
11	125	45.5	3	59.4	+20	36.9	321	06.2	+7	35.0	266	54.5	-14	11.6	347	33.5	+16	58.4
12	140	48.0	18	58.6	+20	36.3	336	07.2	+7	34.4	281	56.7	-14	11.7	2	35.7	+16	58.3
13	155	50.4	33	57.9		35.8	351	08.2		33.8	296	58.9		11.8	17	37.8		58.2
14	170	52.9	48	57.1		35.2	6	09.2		33.2	312	01.1		11.9	32	39.9		58.1
15	185	55.4	63	56.4		34.7	21	10.2		32.6	327	03.4		11.9	47	42.1		58.0
16	200	57.8	78	55.6		34.2	36	11.2		31.9	342	05.6		12.0	62	44.2		57.9
17	216	00.3	93	54.9	+20	33.6	51	12.2	+7	31.3	357	07.8	-14	12.1	77	46.4	+16	57.8
18	231	02.8	108	54.1	+20	33.1	66	13.2	+7	30.7	12	10.0	-14	12.2	92	48.5	+16	57.7
19	246	05.2	123	53.4		32.5	81	14.2		30.1	27	12.2		12.3	107	50.7		57.6
20	261	07.7	138	52.6		32.0	96	15.2		29.4	42	14.4		12.4	122	52.8		57.5
21	276	10.1	153	51.9		31.4	111	16.2		28.8	57	16.6		12.5	137	54.9		57.5
22	291	12.6	168	51.2		30.9	126	17.2		28.2	72	18.9		12.6	152	57.1		57.4
23	306	15.1	183	50.4		30.3	141	18.2		27.6	87	21.1		12.7	167	59.2		57.3
24	321	17.5	198	49.7	+20	29.8	156	19.2	+7	27.0	102	23.3	-14	12.7	183	01.4	+16	57.2
Dif	—		-7		-5		+10		-6		+22		-1		+21		-1	

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna														
	SD: 15 ^h 8 PMG: 12 ^h 04 ^m 9			Edad: 18 ^d 8 PHE { 4 ^h : 60 ^m 2 12 ^h : 60 ^m 0 20 ^h : 59 ^m 8 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	178	45.6	+14	46.5	312	58.5	+4	56.6	60 N	1 55	3 16	4 09	20 34	0	10 23	105											
1	193	45.7		45.8	327	28.5 ¹¹⁰	+5	14.0 ¹⁷⁴	58	2 22	30	18	40	4	19 100												
2	208	45.8		45.0	341	58.5 ¹¹⁰		31.3 ¹⁷³	56	42	42	27	45	9	15 96												
3	223	45.9		44.3	356	28.5 ¹¹⁰	+5	48.5 ¹⁷²	54	2 58	3 53	34	50	12	11 92												
4	238	46.0		43.5	10	58.5 ¹¹⁰	+6	05.8 ¹⁷³	52	3 12	4 02	40	55	14	08 89												
5	253	46.1	+14	42.7	25	28.5 ¹¹⁰	+6	22.9 ¹⁷¹	50	3 23	4 10	4 46	20 59	17	10 05	86											
6	268	46.2	+14	42.0	39	58.5 ¹¹⁰	+6	40.0 ¹⁷¹	45	3 47	4 27	4 59	21 07	23	9 59	80											
7	283	46.3		41.2	54	28.5 ¹¹⁰	+6	57.1 ¹⁷¹	40	4 05	40	5 09	14	28	53	75											
8	298	46.5		40.5	68	58.5 ¹¹⁰	+7	14.1 ¹⁷⁰	35	19	4 51	18	21	31	49	71											
9	313	46.6		39.7	83	28.4 ¹⁰⁹		31.1 ¹⁷⁰	30	31	5 01	26	26	35	45	67											
10	328	46.7		38.9	97	58.4 ¹¹⁰	+7	48.0 ¹⁶⁹	20	4 49	16	39	36	41	38	61											
11	343	46.8	+14	38.2	112	28.3 ¹⁰⁹	+8	04.9 ¹⁶⁹	10 N	5 04	5 29	5 51	21 44	47	9 32	55											
12	358	46.9	+14	37.4	126	58.2 ¹⁰⁹	+8	21.6 ¹⁶⁷	0	5 15	5 40	6 01	21 53	51	9 26	51											
13	13	47.0		36.7	141	28.1 ¹⁰⁹		38.4 ¹⁶⁸	10 S	25	5 50	12	22	01	56	21 45											
14	28	47.1		35.9	155	58.0 ¹⁰⁹	+8	55.0 ¹⁶⁶	20	34	6 00	23	10	61	15	40											
15	43	47.2		35.1	170	27.8 ¹⁰⁸	+9	11.7 ¹⁶⁷	30	43	11	36	20	67	08	34											
16	58	47.4		34.4	184	57.7 ¹⁰⁹		28.2 ¹⁶⁵	35	47	17	43	26	71	04	30											
17	73	47.5	+14	33.6	199	27.5 ¹⁰⁸	+9	44.7 ¹⁶⁵	40	5 51	6 23	6 51	22 33	74	9 00	26											
18	88	47.6	+14	32.8	213	57.3 ¹⁰⁸	+10	01.1 ¹⁶⁴	45	5 55	6 30	7 01	22 41	79	8 55	21											
19	103	47.7		32.1	228	27.1 ¹⁰⁸		17.4 ¹⁶³	50	6 00	38	12	50	86	49	16											
20	118	47.8		31.3	242	56.8 ¹⁰⁷		33.7 ¹⁶³	52	02	42	17	22	55	89	46 13											
21	133	47.9		30.5	257	26.6 ¹⁰⁸	+10	49.9 ¹⁶²	54	04	46	23	23	00	92	43 10											
22	148	48.0		29.8	271	56.3 ¹⁰⁷	+11	06.0 ¹⁶¹	56	06	50	30	05	96	40	7											
23	163	48.2		29.0	286	26.0 ¹⁰⁷		22.1 ¹⁶¹	58	08	6 55	37	11	101	36	3											
24	178	48.3	+14	28.2	300	55.6 ¹⁰⁶	+11	38.0 ¹⁵⁹	60 S	6 11	7 00	7 45	23 18	107	8 32	**											
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO														
	PMG: 2 ^h 34 ^m 4			Mag: -3.8 PMG: 10 ^h 45 ^m			Mag: +1.8 PMG: 13 ^h 34 ^m			Mag: -2.0 PMG: 17 ^h 08 ^m			Mag: +0.4 PMG: 11 ^h 46 ^m														
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec													
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'											
0	321	17.5	198	49.7	+20	29.8	156	19.2	+7	27.0	102	23.3	-14	12.7	183	01.4	+16	57.2									
1	336	20.0	213	48.9		29.2	171	20.2		26.3	117	25.5		12.8	198	03.5		57.1									
2	351	22.5	228	48.2		28.7	186	21.2		25.7	132	27.7		12.9	213	05.7		57.0									
3	6	24.9	243	47.4		28.1	201	22.2		25.1	147	29.9		13.0	228	07.8		56.9									
4	21	27.4	258	46.7		27.6	216	23.2		24.5	162	32.1		13.1	243	09.9		56.8									
5	36	29.9	273	46.0	+20	27.0	231	24.2	+7	23.8	177	34.3	-14	13.2	258	12.1	+16	56.7									
6	51	32.3	288	45.2	+20	26.5	246	25.2	+7	23.2	192	36.5	-14	13.3	273	14.2	+16	56.6									
7	66	34.8	303	44.5		25.9	261	26.2		22.6	207	38.8		13.4	288	16.4		56.5									
8	81	37.3	318	43.7		25.3	276	27.2		22.0	222	41.0		13.5	303	18.5		56.4									
9	96	39.7	333	43.0		24.8	291	28.2		21.3	237	43.2		13.6	318	20.7		56.4									
10	111	42.2	348	42.3		24.2	306	29.2		20.7	252	45.4		13.6	333	22.8		56.3									
11	126	44.6	3	41.5	+20	23.7	321	30.2	+7	20.1	267	47.6	-14	13.7	348	25.0	+16	56.2									
12	141	47.1	18	40.8	+20	23.1	336	31.2	+7	19.5	282	49.8	-14	13.8	3	27.1	+16	56.1									
13	156	49.6	33	40.0		22.5	351	32.2		18.9	297	52.0		13.9	18	29.2		56.0									
14	171	52.0	48	39.3		22.0	6	33.2		18.2	312	54.2		14.0	33	31.4		55.9									
15	186	54.5	63	38.6		21.4	21	34.2		17.6	327	56.4		14.1	48	33.5		55.8									
16	201	57.0	78	37.8		20.8	36	35.2		17.0	342	58.6		14.2	63	35.7		55.7									
17	216	59.4	93	37.1	+20	20.3	51	36.2	+7	16.4	358	00.8	-14	14.3	78	37.8	+16	55.6									
18	232	01.9	108	36.3	+20	19.7	66	37.2	+7	15.7	13	03.0	-14	14.4	93	40.0	+16	55.5									
19	247	04.4	123	35.6		19.1	81	38.2		15.1	28	05.3		14.5	108	42.1		55.4									
20	262	06.8	138	34.9		18.6	96	39.2		14.5	43	07.5		14.6	123	44.2		55.3									
21	277	09.3	153	34.1		18.0	111	40.2		13.9	58	09.7		14.6	138	46.4		55.3									
22	292	11.7	168	33.4		17.4	126	41.2		13.2	73	11.9		14.7	153	48.5		55.2									
23	307	14.2	183	32.7		16.8	141	42.2		12.6	88	14.1		14.8	168	50.7		55.1									
24	322	16.7	198	31.9	+20	16.3	156	43.2	+7	12.0	103	16.3	-14	14.9	183	52.8	+16	55.0									
Dif	—			-7			-6			+10			-6			+22			-1			+21			-1		

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 15'8 PMG: 12 ^h 04 ^m 7			Edad: 19 ^d 8 PHE { SD: 16'2 PMG: 4 ^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	h m	m
0	178	48.3	+14	28.2	300	55.6	+11	38.0	60 N	19 56	20 48	22 05	20 34	1	12 08 107
1	193	48.4		27.5	315	25.2 ¹⁰⁶	+11	53.9 ¹⁵⁹	58	47	35	21 41	44	7	11 59 101
2	208	48.5		26.7	329	54.8 ¹⁰⁶	+12	09.7 ¹⁵⁸	56	40	23	22	20 54	11	51 96
3	223	48.6		25.9	344	24.4 ¹⁰⁶		25.5 ¹⁵⁸	54	33	13	21 07	21 02	15	43 93
4	238	48.7		25.2	358	53.9 ¹⁰⁵		41.1 ¹⁵⁶	52	26	20 04	20 54	09	19	37 89
5	253	48.9	+14	24.4	13	23.4 ¹⁰⁵	+12	56.7 ¹⁵⁶	50	19 21	19 57	20 42	21 16	21	11 31 86
6	268	49.0	+14	23.6	27	52.9 ¹⁰⁵	+13	12.2 ¹⁵⁵	45	19 08	19 40	20 20	21 30	27	11 19 79
7	283	49.1		22.9	42	22.3 ¹⁰⁴		27.6 ¹⁵⁴	40	18 58	27	20 03	42	32	08 75
8	298	49.2		22.1	56	51.7 ¹⁰⁴		42.9 ¹⁵³	35	50	17	19 49	21 52	36	11 00 70
9	313	49.3		21.3	71	21.0 ¹⁰³	+13	58.1 ¹⁵²	30	42	19 07	37	22 01	39	10 52 67
10	328	49.4		20.5	85	50.3 ¹⁰³	+14	13.2 ¹⁵¹	20	30	18 52	19	17	44	39 61
11	343	49.6	+14	19.8	100	19.6 ¹⁰³	+14	28.2 ¹⁵⁰	10 N	18 18	18 40	19 06	22 31	48	10 27 57
12	358	49.7	+14	19.0	114	48.9 ¹⁰³	+14	43.2 ¹⁵⁰	0	18 08	18 29	18 54	22 44	52	10 17 51
13	13	49.8		18.2	129	18.1 ¹⁰²	+14	58.0 ¹⁴⁸	10 S	17 58	19	45	22 57	57	10 06 47
14	28	49.9		17.5	143	47.2 ¹⁰¹	+15	12.8 ¹⁴⁸	20	47	10	36	23 11	61	9 55 42
15	43	50.0		16.7	158	16.3 ¹⁰¹		27.4 ¹⁴⁶	30	35	18 00	28	27	67	42 36
16	58	50.2		15.9	172	45.4 ¹⁰¹		42.0 ¹⁴⁶	35	28	17 54	24	37	70	34 34
17	73	50.3	+14	15.1	187	14.4 ¹⁰⁰	+15	56.4 ¹⁴⁴	40	17 20	17 48	18 20	23 47	75	9 26 29
18	88	50.4	+14	14.4	201	43.4 ¹⁰⁰	+16	10.8 ¹⁴⁴	45	17 11	17 41	18 16	***	***	9 16 25
19	103	50.5		13.6	216	12.4 ¹⁰⁰		25.0 ¹⁴²	50	17 00	34	12	***	***	9 05 19
20	118	50.6		12.8	230	41.3 ⁹⁹		39.2 ¹⁴²	52	16 55	30	10	***	***	8 59 16
21	133	50.7		12.0	245	10.1 ⁹⁸	+16	53.2 ¹⁴⁰	54	49	26	08	***	***	53 13
22	148	50.9		11.3	259	38.9 ⁹⁸	+17	07.1 ¹³⁹	56	43	22	06	***	***	47 9
23	163	51.0		10.5	274	07.7 ⁹⁸		20.9 ¹³⁸	58	36	18	04	***	***	39 5
24	178	51.1	+14	09.7	288	36.4 ⁹⁷	+17	34.7 ¹³⁸	60 S	16 28	17 13	18 02	***	***	8 31 0

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 2 ^h 30 ^m 5		Mag: -3.8 PMG: 10 ^h 46 ^m		Mag: +1.8 PMG: 13 ^h 32 ^m		Mag: -2.0 PMG: 17 ^h 04 ^m		Mag: +0.4 PMG: 11 ^h 43 ^m									
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec									
h	°	'	°	'	°	'	°	'	°	'								
0	322	16.7	198	31.9	+20	16.3	156	43.2	+7	12.0	103	16.3	-14	14.9	183	52.8	+16	55.0
1	337	19.1	213	31.2		15.7	171	44.2		11.4	118	18.5		15.0	198	55.0		54.9
2	352	21.6	228	30.5		15.1	186	45.2		10.7	133	20.7		15.1	213	57.1		54.8
3	7	24.1	243	29.7		14.5	201	46.2		10.1	148	22.9		15.2	228	59.3		54.7
4	22	26.5	258	29.0		13.9	216	47.2		09.5	163	25.1		15.3	244	01.4		54.6
5	37	29.0	273	28.3	+20	13.4	231	48.2	+7	08.9	178	27.3	-14	15.4	259	03.5	+16	54.5
6	52	31.5	288	27.5	+20	12.8	246	49.2	+7	08.2	193	29.5	-14	15.5	274	05.7	+16	54.4
7	67	33.9	303	26.8		12.2	261	50.2		07.6	208	31.7		15.6	289	07.8		54.3
8	82	36.4	318	26.0		11.6	276	51.2		07.0	223	33.9		15.7	304	10.0		54.2
9	97	38.9	333	25.3		11.0	291	52.2		06.4	238	36.1		15.7	319	12.1		54.2
10	112	41.3	348	24.6		10.4	306	53.2		05.7	253	38.3		15.8	334	14.3		54.1
11	127	43.8	3	23.9	+20	09.9	321	54.2	+7	05.1	268	40.5	-14	15.9	349	16.4	+16	54.0
12	142	46.2	18	23.1	+20	09.3	336	55.2	+7	04.5	283	42.7	-14	16.0	4	18.5	+16	53.9
13	157	48.7	33	22.4		08.7	351	56.3		03.9	298	44.9		16.1	19	20.7		53.8
14	172	51.2	48	21.7		08.1	6	57.3		03.2	313	47.1		16.2	34	22.8		53.7
15	187	53.6	63	20.9		07.5	21	58.3		02.6	328	49.3		16.3	49	25.0		53.6
16	202	56.1	78	20.2		06.9	36	59.3		02.0	343	51.5		16.4	64	27.1		53.5
17	217	58.6	93	19.5	+20	06.3	52	00.3	+7	01.3	358	53.8	-14	16.5	79	29.3	+16	53.4
18	233	01.0	108	18.7	+20	05.7	67	01.3	+7	00.7	13	56.0	-14	16.6	94	31.4	+16	53.3
19	248	03.5	123	18.0		05.1	82	02.3	+7	00.1	28	58.2		16.7	109	33.6		53.2
20	263	06.0	138	17.3		04.5	97	03.3	+6	59.5	44	00.4		16.8	124	35.7		53.1
21	278	08.4	153	16.6		03.9	112	04.3		58.8	59	02.6		16.9	139	37.8		53.1
22	293	10.9	168	15.8		03.3	127	05.3		58.2	74	04.8		16.9	154	40.0		53.0
23	308	13.4	183	15.1		02.7	142	06.3		57.6	89	07.0		17.0	169	42.1		52.9
24	323	15.8	198	14.4	+20	02.1	157	07.3	+6	57.0	104	09.2	-14	17.1	184	44.3	+16	52.8
Dif	—		-7		-6		+10		-6		+22		-1		+21		-1	

UT	SOL				☾ LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15 ^h 8 PMG: 12 ^h 04 ^m 5				Edad: 20 ^d 8 PHE { 4 ^h : 58 ^m 8 12 ^h : 58 ^m 5 20 ^h : 58 ^m 3 PMG: 4 ^h 56 ^m R ^o : 53 ^m												
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	178	51.1	+14	09.7	288	36.4	+17	34.7	60 N	2 05	3 22	4 14	20 35	4	13 55	109	
1	193	51.2		08.9	303	05.1	97	+17 48.3 ¹³⁶	58	29	35	23	20 51	13	40	101	
2	208	51.4		08.2	317	33.7	96	+18 01.8 ¹³⁵	56	2 48	47	30	21 05	18	27	95	
3	223	51.5		07.4	332	02.3	96	15.1 ¹³³	54	3 03	3 57	37	17 22		16	90	
4	238	51.6		06.6	346	30.8	95	28.4 ¹³³	52	16	4 05	44	28 25		13	06	86
5	253	51.7	+14	05.8	0	59.3	95	+18 41.5 ¹³¹	50	3 27	4 13	4 49	21 37	29	12	57	83
6	268	51.8	+14	05.0	15	27.7	94	+18 54.6 ¹³¹	45	3 50	4 29	5 01	21 57	34	12	38	78
7	283	52.0		04.3	29	56.1	94	+19 07.5 ¹²⁹	40	4 07	42	11	22 14	38	23	73	
8	298	52.1		03.5	44	24.4	93	20.3 ¹²⁸	35	21	4 53	20	28 41		12	10	70
9	313	52.2		02.7	58	52.7	93	33.0 ¹²⁷	30	32	5 02	27	22 40	44	11	59	67
10	328	52.3		01.9	73	20.9	92	45.5 ¹²⁵	20	4 50	17	40	23 01	48	40	62	
11	343	52.5	+14	01.1	87	49.0	91	+19 57.9 ¹²⁴	10 N	5 04	5 29	5 51	23 19	52	11	24	58
12	358	52.6	+14	00.4	102	17.2	92	+20 10.2 ¹²³	0	5 15	5 40	6 01	23 36	55	11	08	54
13	13	52.7	+13	59.6	116	45.2	90	22.4 ¹²²	10 S	25	50	11	23 54	58	10	53	50
14	28	52.8		58.8	131	13.2	90	34.5 ¹²¹	20	33	5 59	22	** ** *		37	46	
15	43	52.9		58.0	145	41.2	90	46.4 ¹¹⁹	30	41	6 09	34	** ** *		18	42	
16	58	53.1		57.2	160	09.1	89	+20 58.2 ¹¹⁸	35	45	15	41	** ** *		10	08	38
17	73	53.2	+13	56.5	174	37.0	89	+21 09.9 ¹¹⁷	40	5 49	6 21	6 49	** ** *		9	55	35
18	88	53.3	+13	55.7	189	04.8	88	+21 21.4 ¹¹⁵	45	5 53	6 27	6 58	0 00	79	9	41	30
19	103	53.4		54.9	203	32.5	87	32.8 ¹¹⁴	50	57	35	7 08	16 85		24	24	24
20	118	53.6		54.1	218	00.2	87	44.1 ¹¹³	52	5 58	38	13	24 88		15	22	
21	133	53.7		53.3	232	27.9	87	+21 55.2 ¹¹¹	54	6 00	42	19	32 92		9	06	18
22	148	53.8		52.5	246	55.5	86	+22 06.3 ¹¹¹	56	02	46	25	41 97		8	56	14
23	163	53.9		51.7	261	23.0	85	17.1 ¹⁰⁸	58	04	50	32	0 52	102	44	9	
24	178	54.1	+13	51.0	275	50.5	85	+22 27.9 ¹⁰⁸	60 S	6 06	6 55	7 40	1 05	109	8	31	2

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 2 ^h 26 ^m 5		Mag: -3.8 PMG: 10 ^h 48 ^m		Mag: +1.8 PMG: 13 ^h 31 ^m		Mag: -2.0 PMG: 17 ^h 01 ^m		Mag: +0.4 PMG: 11 ^h 39 ^m	
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄	
h	°	'	°	'	°	'	°	'	°	'
0	323	15.8	198	14.4	+20	02.1	157	07.3	+6	57.0
1	338	18.3	213	13.6		01.5	172	08.3		56.3
2	353	20.7	228	12.9		00.9	187	09.3		55.7
3	8	23.2	243	12.2	+20	00.3	202	10.3		55.1
4	23	25.7	258	11.5	+19	59.7	217	11.3		54.5
5	38	28.1	273	10.7	+19	59.1	232	12.3	+6	53.8
6	53	30.6	288	10.0	+19	58.5	247	13.3	+6	53.2
7	68	33.1	303	09.3		57.9	262	14.3		52.6
8	83	35.5	318	08.6		57.3	277	15.3		51.9
9	98	38.0	333	07.8		56.7	292	16.3		51.3
10	113	40.5	348	07.1		56.1	307	17.3		50.7
11	128	42.9	3	06.4	+19	55.5	322	18.3	+6	50.1
12	143	45.4	18	05.7	+19	54.9	337	19.3	+6	49.4
13	158	47.8	33	04.9		54.3	352	20.3		48.8
14	173	50.3	48	04.2		53.6	7	21.3		48.2
15	188	52.8	63	03.5		53.0	22	22.3		47.5
16	203	55.2	78	02.8		52.4	37	23.3		46.9
17	218	57.7	93	02.0	+19	51.8	52	24.3	+6	46.3
18	234	00.2	108	01.3	+19	51.2	67	25.3	+6	45.7
19	249	02.6	123	00.6		50.6	82	26.3		45.0
20	264	05.1	137	59.9		49.9	97	27.3		44.4
21	279	07.6	152	59.2		49.3	112	28.3		43.8
22	294	10.0	167	58.4		48.7	127	29.3		43.1
23	309	12.5	182	57.7		48.1	142	30.3		42.5
24	324	15.0	197	57.0	+19	47.4	157	31.3	+6	41.9
Dif	—		-7		-6		+10		-6	

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UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15°8			Edad: 21 ^d 8 PHE { 4 ^h : 58'0 12 ^h : 57'8 20 ^h : 57'5										
	PMG: 12 ^h 04 ^m 3			SD: 15°8 PMG: 5 ^h 49 ^m R°: 56 ^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	178	54.1	+13 51.0	275	50.5	+22 27.9	85	60 N	19 51	20 41	21 55	14	15 44	104
1	193	54.2	50.2	290	18.0	38.5	106	58	42	29	33	21	21 04	93
2	208	54.3	49.4	304	45.3	48.9	104	56	35	18	15	23	15 02	87
3	223	54.5	48.6	319	12.7	59.2	103	54	28	08	21 01	39	14 46	83
4	238	54.6	47.8	333	40.0	09.4	102	52	22	20 00	20 48	21 53	32	80
5	253	54.7	+13 47.0	348	07.2	19.5	101	50	19 17	19 53	20 38	22 06	14 20	78
6	268	54.8	+13 46.2	2	34.4	29.4	99	45	19 05	19 37	20 16	22 31	13 56	72
7	283	55.0	45.4	17	01.5	39.1	97	40	18 56	25	19 59	22 52	36	70
8	298	55.1	44.7	31	28.6	48.7	96	35	48	14	46	23 09	20	67
9	313	55.2	43.9	45	55.7	58.2	95	30	40	19 05	35	24	13 06	65
10	328	55.3	43.1	60	22.7	07.5	93	20	28	18 51	18	23 49	12 42	61
11	343	55.5	+13 42.3	74	49.6	16.7	92	10 N	18 18	18 39	19 04	** ** *	12 22	58
12	358	55.6	+13 41.5	89	16.5	25.7	90	0	18 08	18 29	18 54	** ** *	12 02	56
13	13	55.7	40.7	103	43.4	34.6	89	10 S	17 58	19	44	** ** *	11 43	54
14	28	55.9	39.9	118	10.2	43.3	87	20	48	10	36	0 12	23	50
15	43	56.0	39.1	132	37.0	51.9	86	30	36	18 01	29	34	11 00	46
16	58	56.1	38.3	147	03.7	00.3	84	35	29	17 55	25	0 47	10 46	44
17	73	56.2	+13 37.5	161	30.3	08.6	83	40	17 22	17 50	18 22	1 02	10 30	42
18	88	56.4	+13 36.7	175	57.0	16.7	81	45	17 13	17 44	18 18	1 19	10 11	39
19	103	56.5	36.0	190	23.6	24.7	80	50	17 03	36	14	41	9 48	33
20	118	56.6	35.2	204	50.1	32.5	78	52	16 58	33	13	1 52	37	30
21	133	56.8	34.4	219	16.6	40.2	77	54	52	30	11	2 04	24	28
22	148	56.9	33.6	233	43.1	47.7	75	56	47	26	10	18	9 10	23
23	163	57.0	32.8	248	09.5	55.0	73	58	40	22	08	34	8 53	17
24	178	57.2	+13 32.0	262	35.9	02.2	72	60 S	16 32	17 17	18 06	2 54	8 33	6
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 2 ^h 22 ^m 6		Mag: -3.8 PMG: 10 ^h 49 ^m		Mag: +1.8 PMG: 13 ^h 29 ^m		Mag: -2.0 PMG: 16 ^h 57 ^m		Mag: +0.4 PMG: 11 ^h 36 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	324	15.0	197 57.0	+19 47.4	157 31.3	+6 41.9	105 01.9	-14 19.4	185 35.7	+16 50.6				
1	339	17.4	212 56.3	46.8	172 32.3	41.3	120 04.1	19.5	200 37.9	50.5				
2	354	19.9	227 55.6	46.2	187 33.3	40.6	135 06.3	19.6	215 40.0	50.4				
3	9	22.3	242 54.8	45.6	202 34.3	40.0	150 08.5	19.7	230 42.2	50.3				
4	24	24.8	257 54.1	44.9	217 35.3	39.4	165 10.7	19.8	245 44.3	50.2				
5	39	27.3	272 53.4	+19 44.3	232 36.3	+6 38.7	180 12.9	-14 19.9	260 46.5	+16 50.1				
6	54	29.7	287 52.7	+19 43.7	247 37.3	+6 38.1	195 15.0	-14 20.0	275 48.6	+16 50.0				
7	69	32.2	302 52.0	43.1	262 38.3	37.5	210 17.2	20.1	290 50.7	49.9				
8	84	34.7	317 51.3	42.4	277 39.4	36.9	225 19.4	20.1	305 52.9	49.8				
9	99	37.1	332 50.5	41.8	292 40.4	36.2	240 21.6	20.2	320 55.0	49.7				
10	114	39.6	347 49.8	41.2	307 41.4	35.6	255 23.8	20.3	335 57.2	49.7				
11	129	42.1	2 49.1	+19 40.5	322 42.4	+6 35.0	270 26.0	-14 20.4	350 59.3	+16 49.6				
12	144	44.5	17 48.4	+19 39.9	337 43.4	+6 34.3	285 28.2	-14 20.5	6 01.5	+16 49.5				
13	159	47.0	32 47.7	39.3	352 44.4	33.7	300 30.4	20.6	21 03.6	49.4				
14	174	49.5	47 47.0	38.6	7 45.4	33.1	315 32.6	20.7	36 05.8	49.3				
15	189	51.9	62 46.3	38.0	22 46.4	32.4	330 34.8	20.8	51 07.9	49.2				
16	204	54.4	77 45.5	37.3	37 47.4	31.8	345 37.0	20.9	66 10.1	49.1				
17	219	56.8	92 44.8	+19 36.7	52 48.4	+6 31.2	0 39.2	-14 21.0	81 12.2	+16 49.0				
18	234	59.3	107 44.1	+19 36.1	67 49.4	+6 30.6	15 41.3	-14 21.1	96 14.3	+16 48.9				
19	250	01.8	122 43.4	35.4	82 50.4	29.9	30 43.5	21.2	111 16.5	48.8				
20	265	04.2	137 42.7	34.8	97 51.4	29.3	45 45.7	21.3	126 18.6	48.7				
21	280	06.7	152 42.0	34.1	112 52.4	28.7	60 47.9	21.4	141 20.8	48.6				
22	295	09.2	167 41.3	33.5	127 53.4	28.0	75 50.1	21.5	156 22.9	48.6				
23	310	11.6	182 40.6	32.8	142 54.4	27.4	90 52.3	21.6	171 25.1	48.5				
24	325	14.1	197 39.8	+19 32.2	157 55.4	+6 26.8	105 54.5	-14 21.7	186 27.2	+16 48.4				
Dif	—		-7	-6	+10	-6	+22	-1	+21	-1				

UT	SOL			 LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8			Edad: 22 ^d 8	PHE { 4 ^h : 57/3 12 ^h : 57/1 20 ^h : 56/8	SD: 15 ^h 6		R°: 56 ^m								
	PMG: 12 ^h 04 ^m 1					PMG: 6 ^h 45 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m
0	178	57.2	+13	32.0	262	35.9	+26	02.2	60 N	2 14	3 28	4 18	20 53	39	17 28	80
1	193	57.3		31.2	277	02.3	74	09.3	58		36	40	21 27	46	16 54	73
2	208	57.4		30.4	291	28.6	73	16.2	56	2 54	3 51	34	21 53	48		29 70
3	223	57.6		29.6	305	54.9	73	22.9	54	3 08	4 01	41	22 13	50	16 09	67
4	238	57.7		28.8	320	21.2	73	29.4	52		21	09	47	30 51	15 52	68
5	253	57.8	+13	28.0	334	47.4	72	+26 35.9	50	3 31	4 16	4 52	22 45	51	15 38	65
6	268	58.0	+13	27.2	349	13.6	72	+26 42.1	45	3 53	4 32	5 04	23 14	53	15 08	64
7	283	58.1		26.4	3	39.8	72	48.2	40	4 09		44		37 54	14 46	62
8	298	58.2		25.6	18	05.9	71	54.1	35		23	4 55	21	23 57	54	27 61
9	313	58.4		24.8	32	32.0	71	+26 59.9	30		34	5 03	28	*** **	14 11	60
10	328	58.5		24.0	46	58.1	71	+27 05.5	20	4 51		18	40	*** **	13 43	60
11	343	58.6	+13	23.2	61	24.2	71	+27 10.9	10 N	5 04	5 29	5 51	0 11	54	13 20	58
12	358	58.8	+13	22.4	75	50.2	70	+27 16.2	0	5 15	5 39	6 01	0 31	57	12 58	57
13	13	58.9		21.6	90	16.3	71	21.3	10 S		24	49	10	0 52	58	37 55
14	28	59.0		20.8	104	42.3	70	26.3	20		32	5 58	20	1 14	61	12 13 54
15	43	59.2		20.0	119	08.2	69	31.1	30		39	6 07	32	40 63	11 46	53
16	58	59.3		19.2	133	34.2	70	35.7	35		43	12	38	1 56	64	30 52
17	73	59.4	+13	18.4	148	00.2	70	+27 40.2	40	5 46	6 18	6 46	2 13	67	11 12	50
18	88	59.6	+13	17.6	162	26.1	69	+27 44.5	45	5 50	6 24	6 54	2 35	69	10 50	48
19	103	59.7		16.8	176	52.0	69	48.6	50		53	31	7 05	3 03	71	21 45
20	118	59.8		16.0	191	17.9	69	52.6	52		55	34	10	16 74	10 07	44
21	134	00.0		15.2	205	43.8	69	+27 56.4	54		56	38	15	32 76	9 52	41
22	149	00.1		14.4	220	09.7	69	+28 00.1	56		58	41	21	3 50	80	33 38
23	164	00.2		13.6	234	35.6	69	03.5	58	5 59	46	27	27	4 13	85	9 10 32
24	179	00.4	+13	12.8	249	01.5	69	+28 06.9	60 S	6 01	6 50	7 34	4 43	96	8 39	22

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 2 ^h 18 ^m 7		Mag: -3.8 PMG: 10 ^h 50 ^m		Mag: +1.8 PMG: 13 ^h 27 ^m		Mag: -2.0 PMG: 16 ^h 54 ^m		Mag: +0.4 PMG: 11 ^h 33 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	325	14.1	197	39.8	+19	32.2	157	55.4	+6	26.8
1	340	16.6	212	39.1		31.5	172	56.4		26.1
2	355	19.0	227	38.4		30.9	187	57.4		25.5
3	10	21.5	242	37.7		30.2	202	58.4		24.9
4	25	24.0	257	37.0		29.6	217	59.4		24.2
5	40	26.4	272	36.3	+19	28.9	233	00.4	+6	23.6
6	55	28.9	287	35.6	+19	28.3	248	01.4	+6	23.0
7	70	31.3	302	34.9		27.6	263	02.4		22.3
8	85	33.8	317	34.2		27.0	278	03.4		21.7
9	100	36.3	332	33.5		26.3	293	04.4		21.1
10	115	38.7	347	32.8		25.7	308	05.4		20.5
11	130	41.2	2	32.0	+19	25.0	323	06.4	+6	19.8
12	145	43.7	17	31.3	+19	24.3	338	07.4	+6	19.2
13	160	46.1	32	30.6		23.7	353	08.4		18.6
14	175	48.6	47	29.9		23.0	8	09.4		17.9
15	190	51.1	62	29.2		22.4	23	10.4		17.3
16	205	53.5	77	28.5		21.7	38	11.4		16.7
17	220	56.0	92	27.8	+19	21.0	53	12.4	+6	16.0
18	235	58.4	107	27.1	+19	20.4	68	13.4	+6	15.4
19	251	00.9	122	26.4		19.7	83	14.4		14.8
20	266	03.4	137	25.7		19.0	98	15.4		14.1
21	281	05.8	152	25.0		18.4	113	16.4		13.5
22	296	08.3	167	24.3		17.7	128	17.5		12.9
23	311	10.8	182	23.6		17.0	143	18.5		12.2
24	326	13.2	197	22.9	+19	16.4	158	19.5	+6	11.6
Dif	—		-7		-7		+10		-6	

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15'8 PMG: 12 ^h 03 ^m 9			Edad: 23 ^d 8 PHE { 4 ^h : 56'6 12 ^h : 56'4 20 ^h : 56'2 SD: 15'4 PMG: 7 ^h 41 ^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	179	00.4	+13	12.8	249	01.5	+28	06.9	60 N	19 45	20 35	21 46	21 32 78	18 48 37
1	194	00.5		12.0	263	27.4		10.0	58	37	23	25	22 13 71	18 07 44
2	209	00.6		11.2	277	53.2		13.0	56	30	12	21 09	22 41 68	17 39 46
3	224	00.8		10.4	292	19.1		15.8	54	24	20 03	20 55	23 03 66	17 17 48
4	239	00.9		09.6	306	45.0		18.5	52	18	19 56	43	21 65	16 59 49
5	254	01.1	+13	08.8	321	10.9	+28	21.0	50	19 13	19 48	20 33	23 36 64	16 43 51
6	269	01.2	+13	08.0	335	36.8	+28	23.3	45	19 02	19 34	20 12	** ** *	16 12 52
7	284	01.3		07.2	350	02.7		25.5	40	18 53	22	19 56	** ** *	15 48 53
8	299	01.5		06.3	4	28.6		27.4	35	45	12	43	** ** *	28 54
9	314	01.6		05.5	18	54.5		29.3	30	38	19 03	33	0 13 55	15 11 54
10	329	01.8		04.7	33	20.4		30.9	20	27	18 49	16	0 41 56	14 43 54
11	344	01.9	+13	03.9	47	46.3	+28	32.5	10 N	18 17	18 38	19 03	1 05 56	14 18 55
12	359	02.0	+13	03.1	62	12.3	+28	33.8	0	18 07	18 28	18 53	1 28 56	13 55 56
13	14	02.2		02.3	76	38.2		35.0	10 S	17 58	19	44	1 50 57	32 56
14	29	02.3		01.5	91	04.2		36.0	20	48	11	37	2 15 57	13 07 57
15	44	02.4	+13	00.7	105	30.2		36.8	30	37	18 02	30	2 43 57	12 39 57
16	59	02.6	+12	59.9	119	56.3		37.5	35	31	17 57	27	3 00 57	22 57
17	74	02.7	+12	59.1	134	22.3	+28	38.0	40	17 24	17 52	18 23	3 20 57	12 02 57
18	89	02.9	+12	58.3	148	48.4	+28	38.4	45	17 15	17 46	18 20	3 44 57	11 38 57
19	104	03.0		57.4	163	14.5		38.6	50	06	39	17	4 14 59	11 06 59
20	119	03.1		56.6	177	40.6		38.6	52	17 01	36	16	30 58	10 51 58
21	134	03.3		55.8	192	06.8		38.5	54	16 56	33	14	4 48 58	33 58
22	149	03.4		55.0	206	33.0		38.2	56	50	29	13	5 10 58	10 11 59
23	164	03.6		54.2	220	59.2		37.8	58	44	25	12	5 38 58	9 42 60
24	179	03.7	+12	53.4	235	25.5	+28	37.2	60 S	16 37	17 21	18 10	6 19 58	9 01 60

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 2 ^h 14 ^m 7		Mag: -3.8 PMG: 10 ^h 51 ^m		Mag: +1.8 PMG: 13 ^h 26 ^m		Mag: -2.0 PMG: 16 ^h 50 ^m		Mag: +0.4 PMG: 11 ^h 29 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	326	13.2	197	22.9	+19	16.4	106	46.9	-14	24.0
1	341	15.7	212	22.2		15.7	121	49.1		24.1
2	356	18.2	227	21.5		15.0	136	51.3		24.2
3	11	20.6	242	20.8		14.3	151	53.5		24.3
4	26	23.1	257	20.1		13.7	166	55.7		24.4
5	41	25.6	272	19.4	+19	13.0	181	57.8	-14	24.5
6	56	28.0	287	18.7	+19	12.3	197	00.0	-14	24.6
7	71	30.5	302	18.0		11.6	212	02.2		24.7
8	86	32.9	317	17.3		11.0	227	04.4		24.8
9	101	35.4	332	16.6		10.3	242	06.6		24.9
10	116	37.9	347	15.9		09.6	257	08.7		25.0
11	131	40.3	2	15.2	+19	08.9	272	10.9	-14	25.1
12	146	42.8	17	14.5	+19	08.2	287	13.1	-14	25.2
13	161	45.3	32	13.8		07.6	302	15.3		25.3
14	176	47.7	47	13.1		06.9	317	17.5		25.4
15	191	50.2	62	12.4		06.2	332	19.6		25.5
16	206	52.7	77	11.7		05.5	347	21.8		25.6
17	221	55.1	92	11.0	+19	04.8	2	24.0	-14	25.7
18	236	57.6	107	10.3	+19	04.1	17	26.2	-14	25.8
19	252	00.1	122	09.6		03.4	32	28.4		25.9
20	267	02.5	137	08.9		02.8	47	30.5		26.0
21	282	05.0	152	08.2		02.1	62	32.7		26.1
22	297	07.4	167	07.5		01.4	77	34.9		26.2
23	312	09.9	182	06.8	+19	00.7	92	37.1		26.3
24	327	12.4	197	06.2	+19	00.0	107	39.2	-14	26.4
Dif	—		-7		-7		+10		-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 6			Edad: 24 ^d 8 PHE { 4 ^h : 56'0 12 ^h : 55'8 20 ^h : 55'6 SD: 15'3 PMG: 8 ^h 38 ^m R°: 54 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	179	03.7	+12 53.4	235	25.5	+28 37.2	8	60 N	2 23	3 34	4 23	22 50	96	19 25	13
1	194	03.9		249	51.8	36.4	73	58	2 43	46	31	23 24	86	18 51	22
2	209	04.0		264	18.1	35.5	73	56	3 00	3 56	38	23 49	81	25	29
3	224	04.1		278	44.5	34.4	74	54	13	4 05	45	** ** *	**	18 05	32
4	239	04.3		293	10.9	33.1	74	52	25	13	50	** ** *	**	17 48	35
5	254	04.4	+12 49.3	307	37.3	+28 31.7	14	50	3 35	4 20	4 55	** ** *	**	17 34	36
6	269	04.6	+12 48.5	322	03.8	+28 30.2	15	45	3 56	4 35	5 06	0 07	62	17 04	41
7	284	04.7		336	30.4	28.5	17	40	4 12	46	15	31	61	16 41	43
8	299	04.9		350	57.0	26.6	19	35	24	4 56	23	0 51	60	22	45
9	314	05.0		5	23.6	24.6	20	30	35	5 05	30	1 08	59	16 05	47
10	329	05.1		19	50.3	22.4	22	20	4 52	18	41	1 37	57	15 37	50
11	344	05.3	+12 44.4	34	17.1	+28 20.0	24	10 N	5 04	5 29	5 51	2 01	56	15 13	52
12	359	05.4	+12 43.6	48	43.9	+28 17.6	24	0	5 14	5 39	6 00	2 24	55	14 51	53
13	14	05.6		63	10.7	14.9	27	10 S	23	48	09	2 47	54	28	56
14	29	05.7		77	37.6	12.1	28	20	31	5 57	19	3 12	52	14 04	57
15	44	05.9		92	04.6	09.2	29	30	37	6 05	30	40	51	13 36	59
16	59	06.0		106	31.6	06.1	31	35	41	10	36	3 57	50	13 19	61
17	74	06.1	+12 39.5	120	58.7	+28 02.8	33	40	5 44	6 15	6 43	4 17	48	12 59	63
18	89	06.3	+12 38.7	135	25.9	+27 59.5	33	45	5 47	6 21	6 51	4 41	46	12 35	66
19	104	06.4		149	53.1	55.9	36	50	50	28	7 01	5 13	43	12 05	68
20	119	06.6		164	20.4	52.2	37	52	51	31	05	28	41	11 49	71
21	134	06.7		178	47.7	48.4	38	54	52	34	10	5 46	39	31	73
22	149	06.9		193	15.1	44.4	40	56	54	37	16	6 08	36	11 10	76
23	164	07.0		207	42.6	40.3	41	58	55	41	22	6 36	31	10 42	81
24	179	07.2	+12 33.8	222	10.1	+27 36.0	43	60 S	5 56	6 45	7 29	7 17	20	10 01	92

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 2 ^h 10 ^m 8		Mag: -3.8 PMG: 10 ^h 52 ^m		Mag: +1.8 PMG: 13 ^h 24 ^m		Mag: -2.0 PMG: 16 ^h 47 ^m		Mag: +0.4 PMG: 11 ^h 26 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	327	12.4	197	06.2	158	43.5	107	39.2	188	10.2
1	342	14.8	212	05.5	173	44.5	122	41.4	203	12.3
2	357	17.3	227	04.8	188	45.5	137	43.6	218	14.5
3	12	19.8	242	04.1	203	46.5	152	45.8	233	16.6
4	27	22.2	257	03.4	218	47.5	167	48.0	248	18.8
5	42	24.7	272	02.7	233	48.5	182	50.1	263	20.9
6	57	27.2	287	02.0	248	49.5	197	52.3	278	23.1
7	72	29.6	302	01.3	263	50.5	212	54.5	293	25.2
8	87	32.1	317	00.6	278	51.5	227	56.7	308	27.4
9	102	34.6	331	59.9	293	52.5	242	58.8	323	29.5
10	117	37.0	346	59.2	308	53.6	258	01.0	338	31.7
11	132	39.5	1	58.6	323	54.6	273	03.2	353	33.8
12	147	41.9	16	57.9	338	55.6	288	05.4	8	35.9
13	162	44.4	31	57.2	353	56.6	303	07.5	23	38.1
14	177	46.9	46	56.5	8	57.6	318	09.7	38	40.2
15	192	49.3	61	55.8	23	58.6	333	11.9	53	42.4
16	207	51.8	76	55.1	38	59.6	348	14.1	68	44.5
17	222	54.3	91	54.4	54	00.6	3	16.2	83	46.7
18	237	56.7	106	53.7	69	01.6	18	18.4	98	48.8
19	252	59.2	121	53.1	84	02.6	33	20.6	113	51.0
20	268	01.7	136	52.4	99	03.6	48	22.7	128	53.1
21	283	04.1	151	51.7	114	04.6	63	24.9	143	55.3
22	298	06.6	166	51.0	129	05.6	78	27.1	158	57.4
23	313	09.1	181	50.3	144	06.6	93	29.3	173	59.6
24	328	11.5	196	49.6	159	07.6	108	31.4	189	01.7
Dif	—		-7		+10		+22		+21	

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna			Puesta de Luna			
	SD: 15 ^h 8 PMG: 12 ^h 03 ^m 4			Edad: 25 ^d 8 PHE { 4 ^h : 55 ^s /5 12 ^h : 55 ^s /3 20 ^h : 55 ^s /2 R°: 51 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m m		h m m				
0	179	07.2	+12	33.8	222	10.1	+27	36.0	60 N	19 39	20 28	21 37	** ** *	19 38	4			
1	194	07.3		33.0	236	37.7	86	31.6	58	32	17	18	** ** *	19 13	12			
2	209	07.5		32.1	251	05.4	87	27.1	56	25	20 07	21 02	** ** *	18 54	16			
3	224	07.6		31.3	265	33.2	88	22.4	54	19	19 59	20 49	0 09	77	37			
4	239	07.8		30.5	280	01.0	88	17.6	52	14	51	38	26	73	23			
5	254	07.9	+12	29.7	294	28.9	89	+27	50	19 09	19 44	20 28	0 40	71	18			
6	269	08.0	+12	28.8	308	56.9	90	+27	45	18 59	19 30	20 08	1 09	67	17			
7	284	08.2		28.0	323	24.9	90	+27	40	50	19	19 53	32	64	24			
8	299	08.3		27.2	337	53.0	91	+26	35	43	09	41	1 51	61	17			
9	314	08.5		26.4	352	21.2	92	51.3	30	36	19 01	31	2 07	60	16			
10	329	08.6		25.5	6	49.5	93	45.7	20	25	18 48	15	34	57	27			
11	344	08.8	+12	24.7	21	17.9	94	+26	10 N	18 16	18 37	19 02	2 57	54	16			
12	359	08.9	+12	23.9	35	46.3	94	+26	0	18 07	18 28	18 52	3 19	52	15			
13	14	09.1		23.1	50	14.8	95	28.0	10 S	17 58	19	44	3 41	49	24			
14	29	09.2		22.2	64	43.4	96	21.8	20	49	11	37	4 04	46	15			
15	44	09.4		21.4	79	12.1	97	15.5	30	38	18 03	31	31	43	14			
16	59	09.5		20.6	93	40.9	98	09.0	35	32	17 58	28	4 47	41	20			
17	74	09.7	+12	19.8	108	09.7	98	+26	40	17 26	17 53	18 25	5 05	39	14			
18	89	09.8	+12	18.9	122	38.7	100	+25	45	17 18	17 48	18 22	5 27	36	13			
19	104	10.0		18.1	137	07.7	100	49.0	50	08	42	20	5 56	30	13			
20	119	10.1		17.3	151	36.8	101	42.1	52	17 04	39	19	6 09	29	13			
21	134	10.3		16.5	166	05.9	101	35.0	54	16 59	36	17	25	25	12			
22	149	10.4		15.6	180	35.2	103	27.8	56	54	33	16	6 44	21	26			
23	164	10.6		14.8	195	04.6	104	20.5	58	48	29	15	7 07	15	12			
24	179	10.7	+12	14.0	209	34.0	104	+25	60 S	16 42	17 25	18 14	7 37	6	11			
100																		
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO					
	PMG: 2 ^h 06 ^m 9			Mag: -3.8 PMG: 10 ^h 53 ^m			Mag: +1.8 PMG: 13 ^h 23 ^m			Mag: -2.0 PMG: 16 ^h 43 ^m			Mag: +0.4 PMG: 11 ^h 22 ^m					
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♊	Dec	hG ♋	Dec	hG ♏	Dec							
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	328	11.5	196	49.6	+18	43.1	159	07.6	+5	41.1	108	31.4	-14	28.8	189	01.7		
1	343	14.0	211	48.9		42.3	174	08.6		40.5	123	33.6		28.9	204	03.9		
2	358	16.4	226	48.3		41.6	189	09.6		39.8	138	35.8		29.0	219	06.0		
3	13	18.9	241	47.6		40.9	204	10.6		39.2	153	37.9		29.1	234	08.1		
4	28	21.4	256	46.9		40.2	219	11.6		38.6	168	40.1		29.2	249	10.3		
5	43	23.8	271	46.2	+18	39.5	234	12.6	+5	37.9	183	42.3	-14	29.3	264	12.4		
6	58	26.3	286	45.5	+18	38.8	249	13.6	+5	37.3	198	44.5	-14	29.4	279	14.6		
7	73	28.8	301	44.9		38.0	264	14.6		36.7	213	46.6		29.5	294	16.7		
8	88	31.2	316	44.2		37.3	279	15.6		36.0	228	48.8		29.6	309	18.9		
9	103	33.7	331	43.5		36.6	294	16.6		35.4	243	51.0		29.7	324	21.0		
10	118	36.2	346	42.8		35.9	309	17.6		34.7	258	53.1		29.8	339	23.2		
11	133	38.6	1	42.1	+18	35.1	324	18.6	+5	34.1	273	55.3	-14	29.9	354	25.3		
12	148	41.1	16	41.5	+18	34.4	339	19.6	+5	33.5	288	57.5	-14	30.0	9	27.5		
13	163	43.5	31	40.8		33.7	354	20.6		32.8	303	59.6		30.1	24	29.6		
14	178	46.0	46	40.1		32.9	9	21.6		32.2	319	01.8		30.2	39	31.8		
15	193	48.5	61	39.4		32.2	24	22.6		31.6	334	04.0		30.3	54	33.9		
16	208	50.9	76	38.7		31.5	39	23.6		30.9	349	06.1		30.4	69	36.1		
17	223	53.4	91	38.1	+18	30.8	54	24.6	+5	30.3	4	08.3	-14	30.5	84	38.2		
18	238	55.9	106	37.4	+18	30.0	69	25.6	+5	29.6	19	10.5	-14	30.6	99	40.4		
19	253	58.3	121	36.7		29.3	84	26.6		29.0	34	12.6		30.7	114	42.5		
20	269	00.8	136	36.0		28.6	99	27.6		28.4	49	14.8		30.8	129	44.6		
21	284	03.3	151	35.4		27.8	114	28.6		27.7	64	17.0		30.9	144	46.8		
22	299	05.7	166	34.7		27.1	129	29.7		27.1	79	19.1		31.0	159	48.9		
23	314	08.2	181	34.0		26.3	144	30.7		26.5	94	21.3		31.1	174	51.1		
24	329	10.7	196	33.3	+18	25.6	159	31.7	+5	25.8	109	23.5	-14	31.2	189	53.2		
Dif	—		-7		-7		+10		-6		+22		-1		+21		-1	

UT	SOL				● LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15'8 PMG: 12 ^h 03 ^m 2				Edad: 26 ^d 8 PHE { 4 ^h : 55'0 12 ^h : 54'9 20 ^h : 54'8 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	10.7	+12	14.0	209	34.0	+25	13.1	75	60 N	2 31	3 39	4 28	0 26	97	19 42	1	
1	194	10.9		13.1	224	03.5 ¹⁰⁵	+25	05.6	75	58	2 50	3 51	36	0 50	90	25	6	
2	209	11.0		12.3	238	33.1 ¹⁰⁶	+24	57.9	77	56	3 05	4 00	42	1 10	84	19 10	1	
3	224	11.2		11.5	253	02.8 ¹⁰⁷		50.2	77	54	18	09	48	26	80	18 58	14	
4	239	11.3		10.6	267	32.6 ¹⁰⁸		42.3	79	52	29	16	53	39	77	47	16	
5	254	11.5	+12	09.8	282	02.5 ¹⁰⁹	+24	34.3	80	50	3 39	4 23	4 58	1 51	74	18 37	19	
6	269	11.7	+12	09.0	296	32.4 ¹⁰⁹	+24	26.2	81	45	3 59	4 37	5 09	2 16	69	18 16	24	
7	284	11.8		08.2	311	02.5 ¹¹¹		18.0	82	40	4 14	48	17	36	65	17 59	28	
8	299	12.0		07.3	325	32.6 ¹¹¹		09.7	83	35	26	4 58	24	2 52	62	45	31	
9	314	12.1		06.5	340	02.8 ¹¹²	+24	01.2	85	30	36	5 06	31	3 07	59	32	34	
10	329	12.3		05.7	354	33.1 ¹¹³	+23	52.7	85	20	4 52	19	42	31	55	17 11	38	
11	344	12.4	+12	04.8	9	03.5 ¹¹⁴	+23	44.0	87	10 N	5 04	5 30	5 51	3 51	52	16 52	43	
12	359	12.6	+12	04.0	23	34.0 ¹¹⁵	+23	35.3	87	0	5 14	5 39	6 00	4 11	48	16 34	47	
13	14	12.7		03.2	38	04.6 ¹¹⁶		26.4	89	10 S	22	47	08	30	45	16 17	49	
14	29	12.9		02.3	52	35.3 ¹¹⁷		17.5	89	20	29	5 55	18	4 50	41	15 57	54	
15	44	13.0		01.5	67	06.0 ¹¹⁷	+23	08.4	91	30	35	6 03	28	5 14	37	35	59	
16	59	13.2	+12	00.7	81	36.8 ¹¹⁸	+22	59.2	92	35	38	08	34	28	34	22	62	
17	74	13.3	+11	59.8	96	07.8 ¹²⁰	+22	50.0	92	40	5 41	6 13	6 40	5 44	31	15 07	65	
18	89	13.5	+11	59.0	110	38.8 ¹²⁰	+22	40.6	94	45	5 44	6 18	6 48	6 03	27	14 49	69	
19	104	13.7		58.1	125	09.9 ¹²¹		31.1	95	50	46	24	6 57	26	22	27	74	
20	119	13.8		57.3	139	41.1 ¹²²		21.6	95	52	47	27	7 01	38	19	16	77	
21	134	14.0		56.5	154	12.3 ¹²²		11.9	97	54	48	29	06	6 50	17	14 04	80	
22	149	14.1		55.6	168	43.7 ¹²⁴	+22	02.2	97	56	49	33	11	7 05	13	13 49	84	
23	164	14.3		54.8	183	15.1 ¹²⁴	+21	52.3	99	58	50	36	17	22	8	33	89	
24	179	14.4	+11	54.0	197	46.7 ¹²⁶	+21	42.4	99	60 S	5 51	6 40	7 23	7 43	2	13 13	95	
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG 2 ^h 03 ^m 0		Mag: -3.8 PMG: 10 ^h 54 ^m				Mag: +1.8 PMG: 13 ^h 21 ^m				Mag: -2.0 PMG: 16 ^h 40 ^m				Mag: +0.4 PMG: 11 ^h 19 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	329	10.7	196	33.3	+18	25.6	159	31.7	+5	25.8	109	23.5	-14	31.2	189	53.2	+16	39.6
1	344	13.1	211	32.7		24.9	174	32.7		25.2	124	25.6		31.3	204	55.4		39.5
2	359	15.6	226	32.0		24.1	189	33.7		24.5	139	27.8		31.4	219	57.5		39.4
3	14	18.0	241	31.3		23.4	204	34.7		23.9	154	30.0		31.5	234	59.7		39.3
4	29	20.5	256	30.6		22.6	219	35.7		23.3	169	32.1		31.6	250	01.8		39.2
5	44	23.0	271	30.0	+18	21.9	234	36.7	+5	22.6	184	34.3	-14	31.7	265	04.0	+16	39.1
6	59	25.4	286	29.3	+18	21.2	249	37.7	+5	22.0	199	36.5	-14	31.8	280	06.1	+16	39.0
7	74	27.9	301	28.6		20.4	264	38.7		21.3	214	38.6		31.9	295	08.3		38.9
8	89	30.4	316	28.0		19.7	279	39.7		20.7	229	40.8		32.0	310	10.4		38.8
9	104	32.8	331	27.3		18.9	294	40.7		20.1	244	43.0		32.1	325	12.6		38.7
10	119	35.3	346	26.6		18.2	309	41.7		19.4	259	45.1		32.2	340	14.7		38.6
11	134	37.8	1	25.9	+18	17.4	324	42.7	+5	18.8	274	47.3	-14	32.3	355	16.9	+16	38.5
12	149	40.2	16	25.3	+18	16.7	339	43.7	+5	18.1	289	49.5	-14	32.4	10	19.0	+16	38.4
13	164	42.7	31	24.6		15.9	354	44.7		17.5	304	51.6		32.6	25	21.2		38.4
14	179	45.2	46	23.9		15.2	9	45.7		16.9	319	53.8		32.7	40	23.3		38.3
15	194	47.6	61	23.3		14.4	24	46.7		16.2	334	55.9		32.8	55	25.4		38.2
16	209	50.1	76	22.6		13.7	39	47.7		15.6	349	58.1		32.9	70	27.6		38.1
17	224	52.5	91	21.9	+18	12.9	54	48.7	+5	15.0	5	00.3	-14	33.0	85	29.7	+16	38.0
18	239	55.0	106	21.3	+18	12.2	69	49.7	+5	14.3	20	02.4	-14	33.1	100	31.9	+16	37.9
19	254	57.5	121	20.6		11.4	84	50.7		13.7	35	04.6		33.2	115	34.0		37.8
20	269	59.9	136	19.9		10.7	99	51.7		13.0	50	06.7		33.3	130	36.2		37.7
21	285	02.4	151	19.3		09.9	114	52.7		12.4	65	08.9		33.4	145	38.3		37.6
22	300	04.9	166	18.6		09.1	129	53.7		11.8	80	11.1		33.5	160	40.5		37.5
23	315	07.3	181	17.9		08.4	144	54.7		11.1	95	13.2		33.6	175	42.6		37.4
24	330	09.8	196	17.3	+18	07.6	159	55.7	+5	10.5	110	15.4	-14	33.7	190	44.8	+16	37.3
Dif	—		-7		-7		+10		-6		+22		-1		+21		-	

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8 PMG: 12 ^h 02 ^m 9			Edad: 27 ^d 8 PHE { 4 ^h : 54 ^m 7 12 ^h : 54 ^m 5 20 ^h : 54 ^m 4 R°: 43 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m	h m	h m
0	179	14.4	+11	54.0	197	46.7	+21	42.4	60 N	19 34	20 22	21 28	2 03 93	19 43 **
1	194	14.6		53.1	212	18.3 ¹²⁶		32.4 ¹⁰⁰	58	27	11	21 10	20 87	31 3
2	209	14.7		52.3	226	50.0 ¹²⁷		22.2 ¹⁰²	56	20	20 02	20 55	34 82	21 7
3	224	14.9		51.4	241	21.8 ¹²⁸		12.0 ¹⁰²	54	15	19 54	43	46 78	12 9
4	239	15.1		50.6	255	53.7 ¹²⁹	+21	01.8 ¹⁰²	52	10	46	33	2 56 76	19 03 13
5	254	15.2	+11	49.8	270	25.6 ¹²⁹	+20	51.4 ¹⁰⁴	50	19 05	19 40	20 23	3 05 74	18 56 15
6	269	15.4	+11	48.9	284	57.7 ¹³¹	+20	40.9 ¹⁰⁵	45	18 55	19 26	20 04	3 25 68	18 40 20
7	284	15.5		48.1	299	29.8 ¹³¹		30.4 ¹⁰⁵	40	47	16	19 50	41 64	27 24
8	299	15.7		47.3	314	02.0 ¹³²		19.7 ¹⁰⁷	35	40	19 07	38	3 54 60	16 27
9	314	15.8		46.4	328	34.3 ¹³³	+20	09.0 ¹⁰⁷	30	34	18 59	28	4 06 57	18 06 30
10	329	16.0		45.6	343	06.7 ¹³⁴	+19	58.2 ¹⁰⁸	20	24	46	13	26 52	17 49 35
11	344	16.2	+11	44.7	357	39.1 ¹³⁴	+19	47.4 ¹⁰⁸	10 N	18 15	18 36	19 01	4 43 48	17 35 39
12	359	16.3	+11	43.9	12	11.7 ¹³⁶	+19	36.4 ¹¹⁰	0	18 06	18 27	18 52	4 59 44	17 21 43
13	14	16.5		43.0	26	44.3 ¹³⁶		25.4 ¹¹⁰	10 S	17 58	19	44	5 15 40	17 06 47
14	29	16.6		42.2	41	17.0 ¹³⁷		14.3 ¹¹¹	20	49	12	38	31 37	16 51 52
15	44	16.8		41.4	55	49.8 ¹³⁸	+19	03.1 ¹¹²	30	39	04	32	5 51 32	34 56
16	59	16.9		40.5	70	22.6 ¹³⁸	+18	51.8 ¹¹³	35	34	18 00	29	6 02 29	24 59
17	74	17.1	+11	39.7	84	55.6 ¹⁴⁰	+18	40.5 ¹¹³	40	17 27	17 55	18 27	6 15 26	16 12 63
18	89	17.3	+11	38.8	99	28.6 ¹⁴⁰	+18	29.1 ¹¹⁴	45	17 20	17 50	18 24	6 30 22	15 58 67
19	104	17.4		38.0	114	01.7 ¹⁴¹		17.6 ¹¹⁵	50	11	45	22	48 17	41 72
20	119	17.6		37.1	128	34.9 ¹⁴²	+18	06.1 ¹¹⁵	52	07	42	21	6 57 14	33 74
21	134	17.7		36.3	143	08.1 ¹⁴²	+17	54.5 ¹¹⁶	54	17 03	39	21	7 07 11	24 77
22	149	17.9		35.5	157	41.4 ¹⁴³		42.8 ¹¹⁷	56	16 58	36	20	18 8	13 82
23	164	18.1		34.6	172	14.8 ¹⁴⁴		31.1 ¹¹⁷	58	52	33	19	30 5	15 02 85
24	179	18.2	+11	33.8	186	48.3 ¹⁴⁵	+17	19.2 ¹¹⁹	60 S	16 46	17 30	18 18	7 45 **	14 48 90
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 1 ^h 59 ^m 0		Mag: -3.8 PMG: 10 ^h 55 ^m		Mag: +1.8 PMG: 13 ^h 19 ^m		Mag: -2.0 PMG: 16 ^h 37 ^m		Mag: +0.4 PMG: 11 ^h 15 ^m					
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄					
h	°	'	°	'	°	'	°	'	°	'				
0	330	09.8	196	17.3	159	55.7	110	15.4	190	44.8				
1	345	12.3	211	16.6	174	56.7	125	17.6	205	46.9				
2	0	14.7	226	15.9	189	57.7	140	19.7	220	49.1				
3	15	17.2	241	15.3	204	58.7	155	21.9	235	51.2				
4	30	19.7	256	14.6	219	59.7	170	24.0	250	53.4				
5	45	22.1	271	13.9	235	00.7	185	26.2	265	55.5				
6	60	24.6	286	13.3	250	01.7	200	28.3	280	57.7				
7	75	27.0	301	12.6	265	02.7	215	30.5	295	59.8				
8	90	29.5	316	12.0	280	03.7	230	32.7	311	02.0				
9	105	32.0	331	11.3	295	04.7	245	34.8	326	04.1				
10	120	34.4	346	10.6	310	05.7	260	37.0	341	06.3				
11	135	36.9	1	10.0	325	06.7	275	39.1	356	08.4				
12	150	39.4	16	09.3	340	07.8	290	41.3	11	10.6				
13	165	41.8	31	08.7	355	08.8	305	43.5	26	12.7				
14	180	44.3	46	08.0	10	09.8	320	45.6	41	14.9				
15	195	46.8	61	07.3	25	10.8	335	47.8	56	17.0				
16	210	49.2	76	06.7	40	11.8	350	49.9	71	19.2				
17	225	51.7	91	06.0	55	12.8	5	52.1	86	21.3				
18	240	54.1	106	05.4	70	13.8	20	54.2	101	23.4				
19	255	56.6	121	04.7	85	14.8	35	56.4	116	25.6				
20	270	59.1	136	04.1	100	15.8	50	58.6	131	27.7				
21	286	01.5	151	03.4	115	16.8	66	00.7	146	29.9				
22	301	04.0	166	02.7	130	17.8	81	02.9	161	32.0				
23	316	06.5	181	02.1	145	18.8	96	05.0	176	34.2				
24	331	08.9	196	01.4	160	19.8	111	07.2	191	36.3				
Dif	—		-7		+10		+22		+21					

ALMANAQUE NÁUTICO PERSEIS

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna	Puesta de Luna		
	SD: 15 ^h 8 PMG: 12 ^h 02 ^m 4			Edad: 29 ^d 8 PHE { 4 ^h : 54 ^m 1 12 ^h : 54 ^m 1 20 ^h : 54 ^m 0 R°: 39 ^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	22.1	+11 13.4	176	31.9	+12 18.6	60 N	19 28	20 15	21 19	5 03 83	19 41	**	
1	194	22.3		191	06.9 ¹⁶⁰	+12 05.4 ¹³²	58	21	20 05	21 03	09 80	37	1	
2	209	22.5		205	42.1 ¹⁶²	+11 52.2 ¹³²	56	15	19 56	20 49	15 77	33	4	
3	224	22.6		220	17.2 ¹⁶¹	39.0 ¹³²	54	10	49	37	21 73	29	7	
4	239	22.8		234	52.5 ¹⁶³	25.7 ¹³³	52	05	42	27	25 71	26	9	
5	254	23.0	+11 09.1	249	27.7 ¹⁶²	+11 12.4 ¹³³	50	19 01	19 36	20 18	5 29 69	19 23	11	
6	269	23.1	+11 08.3	264	03.1 ¹⁶⁴	+10 59.1 ¹³³	45	18 52	19 23	20 00	5 39 64	19 17	16	
7	284	23.3		278	38.4 ¹⁶³	45.7 ¹³⁴	40	44	12	19 46	46 60	12	19	
8	299	23.5		293	13.9 ¹⁶⁵	32.3 ¹³⁴	35	38	19 04	35	53 56	07	23	
9	314	23.6		307	49.3 ¹⁶⁴	18.9 ¹³⁴	30	32	18 57	26	5 58 54	19 03	26	
10	329	23.8		322	24.9 ¹⁶⁶	+10 05.4 ¹³⁵	20	22	45	11	6 08 49	18 56	31	
11	344	24.0	+11 04.0	337	00.4 ¹⁶⁵	+9 51.9 ¹³⁵	10 N	18 14	18 35	19 00	6 17 44	18 50	35	
12	359	24.1	+11 03.1	351	36.0 ¹⁶⁶	+9 38.3 ¹³⁶	0	18 06	18 27	18 51	6 25 40	18 44	39	
13	14	24.3	02.3	6	11.7 ¹⁶⁷	24.8 ¹³⁵	10 S	17 58	19	44	33 35	38	43	
14	29	24.5	01.4	20	47.4 ¹⁶⁷	+9 11.2 ¹³⁶	20	50	12	38	41 31	32	48	
15	44	24.6	+11 00.6	35	23.1 ¹⁶⁷	+8 57.5 ¹³⁷	30	41	05	33	51 26	24	53	
16	59	24.8	+10 59.7	49	58.9 ¹⁶⁸	43.9 ¹³⁶	35	35	18 01	31	6 56 24	20	56	
17	74	25.0	+10 58.9	64	34.7 ¹⁶⁸	+8 30.2 ¹³⁷	40	17 29	17 57	18 28	7 03 20	18 15	60	
18	89	25.1	+10 58.0	79	10.5 ¹⁶⁸	+8 16.5 ¹³⁷	45	17 22	17 52	18 27	7 10 16	18 10	63	
19	104	25.3		93	46.4 ¹⁶⁹	+8 02.7 ¹³⁸	50	14	47	25	19 11	03	68	
20	119	25.5		108	22.3 ¹⁶⁹	+7 48.9 ¹³⁸	52	11	45	24	23 9	18 00	70	
21	134	25.7		122	58.3 ¹⁷⁰	35.1 ¹³⁸	54	06	43	24	27 7	17 56	73	
22	149	25.8		137	34.2 ¹⁶⁹	21.3 ¹³⁸	56	17 02	40	23	32 4	52	76	
23	164	26.0		152	10.3 ¹⁷¹	+7 07.5 ¹³⁸	58	16 57	37	23	37 2	48	79	
24	179	26.2	+10 52.8	166	46.3 ¹⁷⁰	+6 53.6 ¹³⁹	60 S	16 51	17 34	18 23	7 43 **	17 43	83	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 1 ^h 51 ^m 2		Mag: -3.9 PMG: 10 ^h 57 ^m			Mag: +1.8 PMG: 13 ^h 16 ^m			Mag: -2.0 PMG: 16 ^h 30 ^m			Mag: +0.4 PMG: 11 ^h 09 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'
0	332	08.1	195	45.8	+17 30.1	160	43.8	+4 39.7	111	58.8	-14 38.7	192	27.9	+16 32.9
1	347	10.5	210	45.2		175	44.8	39.0	127	01.0	38.8	207	30.1	32.9
2	2	13.0	225	44.5		190	45.8	38.4	142	03.1	39.0	222	32.2	32.8
3	17	15.5	240	43.9		205	46.8	37.7	157	05.3	39.1	237	34.4	32.7
4	32	17.9	255	43.2		220	47.8	37.1	172	07.4	39.2	252	36.5	32.6
5	47	20.4	270	42.6	+17 26.1	235	48.8	+4 36.4	187	09.6	-14 39.3	267	38.7	+16 32.5
6	62	22.9	285	42.0	+17 25.3	250	49.9	+4 35.8	202	11.7	-14 39.4	282	40.8	+16 32.4
7	77	25.3	300	41.3	24.5	265	50.9	35.2	217	13.9	39.5	297	43.0	32.3
8	92	27.8	315	40.7	23.7	280	51.9	34.5	232	16.0	39.6	312	45.1	32.2
9	107	30.2	330	40.0	22.9	295	52.9	33.9	247	18.2	39.7	327	47.3	32.1
10	122	32.7	345	39.4	22.1	310	53.9	33.2	262	20.3	39.8	342	49.4	32.0
11	137	35.2	0	38.7	+17 21.2	325	54.9	+4 32.6	277	22.5	-14 39.9	357	51.6	+16 31.9
12	152	37.6	15	38.1	+17 20.4	340	55.9	+4 31.9	292	24.6	-14 40.0	12	53.7	+16 31.9
13	167	40.1	30	37.5	19.6	355	56.9	31.3	307	26.8	40.1	27	55.9	31.8
14	182	42.6	45	36.8	18.8	10	57.9	30.6	322	28.9	40.2	42	58.0	31.7
15	197	45.0	60	36.2	18.0	25	58.9	30.0	337	31.0	40.3	58	00.2	31.6
16	212	47.5	75	35.5	17.2	40	59.9	29.4	352	33.2	40.5	73	02.3	31.5
17	227	50.0	90	34.9	+17 16.4	56	00.9	+4 28.7	7	35.3	-14 40.6	88	04.5	+16 31.4
18	242	52.4	105	34.3	+17 15.5	71	01.9	+4 28.1	22	37.5	-14 40.7	103	06.6	+16 31.3
19	257	54.9	120	33.6	14.7	86	02.9	27.4	37	39.6	40.8	118	08.8	31.2
20	272	57.4	135	33.0	13.9	101	03.9	26.8	52	41.8	40.9	133	10.9	31.1
21	287	59.8	150	32.4	13.1	116	04.9	26.1	67	43.9	41.0	148	13.1	31.0
22	303	02.3	165	31.7	12.3	131	05.9	25.5	82	46.1	41.1	163	15.2	30.9
23	318	04.7	180	31.1	11.4	146	06.9	24.8	97	48.2	41.2	178	17.4	30.8
24	333	07.2	195	30.5	+17 10.6	161	07.9	+4 24.2	112	50.3	-14 41.3	193	19.5	+16 30.8
Dif	—		-6		-8	+10		-6	+21		-1	+22		-1

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna				
	SD: 15 ^h 8 PMG: 12 ^h 02 ^m 1			Edad: 1 ^d 2 PHE { 4 ^h : 54 ^o 0 12 ^h : 54 ^o 0 20 ^h : 54 ^o 0 R°: 38 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	
0	179	26.2	+10	52.8	166	46.3	+6	53.6	60 N	2	46	3	50	4	38	6	26
1	194	26.3		52.0	181	22.4 ¹⁷¹		39.7 ¹³⁹	58	3	03	4	00	44	29	78	38
2	209	26.5		51.1	195	58.5 ¹⁷¹		25.8 ¹³⁹	56	16		09	50	32	75	37	4
3	224	26.7		50.3	210	34.7 ¹⁷²	+6	11.9 ¹³⁹	54	28	17	4	55	34	73	36	6
4	239	26.8		49.4	225	10.8 ¹⁷¹	+5	57.9 ¹⁴⁰	52	38	24	5	00	36	70	35	9
5	254	27.0	+10	48.5	239	47.0 ¹⁷²	+5	44.0 ¹³⁹	50	3	47	4	30	5	04	6	38
6	269	27.2	+10	47.7	254	23.3 ¹⁷³	+5	30.0 ¹⁴⁰	45	4	05	4	42	5	13	6	43
7	284	27.4		46.8	268	59.5 ¹⁷²		16.0 ¹⁴⁰	40	19	4	53	21	46	59	31	19
8	299	27.5		45.9	283	35.8 ¹⁷³	+5	02.0 ¹⁴⁰	35	30	5	01	27	49	56	30	22
9	314	27.7		45.1	298	12.1 ¹⁷³	+4	48.0 ¹⁴⁰	30	39		08	33	52	53	29	25
10	329	27.9		44.2	312	48.4 ¹⁷³		33.9 ¹⁴¹	20	4	54	20	43	6	57	47	27
11	344	28.0	+10	43.4	327	24.7 ¹⁷³	+4	19.8 ¹⁴¹	10 N	5	05	5	30	5	51	7	01
12	359	28.2	+10	42.5	342	01.1 ¹⁷⁴	+4	05.8 ¹⁴⁰	0	5	13	5	38	5	59	7	05
13	14	28.4		41.6	356	37.5 ¹⁷⁴	+3	51.7 ¹⁴¹	10 S		20	45	6	06	8	35	21
14	29	28.6		40.8	11	13.9 ¹⁷⁴		37.6 ¹⁴¹	20	26	52	14	12	30	20	47	43
15	44	28.7		39.9	25	50.3 ¹⁷⁴		23.5 ¹⁴¹	30	31	5	59	24	17	25	17	53
16	59	28.9		39.0	40	26.7 ¹⁷⁴	+3	09.4 ¹⁴¹	35	34	6	03	29	20	22	16	56
17	74	29.1	+10	38.2	55	03.1 ¹⁷⁴	+2	55.2 ¹⁴²	40	5	35	6	07	6	34	7	23
18	89	29.2	+10	37.3	69	39.6 ¹⁷⁵	+2	41.1 ¹⁴¹	45	5	37	6	11	6	41	7	26
19	104	29.4		36.4	84	16.1 ¹⁷⁵		27.0 ¹⁴¹	50	39	16		49	30	11	11	68
20	119	29.6		35.6	98	52.6 ¹⁷⁵	+2	12.8 ¹⁴²	52	39	18		53	32	9	10	70
21	134	29.8		34.7	113	29.0 ¹⁷⁴	+1	58.6 ¹⁴²	54	40	21	6	57	34	6	09	73
22	149	29.9		33.8	128	05.5 ¹⁷⁵		44.5 ¹⁴¹	56	40	23	7	01	36	4	08	75
23	164	30.1		33.0	142	42.1 ¹⁷⁶		30.3 ¹⁴²	58	41	26		06	39	1	07	78
24	179	30.3	+10	32.1	157	18.6 ¹⁷⁵	+1	16.1 ¹⁴²	60 S	5	41	6	29	7	41	**	19

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 1 ^h 47 ^m 2		Mag: -3.9 PMG: 10 ^h 58 ^m		Mag: +1.8 PMG: 13 ^h 15 ^m		Mag: -2.0 PMG: 16 ^h 26 ^m		Mag: +0.4 PMG: 11 ^h 05 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	333	07.2	195	30.5	+17	10.6	112	50.3	-14	41.3
1	348	09.7	210	29.8		09.8	127	52.5		41.4
2	3	12.1	225	29.2		09.0	142	54.6		41.5
3	18	14.6	240	28.5		08.1	157	56.8		41.6
4	33	17.1	255	27.9		07.3	172	58.9		41.7
5	48	19.5	270	27.3	+17	06.5	188	01.1	-14	41.9
6	63	22.0	285	26.6	+17	05.7	203	03.2	-14	42.0
7	78	24.5	300	26.0		04.8	218	05.4		42.1
8	93	26.9	315	25.4		04.0	233	07.5		42.2
9	108	29.4	330	24.7		03.2	248	09.6		42.3
10	123	31.8	345	24.1		02.3	263	11.8		42.4
11	138	34.3	0	23.5	+17	01.5	278	13.9	-14	42.5
12	153	36.8	15	22.9	+17	00.7	293	16.1	-14	42.6
13	168	39.2	30	22.2	+16	59.8	308	18.2		42.7
14	183	41.7	45	21.6		59.0	323	20.3		42.8
15	198	44.2	60	21.0		58.2	338	22.5		42.9
16	213	46.6	75	20.3		57.3	353	24.6		43.0
17	228	49.1	90	19.7	+16	56.5	8	26.8	-14	43.2
18	243	51.6	105	19.1	+16	55.7	23	28.9	-14	43.3
19	258	54.0	120	18.5		54.8	38	31.0		43.4
20	273	56.5	135	17.8		54.0	53	33.2		43.5
21	288	59.0	150	17.2		53.2	68	35.3		43.6
22	304	01.4	165	16.6		52.3	83	37.5		43.7
23	319	03.9	180	15.9		51.5	98	39.6		43.8
24	334	06.3	195	15.3	+16	50.6	113	41.7	-14	43.9
Dif	—		-6		-8		+10		-6	

UT	SOL				● LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8 PMG: 12 ^h 01 ^m 8				Edad: 2 ^d 2 PHE { 4 ^h : 54 ⁰ 12 ^h : 54 ⁰ 20 ^h : 54 ⁰ PMG: 13 ^h 52 ^m R°: 39 ^m											
	hG ☉		Dec		hG ☾		Dif				Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m
0	179	30.3	+10	32.1	157	18.6	+1	16.1	60 N	19 22	20 09	21 11	7 48 81	19 37	**	
1	194	30.5		31.2	171	55.1 ¹⁷⁵	+1	02.0 ¹⁴¹	58	16	19 59	20 55	47 78	39	2	
2	209	30.6		30.4	186	31.6 ¹⁷⁵	+0	47.8 ¹⁴²	56	10		51 43	47 75	41	4	
3	224	30.8		29.5	201	08.2 ¹⁷⁶		33.6 ¹⁴²	54	05	44	32	47 72	42	7	
4	239	31.0		28.6	215	44.7 ¹⁷⁵		19.4 ¹⁴²	52	19 01	37	22	46 70	44	9	
5	254	31.2	+10	27.8	230	21.3 ¹⁷⁶	+0	05.2 ¹⁴²	50	18 57	19 31	20 14	7 46 68	19 45	11	
6	269	31.3	+10	26.9	244	57.8 ¹⁷⁵	-0	08.9 ¹⁴¹	45	18 48	19 19	19 56	7 46 63	19 48	15	
7	284	31.5		26.0	259	34.3 ¹⁷⁵		23.1 ¹⁴²	40	41	09	43	45 59	50	19	
8	299	31.7		25.2	274	10.9 ¹⁷⁶		37.3 ¹⁴²	35	35	19 01	32	45 56	52	22	
9	314	31.9		24.3	288	47.4 ¹⁷⁵	-0	51.5 ¹⁴²	30	30	18 54	23	45 52	54	25	
10	329	32.0		23.4	303	24.0 ¹⁷⁶	-1	05.6 ¹⁴¹	20	21	43	19 09	44 48	57	30	
11	344	32.2	+10	22.6	318	00.5 ¹⁷⁵	-1	19.8 ¹⁴²	10 N	18 13	18 34	18 59	7 44 43	19 59	35	
12	359	32.4	+10	21.7	332	37.0 ¹⁷⁵	-1	34.0 ¹⁴²	0	18 05	18 26	18 51	7 43 39	20 02	39	
13	14	32.6		20.8	347	13.6 ¹⁷⁶	-1	48.1 ¹⁴¹	10 S	17 58	19	44	43 34	04	44	
14	29	32.7		19.9	1	50.1 ¹⁷⁵	-2	02.3 ¹⁴²	20	50	13	38	42 30	07	48	
15	44	32.9		19.1	16	26.6 ¹⁷⁵		16.4 ¹⁴¹	30	42	06	34	42 25	10	53	
16	59	33.1		18.2	31	03.1 ¹⁷⁵		30.6 ¹⁴²	35	37	18 02	32	42 22	12	56	
17	74	33.3	+10	17.3	45	39.6 ¹⁷⁵	-2	44.7 ¹⁴¹	40	17 31	17 59	18 30	7 41 19	20 14	59	
18	89	33.4	+10	16.5	60	16.1 ¹⁷⁵	-2	58.8 ¹⁴¹	45	17 25	17 55	18 29	7 41 15	20 16	64	
19	104	33.6		15.6	74	52.5 ¹⁷⁴	-3	13.0 ¹⁴²	50	17	50	28	41 10	19	68	
20	119	33.8		14.7	89	29.0 ¹⁷⁵		27.1 ¹⁴¹	52	14	48	27	41 8	20	71	
21	134	34.0		13.8	104	05.4 ¹⁷⁴		41.1 ¹⁴⁰	54	10	46	27	40 7	22	73	
22	149	34.2		13.0	118	41.9 ¹⁷⁵	-3	55.2 ¹⁴¹	56	06	44	27	40 4	23	76	
23	164	34.3		12.1	133	18.3 ¹⁷⁴	-4	09.3 ¹⁴¹	58	17 01	41	27	40 1	25	79	
24	179	34.5	+10	11.2	147	54.7 ¹⁷⁴	-4	23.4 ¹⁴¹	60 S	16 56	17 38	18 27	7 40 **	20 27	82	
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO							
	PMG: 1 ^h 43 ^m 3		Mag: -3.9 PMG: 10 ^h 59 ^m		Mag: +1.8 PMG: 13 ^h 13 ^m		Mag: -2.0 PMG: 16 ^h 23 ^m		Mag: +0.4 PMG: 11 ^h 02 ^m							
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄							
h	°	'	°	'	°	'	°	'	°	'						
0	334	06.3	195	15.3	+16	50.6	113	41.7	-14	43.9						
1	349	08.8	210	14.7		49.8	128	43.9		44.0						
2	4	11.3	225	14.1		48.9	143	46.0		44.1						
3	19	13.7	240	13.4		48.1	158	48.2		44.2						
4	34	16.2	255	12.8		47.3	173	50.3		44.4						
5	49	18.7	270	12.2	+16	46.4	188	52.4	-14	44.5						
6	64	21.1	285	11.6	+16	45.6	203	54.6	-14	44.6						
7	79	23.6	300	10.9		44.7	218	56.7		44.7						
8	94	26.1	315	10.3		43.9	233	58.8		44.8						
9	109	28.5	330	09.7		43.0	249	01.0		44.9						
10	124	31.0	345	09.1		42.2	264	03.1		45.0						
11	139	33.4	0	08.5	+16	41.3	279	05.3	-14	45.1						
12	154	35.9	15	07.8	+16	40.5	294	07.4	-14	45.2						
13	169	38.4	30	07.2		39.6	309	09.5		45.3						
14	184	40.8	45	06.6		38.7	324	11.7		45.5						
15	199	43.3	60	06.0		37.9	339	13.8		45.6						
16	214	45.8	75	05.4		37.0	354	15.9		45.7						
17	229	48.2	90	04.7	+16	36.2	9	18.1	-14	45.8						
18	244	50.7	105	04.1	+16	35.3	24	20.2	-14	45.9						
19	259	53.2	120	03.5		34.5	39	22.3		46.0						
20	274	55.6	135	02.9		33.6	54	24.5		46.1						
21	289	58.1	150	02.3		32.7	69	26.6		46.2						
22	305	00.6	165	01.7		31.9	84	28.7		46.3						
23	320	03.0	180	01.0		31.0	99	30.9		46.4						
24	335	05.5	195	00.4	+16	30.2	114	33.0	-14	46.6						
Dif	—		-6		-9		+10		-1							

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna								
	SD: 15 ^h 8 PMG: 12 ^h 01 ^m 6			Edad: 3 ^d 2 PHE { 4 ^h : 54 ^o 0 12 ^h : 54 ^o 1 20 ^h : 54 ^o 2 R ^o : 41 ^m																	
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R ^o	Hora	R ^o						
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m					
0	179	34.5	+10	11.2	147	54.7	-4	23.4	60 N	2	53	3	56	4	42	9	09 84				
1	194	34.7		10.3	162	31.1 ¹⁷⁴		37.4 ¹⁴⁰	58	3	09	4	05	49	05	81	41 2				
2	209	34.9		09.5	177	07.4 ¹⁷³	-4	51.4 ¹⁴⁰	56	22		13	54	9	02	77	45 5				
3	224	35.0		08.6	191	43.7 ¹⁷³	-5	05.4 ¹⁴⁰	54	33		21	4	59	8	59	74 49 8				
4	239	35.2		07.7	206	20.1 ¹⁷⁴		19.4 ¹⁴⁰	52	42		27	5	03	5	6	72 53 10				
5	254	35.4	+10	06.8	220	56.3 ¹⁷²	-5	33.4 ¹⁴⁰	50	3	51	4	33	5	07	8	54 69 19 56 13				
6	269	35.6	+10	06.0	235	32.6 ¹⁷³	-5	47.4 ¹⁴⁰	45	4	08	4	45	5	16	8	49 64 20 03 17				
7	284	35.8		05.1	250	08.9 ¹⁷³	-6	01.3 ¹³⁹	40	21		4	55	23	44	61	09 21				
8	299	35.9		04.2	264	45.1 ¹⁷²		15.2 ¹³⁹	35	32		5	03	29	41	56	14 25				
9	314	36.1		03.3	279	21.3 ¹⁷²		29.1 ¹³⁹	30	40		09	34	37	54	19	27				
10	329	36.3		02.5	293	57.4 ¹⁷¹		43.0 ¹³⁹	20	4	54	21	43	32	48	32	48 27 32				
11	344	36.5	+10	01.6	308	33.6 ¹⁷²	-6	56.9 ¹³⁹	10 N	5	05	5	30	5	51	8	27 44 20 34 37				
12	359	36.7	+10	00.7	323	09.7 ¹⁷¹	-7	10.7 ¹³⁸	0	5	13	5	37	5	58	8	22 40 20 41 41				
13	14	36.8	+9	59.8	337	45.7 ¹⁷⁰		24.5 ¹³⁸	10 S	19		44	6	05	17	36	48 45				
14	29	37.0		59.0	352	21.8 ¹⁷¹		38.3 ¹³⁸	20	25		51	13	12	32	20	55 49				
15	44	37.2		58.1	6	57.8 ¹⁷⁰	-7	52.1 ¹³⁸	30	29		5	57	21	07	26	21 03 55				
16	59	37.4		57.2	21	33.8 ¹⁷⁰	-8	05.9 ¹³⁸	35	31		6	01	26	04	23	08 57				
17	74	37.6	+9	56.3	36	09.7 ¹⁶⁹	-8	19.6 ¹³⁷	40	5	33	6	04	6	32	8	00 21 21 13 61				
18	89	37.7	+9	55.4	50	45.6 ¹⁶⁹	-8	33.3 ¹³⁷	45	5	34	6	08	6	38	7	56 17 21 20 65				
19	104	37.9		54.6	65	21.5 ¹⁶⁹	-8	46.9 ¹³⁶	50	35		12	45	51	12	27	70				
20	119	38.1		53.7	79	57.3 ¹⁶⁸	-9	00.6 ¹³⁷	52	35		14	49	49	10	31	72				
21	134	38.3		52.8	94	33.1 ¹⁶⁸		14.2 ¹³⁶	54	35		16	52	47	7	35	75				
22	149	38.5		51.9	109	08.8 ¹⁶⁷		27.8 ¹³⁶	56	36		19	6	57	44	5	39 78				
23	164	38.6		51.0	123	44.5 ¹⁶⁷		41.3 ¹³⁵	58	36		21	7	01	41	2	44 81				
24	179	38.8	+9	50.2	138	20.2 ¹⁶⁷	-9	54.8 ¹³⁵	60 S	5	36	6	24	7	06	7	38 ** 21 49 86				
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO								
	PMG: 1 ^h 39 ^m 4			Mag: -3.9 PMG: 11 ^h 00 ^m			Mag: +1.8 PMG: 13 ^h 11 ^m			Mag: -2.0 PMG: 16 ^h 19 ^m			Mag: +0.4 PMG: 10 ^h 58 ^m								
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec							
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'					
0	335	05.5	195	00.4	+16	30.2	161	56.0	+3	53.2	114	33.0	-14	46.6	195	02.8	+16	26.4			
1	350	07.9	209	59.8		29.3	176	57.0		52.5	129	35.1		46.7	210	04.9		26.3			
2	5	10.4	224	59.2		28.4	191	58.0		51.9	144	37.3		46.8	225	07.1		26.2			
3	20	12.9	239	58.6		27.6	206	59.0		51.2	159	39.4		46.9	240	09.2		26.1			
4	35	15.3	254	58.0		26.7	222	00.0		50.6	174	41.5		47.0	255	11.4		26.0			
5	50	17.8	269	57.3	+16	25.8	237	01.0	+3	49.9	189	43.7	-14	47.1	270	13.5	+16	25.9			
6	65	20.3	284	56.7	+16	25.0	252	02.0	+3	49.3	204	45.8	-14	47.2	285	15.7	+16	25.8			
7	80	22.7	299	56.1		24.1	267	03.0		48.6	219	47.9		47.3	300	17.9		25.7			
8	95	25.2	314	55.5		23.2	282	04.0		48.0	234	50.1		47.4	315	20.0		25.6			
9	110	27.7	329	54.9		22.4	297	05.0		47.4	249	52.2		47.6	330	22.2		25.5			
10	125	30.1	344	54.3		21.5	312	06.0		46.7	264	54.3		47.7	345	24.3		25.5			
11	140	32.6	359	53.7	+16	20.6	327	07.0	+3	46.1	279	56.5	-14	47.8	0	26.5	+16	25.4			
12	155	35.1	14	53.1	+16	19.8	342	08.0	+3	45.4	294	58.6	-14	47.9	15	28.6	+16	25.3			
13	170	37.5	29	52.5		18.9	357	09.0		44.8	310	00.7		48.0	30	30.8		25.2			
14	185	40.0	44	51.8		18.0	12	10.0		44.1	325	02.9		48.1	45	32.9		25.1			
15	200	42.4	59	51.2		17.1	27	11.0		43.5	340	05.0		48.2	60	35.1		25.0			
16	215	44.9	74	50.6		16.3	42	12.0		42.8	355	07.1		48.3	75	37.2		24.9			
17	230	47.4	89	50.0	+16	15.4	57	13.0	+3	42.2	10	09.3	-14	48.4	90	39.4	+16	24.8			
18	245	49.8	104	49.4	+16	14.5	72	14.0	+3	41.5	25	11.4	-14	48.6	105	41.5	+16	24.7			
19	260	52.3	119	48.8		13.6	87	15.0		40.9	40	13.5		48.7	120	43.7		24.6			
20	275	54.8	134	48.2		12.8	102	16.0		40.2	55	15.6		48.8	135	45.8		24.5			
21	290	57.2	149	47.6		11.9	117	17.0		39.6	70	17.8		48.9	150	48.0		24.5			
22	305	59.7	164	47.0		11.0	132	18.0		38.9	85	19.9		49.0	165	50.1		24.4			
23	321	02.2	179	46.4		10.1	147	19.0		38.3	100	22.0		49.1	180	52.3		24.3			
24	336	04.6	194	45.8	+16	09.2	162	20.0	+3	37.6	115	24.2	-14	49.2	195	54.5	+16	24.2			
Dif	—			-6			-9			+10			-6			+21			-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 : 54/2 12 ^h : 54/3 20 ^h : 54/4	SD: 14 ^h 8				R°: 43 ^m							
	PMG: 12 ^h 01 ^m 3				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	179	38.8	+9	50.2	138	20.2	-9 54.8	60 N	19 16	20 02	21 03	10 33 89	19 34 **			
1	194	39.0		49.3	152	55.8 ¹⁶⁶	-10 08.3 ¹³⁵	58	10	19 53	20 48	26 84	43 3			
2	209	39.2		48.4	167	31.4 ¹⁶⁶	21.8 ¹³⁵	56	05	45	36	19 80	50 7			
3	224	39.4		47.5	182	06.9 ¹⁶⁵	35.2 ¹³⁴	54	19 01	38	26	13 77	19 57 10			
4	239	39.6		46.6	196	42.4 ¹⁶⁵	-10 48.6 ¹³⁴	52	18 57	32	17	08 74	20 03 13			
5	254	39.7	+9	45.8	211	17.8 ¹⁶⁴	-11 01.9 ¹³³	50	18 53	19 27	20 09	10 03 72	20 09 15			
6	269	39.9	+9	44.9	225	53.2 ¹⁶⁴	-11 15.3 ¹³⁴	45	18 45	19 15	19 52	9 53 66	20 20 21			
7	284	40.1		44.0	240	28.5 ¹⁶³	28.5 ¹³²	40	38	19 06	40	45 62	30 25			
8	299	40.3		43.1	255	03.8 ¹⁶³	41.8 ¹³³	35	32	18 58	29	37 59	39 28			
9	314	40.5		42.2	269	39.0 ¹⁶²	-11 55.0 ¹³²	30	27	52	21	31 56	46 31			
10	329	40.7		41.3	284	14.2 ¹⁶²	-12 08.2 ¹³²	20	19	41	19 08	20 51	20 59 36			
11	344	40.8	+9	40.5	298	49.3 ¹⁶¹	-12 21.3 ¹³¹	10 N	18 11	18 33	18 58	9 11 46	21 11 40			
12	359	41.0	+9	39.6	313	24.4 ¹⁶¹	-12 34.4 ¹³¹	0	18 05	18 26	18 50	9 02 42	21 22 43			
13	14	41.2		38.7	327	59.4 ¹⁶⁰	-12 47.4 ¹³⁰	10 S	17 58	19	44	8 53 38	33 47			
14	29	41.4		37.8	342	34.3 ¹⁵⁹	-13 00.4 ¹³⁰	20	51	13	39	44 34	44 52			
15	44	41.6		36.9	357	09.2 ¹⁵⁹	13.4 ¹³⁰	30	43	07	35	33 29	21 58 56			
16	59	41.8		36.0	11	44.0 ¹⁵⁸	26.3 ¹²⁹	35	38	04	33	27 26	22 05 60			
17	74	41.9	+9	35.2	26	18.8 ¹⁵⁸	-13 39.1 ¹²⁸	40	17 33	18 00	18 32	8 21 22	22 14 63			
18	89	42.1	+9	34.3	40	53.5 ¹⁵⁷	-13 52.0 ¹²⁹	45	17 27	17 57	18 31	8 13 18	22 25 67			
19	104	42.3		33.4	55	28.1 ¹⁵⁶	-14 04.7 ¹²⁷	50	20	53	30	8 03 14	37 73			
20	119	42.5		32.5	70	02.7 ¹⁵⁶	17.5 ¹²⁸	52	17	51	30	7 59 12	43 75			
21	134	42.7		31.6	84	37.2 ¹⁵⁵	30.2 ¹²⁷	54	13	49	30	54 9	50 78			
22	149	42.9		30.7	99	11.7 ¹⁵⁵	42.8 ¹²⁶	56	09	47	30	49 6	22 57 82			
23	164	43.1		29.8	113	46.1 ¹⁵⁴	-14 55.4 ¹²⁶	58	05	45	31	43 3	23 05 86			
24	179	43.2	+9	29.0	128	20.4 ¹⁵³	-15 07.9 ¹²⁵	60 S	17 00	17 43	18 31	7 37 **	23 15 91			
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO							
	PMG: 1 ^h 35 ^m 4		Mag: -3.9 PMG: 11 ^h 01 ^m		Mag: +1.8 PMG: 13 ^h 10 ^m		Mag: -2.0 PMG: 16 ^h 16 ^m		Mag: +0.4 PMG: 10 ^h 55 ^m							
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec						
h	°	'	°	'	°	'	°	'	°	'						
0	336	04.6	194	45.8	+16 09.2	162	20.0	+3 37.6	115	24.2	-14 49.2	195	54.5	+16 24.2		
1	351	07.1	209	45.2	08.4	177	21.0	37.0	130	26.3	49.3	210	56.6	24.1		
2	6	09.5	224	44.6	07.5	192	22.0	36.3	145	28.4	49.4	225	58.8	24.0		
3	21	12.0	239	44.0	06.6	207	23.0	35.7	160	30.5	49.6	241	00.9	23.9		
4	36	14.5	254	43.3	05.7	222	24.0	35.0	175	32.7	49.7	256	03.1	23.8		
5	51	16.9	269	42.7	+16 04.8	237	25.0	+3 34.4	190	34.8	-14 49.8	271	05.2	+16 23.7		
6	66	19.4	284	42.1	+16 03.9	252	26.0	+3 33.7	205	36.9	-14 49.9	286	07.4	+16 23.6		
7	81	21.9	299	41.5	03.0	267	27.0	33.1	220	39.1	50.0	301	09.5	23.5		
8	96	24.3	314	40.9	02.2	282	28.0	32.4	235	41.2	50.1	316	11.7	23.5		
9	111	26.8	329	40.3	01.3	297	29.0	31.8	250	43.3	50.2	331	13.8	23.4		
10	126	29.3	344	39.7	+16 00.4	312	30.0	31.1	265	45.4	50.3	346	16.0	23.3		
11	141	31.7	359	39.1	+15 59.5	327	31.0	+3 30.5	280	47.6	-14 50.5	1	18.1	+16 23.2		
12	156	34.2	14	38.5	+15 58.6	342	32.0	+3 29.8	295	49.7	-14 50.6	16	20.3	+16 23.1		
13	171	36.7	29	37.9	57.7	357	33.0	29.2	310	51.8	50.7	31	22.5	23.0		
14	186	39.1	44	37.3	56.8	12	34.0	28.5	325	53.9	50.8	46	24.6	22.9		
15	201	41.6	59	36.7	55.9	27	35.0	27.9	340	56.1	50.9	61	26.8	22.8		
16	216	44.0	74	36.1	55.0	42	36.0	27.2	355	58.2	51.0	76	28.9	22.7		
17	231	46.5	89	35.5	+15 54.1	57	37.0	+3 26.6	11	00.3	-14 51.1	91	31.1	+16 22.6		
18	246	49.0	104	34.9	+15 53.2	72	38.0	+3 25.9	26	02.4	-14 51.2	106	33.2	+16 22.5		
19	261	51.4	119	34.3	52.3	87	39.0	25.3	41	04.6	51.4	121	35.4	22.5		
20	276	53.9	134	33.7	51.4	102	40.0	24.6	56	06.7	51.5	136	37.5	22.4		
21	291	56.4	149	33.1	50.5	117	41.0	24.0	71	08.8	51.6	151	39.7	22.3		
22	306	58.8	164	32.5	49.6	132	42.0	23.3	86	10.9	51.7	166	41.8	22.2		
23	322	01.3	179	31.9	48.7	147	43.0	22.7	101	13.1	51.8	181	44.0	22.1		
24	337	03.8	194	31.3	+15 47.8	162	44.0	+3 22.0	116	15.2	-14 51.9	196	46.1	+16 22.0		
Dif	—		-6		-9		+10		+21		-1		+22		-1	

UT	SOL			 LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15/8 PMG: 12 ^h 01 ^m 0			Edad: 5 ^d 2 PHE { 4 ^h : 54/5 12 ^h : 54/7 20 ^h : 54/8 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	179	43.2	+9 29.0	128	20.4	-15 07.9	60 N	3 00	4 01	4 47	12 02	94	19 33	1	
1	194	43.4		142	54.6 ¹⁵²	20.4 ¹²⁵	58	15	10	53	11 50	88	46	7	
2	209	43.6		157	28.8 ¹⁵²	32.8 ¹²⁴	56	27	18	4 58	39 84		19 57	1	
3	224	43.8		172	02.9 ¹⁵¹	45.2 ¹²⁴	54	37	25	5 02	30 80		20 07	15	
4	239	44.0		186	36.9 ¹⁵⁰	-15 57.5 ¹²³	52	46	31	06	22 77		16 18		
5	254	44.2	+9 24.5	201	10.9 ¹⁵⁰	-16 09.7 ¹²²	50	3 54	4 36	5 10	11 15	74	20 24	20	
6	269	44.4	+9 23.6	215	44.8 ¹⁴⁹	-16 21.9 ¹²²	45	4 10	4 47	5 18	10 59	69	20 41	25	
7	284	44.6		230	18.6 ¹⁴⁸	34.1 ¹²²	40	23	4 57	25	47 64		20 55	29	
8	299	44.7		244	52.3 ¹⁴⁷	46.2 ¹²¹	35	33	5 04	30	36 61		21 07	32	
9	314	44.9		259	26.0 ¹⁴⁷	-16 58.2 ¹²⁰	30	42	11	35	27 58		17 35		
10	329	45.1		273	59.6 ¹⁴⁶	-17 10.2 ¹²⁰	20	4 55	21	44	10 11	53	35	40	
11	344	45.3	+9 19.2	288	33.1 ¹⁴⁵	-17 22.1 ¹¹⁹	10 N	5 05	5 30	5 51	9 57	49	21 51	43	
12	359	45.5	+9 18.3	303	06.5 ¹⁴⁴	-17 33.9 ¹¹⁸	0	5 12	5 37	5 58	9 44	45	22 05	48	
13	14	45.7		317	39.8 ¹⁴³	45.7 ¹¹⁸	10 S	18	43	6 04	31 42		20 51		
14	29	45.9		332	13.1 ¹⁴³	-17 57.4 ¹¹⁷	20	23	49	11	18 37		36 55		
15	44	46.1		346	46.3 ¹⁴²	-18 09.0 ¹¹⁶	30	27	55	19	9 02	33	22 54	60	
16	59	46.2		1	19.4 ¹⁴¹	20.6 ¹¹⁶	35	29	5 58	23	8 53	30	23 05	62	
17	74	46.4	+9 13.8	15	52.4 ¹⁴⁰	-18 32.1 ¹¹⁵	40	5 30	6 01	6 28	8 43	27	23 17	66	
18	89	46.6	+9 13.0	30	25.3 ¹³⁹	-18 43.6 ¹¹⁵	45	5 31	6 05	6 34	8 31	23	23 32	69	
19	104	46.8		44	58.1 ¹³⁸	-18 55.0 ¹¹⁴	50	31	08	41	17 18		50 75		
20	119	47.0		59	30.9 ¹³⁸	-19 06.3 ¹¹³	52	31	10	44	11 15		23 58	78	
21	134	47.2		74	03.5 ¹³⁶	17.5 ¹¹²	54	31	12	48	8 03	13	** ** *	**	
22	149	47.4		88	36.1 ¹³⁶	28.7 ¹¹²	56	31	14	52	7 55	9	** ** *	**	
23	164	47.6		103	08.6 ¹³⁵	39.7 ¹¹⁰	58	31	16	6 56	46 5		** ** *	**	
24	179	47.8	+9 07.6	117	41.0 ¹³⁴	-19 50.7 ¹¹⁰	60 S	5 30	6 18	7 01	7 36	0	** ** *	**	
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO		
	PMG 1 ^h 31 ^m 5			Mag: -3.9 PMG: 11 ^h 02 ^m			Mag: +1.8 PMG: 13 ^h 08 ^m			Mag: -2.0 PMG: 16 ^h 13 ^m			Mag: +0.4 PMG: 10 ^h 51 ^m		
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°
0	337	03.8		194	31.3	+15 47.8	162	44.0	+3 22.0	116	15.2	-14 51.9	196	46.1	+16 22.0
1	352	06.2		209	30.8	46.9	177	45.0	21.4	131	17.3	52.0	211	48.3	21.9
2	7	08.7		224	30.2	46.0	192	46.0	20.7	146	19.4	52.1	226	50.5	21.8
3	22	11.1		239	29.6	45.1	207	47.0	20.1	161	21.5	52.3	241	52.6	21.7
4	37	13.6		254	29.0	44.2	222	48.0	19.4	176	23.7	52.4	256	54.8	21.6
5	52	16.1		269	28.4	+15 43.3	237	49.0	+3 18.8	191	25.8	-14 52.5	271	56.9	+16 21.5
6	67	18.5		284	27.8	+15 42.4	252	50.0	+3 18.1	206	27.9	-14 52.6	286	59.1	+16 21.5
7	82	21.0		299	27.2	41.5	267	51.0	17.5	221	30.0	52.7	302	01.2	21.4
8	97	23.5		314	26.6	40.6	282	52.0	16.8	236	32.2	52.8	317	03.4	21.3
9	112	25.9		329	26.0	39.7	297	53.0	16.2	251	34.3	52.9	332	05.5	21.2
10	127	28.4		344	25.4	38.8	312	54.0	15.5	266	36.4	53.0	347	07.7	21.1
11	142	30.9		359	24.8	+15 37.9	327	55.0	+3 14.9	281	38.5	-14 53.2	2	09.8	+16 21.0
12	157	33.3		14	24.2	+15 37.0	342	56.0	+3 14.2	296	40.6	-14 53.3	17	12.0	+16 20.9
13	172	35.8		29	23.6	36.1	357	57.0	13.6	311	42.8	53.4	32	14.2	20.8
14	187	38.3		44	23.0	35.2	12	58.0	12.9	326	44.9	53.5	47	16.3	20.7
15	202	40.7		59	22.5	34.3	27	59.0	12.3	341	47.0	53.6	62	18.5	20.6
16	217	43.2		74	21.9	33.3	43	00.0	11.6	356	49.1	53.7	77	20.6	20.5
17	232	45.6		89	21.3	+15 32.4	58	01.0	+3 11.0	11	51.2	-14 53.8	92	22.8	+16 20.5
18	247	48.1		104	20.7	+15 31.5	73	02.0	+3 10.3	26	53.4	-14 54.0	107	24.9	+16 20.4
19	262	50.6		119	20.1	30.6	88	03.0	09.7	41	55.5	54.1	122	27.1	20.3
20	277	53.0		134	19.5	29.7	103	04.0	09.0	56	57.6	54.2	137	29.2	20.2
21	292	55.5		149	18.9	28.8	118	05.0	08.4	71	59.7	54.3	152	31.4	20.1
22	307	58.0		164	18.3	27.9	133	06.0	07.7	87	01.8	54.4	167	33.6	20.0
23	323	00.4		179	17.8	26.9	148	07.0	07.1	102	04.0	54.5	182	35.7	19.9
24	338	02.9		194	17.2	+15 26.0	163	08.0	+3 06.4	117	06.1	-14 54.6	197	37.9	+16 19.8
Dif	—			-6	-9		+10	-7		+21	-1		+22	-1	

UT	SOL			 LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15/8 PMG: 12 ^h 00 ^m 7			Edad: 6 ^d 2 SD: 15/0 PMG: 16 ^h 41 ^m	PHE { 4 ^h : 55/0 12 ^h : 55/2 20 ^h : 55/4 R°: 51 ^m									
	hG ☉	Dec				hG ☾			Dif	Dec	Dif	Civil	Náutico	Hora
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m
0	179	47.8	+9 07.6	117	41.0	-19 50.7	110	60 N	19 10	19 55	20 55	13 36 101	19 34 4	
1	194	47.9	06.7	132	13.3 ¹³³	-20 01.7 ¹¹⁰	110	58	05	47	41	18 92	19 53 12	
2	209	48.1	05.8	146	45.5 ¹³²	12.5 ¹⁰⁸	108	56	19 00	40	30	13 03 86	20 08 19	
3	224	48.3	04.9	161	17.6 ¹³¹	23.3 ¹⁰⁸	107	54	18 56	33	20	12 50 82	22 22	
4	239	48.5	04.0	175	49.6 ¹³⁰	34.0 ¹⁰⁷	106	52	52	28	11	39 78	34 25	
5	254	48.7	+9 03.1	190	21.6 ¹³⁰	-20 44.6 ¹⁰⁶	106	50	18 49	19 22	20 04	12 29 75	20 44 29	
6	269	48.9	+9 02.2	204	53.4 ¹²⁸	-20 55.2 ¹⁰⁶	106	45	18 41	19 12	19 48	12 08 70	21 06 34	
7	284	49.1	01.3	219	25.2 ¹²⁸	-21 05.6 ¹⁰⁴	104	40	35	19 03	36	11 51 66	24 37	
8	299	49.3	+9 00.4	233	56.8 ¹²⁶	16.0 ¹⁰⁴	103	35	30	18 56	26	37 63	39 40	
9	314	49.5	+8 59.6	248	28.3 ¹²⁵	26.3 ¹⁰³	102	30	25	50	18	25 60	21 52 42	
10	329	49.7	58.7	262	59.8 ¹²⁵	36.5 ¹⁰²	101	20	17	40	19 06	11 04 56	22 15 46	
11	344	49.9	+8 57.8	277	31.1 ¹²³	-21 46.6 ¹⁰¹	100	10 N	18 10	18 32	18 56	10 46 53	22 34 49	
12	359	50.0	+8 56.9	292	02.4 ¹²³	-21 56.6 ¹⁰⁰	99	0	18 04	18 25	18 49	10 29 50	22 53 51	
13	14	50.2	56.0	306	33.6 ¹²²	-22 06.5 ⁹⁹	98	10 S	17 58	19	44	10 13 46	23 11 55	
14	29	50.4	55.1	321	04.6 ¹²⁰	16.3 ⁹⁸	98	20	51	13	39	9 55 43	31 57	
15	44	50.6	54.2	335	35.6 ¹²⁰	26.1 ⁹⁸	96	30	44	08	36	35 39	23 54 61	
16	59	50.8	53.3	350	06.4 ¹¹⁸	35.7 ⁹⁶	96	35	40	05	35	23 36	** ** *	
17	74	51.0	+8 52.4	4	37.2 ¹¹⁸	-22 45.3 ⁹⁶	95	40	17 35	18 02	18 34	9 10 33	** ** *	
18	89	51.2	+8 51.5	19	07.8 ¹¹⁶	-22 54.8 ⁹⁵	93	45	17 30	17 59	18 33	8 54 29	** ** *	
19	104	51.4	50.6	33	38.4 ¹¹⁶	-23 04.1 ⁹³	93	50	23	56	33	35 24	** ** *	
20	119	51.6	49.7	48	08.8 ¹¹⁴	13.4 ⁹³	92	52	20	54	33	26 21	** ** *	
21	134	51.8	48.8	62	39.1 ¹¹³	22.6 ⁹²	90	54	17	53	34	16 18	0 08 81	
22	149	52.0	47.9	77	09.4 ¹¹³	31.6 ⁹⁰	88	56	13	51	34	8 04 15	19 85	
23	164	52.2	47.0	91	39.5 ¹¹¹	40.6 ⁹⁰	88	58	09	49	35	7 51 10	31 90	
24	179	52.4	+8 46.1	106	09.5 ¹¹⁰	-23 49.4 ⁸⁸	88	60 S	17 05	17 47	18 35	7 36 2	0 46 97	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO				
	PMG: 1 ^h 27 ^m 6		Mag: -3.9 PMG: 11 ^h 03 ^m		Mag: +1.8 PMG: 13 ^h 07 ^m		Mag: -1.9 PMG: 16 ^h 09 ^m		Mag: +0.4 PMG: 10 ^h 48 ^m				
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec			
h	°	'	°	'	°	'	°	'	°	'			
0	338	02.9	194	17.2	+15 26.0	163	08.0	+3 06.4	117	06.1	-14 54.6		
1	353	05.4	209	16.6	25.1	178	09.0	05.8	132	08.2	54.8		
2	8	07.8	224	16.0	24.2	193	10.0	05.1	147	10.3	54.9		
3	23	10.3	239	15.4	23.3	208	11.0	04.5	162	12.4	55.0		
4	38	12.8	254	14.8	22.3	223	12.0	03.8	177	14.6	55.1		
5	53	15.2	269	14.2	+15 21.4	238	13.0	+3 03.2	192	16.7	-14 55.2		
6	68	17.7	284	13.7	+15 20.5	253	14.0	+3 02.5	207	18.8	-14 55.3		
7	83	20.1	299	13.1	19.6	268	15.0	01.8	222	20.9	55.4		
8	98	22.6	314	12.5	18.6	283	16.0	01.2	237	23.0	55.6		
9	113	25.1	329	11.9	17.7	298	17.0	+3 00.5	252	25.1	55.7		
10	128	27.5	344	11.3	16.8	313	18.0	+2 59.9	267	27.3	55.8		
11	143	30.0	359	10.7	+15 15.9	328	19.0	+2 59.2	282	29.4	-14 55.9		
12	158	32.5	14	10.2	+15 14.9	343	20.0	+2 58.6	297	31.5	-14 56.0		
13	173	34.9	29	09.6	14.0	358	21.0	57.9	312	33.6	56.1		
14	188	37.4	44	09.0	13.1	13	22.0	57.3	327	35.7	56.2		
15	203	39.9	59	08.4	12.2	28	23.0	56.6	342	37.8	56.4		
16	218	42.3	74	07.8	11.2	43	24.0	56.0	357	39.9	56.5		
17	233	44.8	89	07.3	+15 10.3	58	25.0	+2 55.3	12	42.1	-14 56.6		
18	248	47.2	104	06.7	+15 09.4	73	26.0	+2 54.7	27	44.2	-14 56.7		
19	263	49.7	119	06.1	08.4	88	27.0	54.0	42	46.3	56.8		
20	278	52.2	134	05.5	07.5	103	28.0	53.4	57	48.4	56.9		
21	293	54.6	149	05.0	06.6	118	29.0	52.7	72	50.5	57.1		
22	308	57.1	164	04.4	05.6	133	30.0	52.1	87	52.6	57.2		
23	323	59.6	179	03.8	04.7	148	31.0	51.4	102	54.7	57.3		
24	339	02.0	194	03.2	+15 03.8	163	32.0	+2 50.8	117	56.9	-14 57.4		
Dif	—		-6	-9		+10	-7		+21	-1		+22	-1

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna														
	SD: 15 ^h 8 PMG: 12 ^h 00 ^m 4			Edad: 7 ^d 2 SD: 15 ^h 1 PMG: 17 ^h 32 ^m	PHE { 4 ^h : 55 ^m 6 12 ^h : 55 ^m 9 20 ^h : 56 ^m 1 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	m										
0	179	52.4	+8	46.1	106	09.5	-23	49.4	60 N	3 07	4 07	4 52	15 17	100	19 38	14											
1	194	52.5		45.2	120	39.5 ¹¹⁰	-23	58.2 ⁸⁸	58	21	15	4 57	14 50	88	20 05	26											
2	209	52.7		44.3	135	09.3 ¹⁰⁸	-24	06.8 ⁸⁶	56	32	22	5 02		29 82		27 31											
3	224	52.9		43.4	149	39.0 ¹⁰⁷		15.4 ⁸⁶	54	42	28	06	14 12	78		44 36											
4	239	53.1		42.5	164	08.6 ¹⁰⁶		23.8 ⁸⁴	52	50	34	10	13 57	75	20 59	39											
5	254	53.3	+8	41.6	178	38.1 ¹⁰⁵	-24	32.1 ⁸³	50	3 58	4 39	5 13	13 44	73	21 13	40											
6	269	53.5	+8	40.7	193	07.5 ¹⁰⁴	-24	40.3 ⁸²	45	4 13	4 50	5 20	13 18	69	21 40	44											
7	284	53.7		39.8	207	36.8 ¹⁰³		48.4 ⁸¹	40	25	4 59	27	12 57	66	22 01	47											
8	299	53.9		38.9	222	06.0 ¹⁰²	-24	56.4 ⁸⁰	35	35	5 06	32	40 64		19	49											
9	314	54.1		38.0	236	35.1 ¹⁰¹	-25	04.3 ⁷⁹	30	43	12	36	25 62		22 34	50											
10	329	54.3		37.1	251	04.0 ⁹⁹		12.0 ⁷⁷	20	4 56	22	44	12 00	59	23 01	52											
11	344	54.5	+8	36.2	265	32.9 ⁹⁹	-25	19.6 ⁷⁶	10 N	5 05	5 30	5 51	11 39	56	23 23	54											
12	359	54.7	+8	35.3	280	01.7 ⁹⁸	-25	27.2 ⁷⁶	0	5 12	5 36	5 57	11 19	54	23 44	56											
13	14	54.9		34.4	294	30.3 ⁹⁶		34.6 ⁷⁴	10 S	17	42	6 03	10 59	52	***	***	***										
14	29	55.1		33.5	308	58.9 ⁹⁶		41.8 ⁷²	20	22	47	10	38 49		***	***	***										
15	44	55.3		32.6	323	27.3 ⁹⁴		49.0 ⁷²	30	25	53	17	10 14	46	***	***	***										
16	59	55.5		31.7	337	55.6 ⁹³	-25	56.0 ⁷⁰	35	26	55	21	9 59	44		0 07	64										
17	74	55.7	+8	30.8	352	23.9 ⁹³	-26	02.9 ⁶⁹	40	5 27	5 58	6 25	9 43	42		0 23	66										
18	89	55.9	+8	29.9	6	52.0 ⁹¹	-26	09.7 ⁶⁸	45	5 27	6 01	6 31	9 23	39		0 41	70										
19	104	56.1		29.0	21	20.0 ⁹⁰		16.3 ⁶⁶	50	27	04	37	8 59	34	1 05	74											
20	119	56.3		28.1	35	47.9 ⁸⁹		22.8 ⁶⁵	52	27	06	40	47 32		16	77											
21	134	56.4		27.2	50	15.8 ⁸⁹		29.2 ⁶⁴	54	27	07	43	34 29		29	80											
22	149	56.6		26.3	64	43.5 ⁸⁷		35.4 ⁶²	56	26	09	46	19 24		1 44	84											
23	164	56.8		25.4	79	11.1 ⁸⁶		41.5 ⁶¹	58	25	11	50	8 01	18	2 01	91											
24	179	57.0	+8	24.5	93	38.6 ⁸⁵	-26	47.5 ⁶⁰	60 S	5 25	6 13	6 55	7 38	10	2 23	100											
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO														
	PMG 1 ^h 23 ^m 6			Mag: -3.9 PMG: 11 ^h 04 ^m			Mag: +1.8 PMG: 13 ^h 05 ^m			Mag: -1.9 PMG: 16 ^h 06 ^m			Mag: +0.5 PMG: 10 ^h 44 ^m														
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec													
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°										
0	339	02.0	194	03.2	+15	03.8	163	32.0	+2	50.8	117	56.9	-14	57.4	198	29.6	+16	17.6									
1	354	04.5	209	02.6		02.8	178	33.0		50.1	132	59.0		57.5	213	31.8		17.5									
2	9	07.0	224	02.1		01.9	193	34.0		49.5	148	01.1		57.6	228	33.9		17.5									
3	24	09.4	239	01.5	+15	00.9	208	35.0		48.8	163	03.2		57.7	243	36.1		17.4									
4	39	11.9	254	00.9	+15	00.0	223	36.0		48.2	178	05.3		57.9	258	38.2		17.3									
5	54	14.4	269	00.3	+14	59.1	238	37.0	+2	47.5	193	07.4	-14	58.0	273	40.4	+16	17.2									
6	69	16.8	283	59.8	+14	58.1	253	38.0	+2	46.8	208	09.5	-14	58.1	288	42.5	+16	17.1									
7	84	19.3	298	59.2		57.2	268	39.0		46.2	223	11.6		58.2	303	44.7		17.0									
8	99	21.7	313	58.6		56.2	283	40.0		45.5	238	13.8		58.3	318	46.9		16.9									
9	114	24.2	328	58.1		55.3	298	41.0		44.9	253	15.9		58.4	333	49.0		16.8									
10	129	26.7	343	57.5		54.4	313	42.0		44.2	268	18.0		58.6	348	51.2		16.7									
11	144	29.1	358	56.9	+14	53.4	328	43.0	+2	43.6	283	20.1	-14	58.7	3	53.3	+16	16.6									
12	159	31.6	13	56.3	+14	52.5	343	44.0	+2	42.9	298	22.2	-14	58.8	18	55.5	+16	16.6									
13	174	34.1	28	55.8		51.5	358	45.0		42.3	313	24.3		58.9	33	57.6		16.5									
14	189	36.5	43	55.2		50.6	13	46.0		41.6	328	26.4		59.0	48	59.8		16.4									
15	204	39.0	58	54.6		49.6	28	47.0		41.0	343	28.5		59.1	64	02.0		16.3									
16	219	41.5	73	54.1		48.7	43	48.0		40.3	358	30.6		59.2	79	04.1		16.2									
17	234	43.9	88	53.5	+14	47.7	58	49.0	+2	39.7	13	32.8	-14	59.4	94	06.3	+16	16.1									
18	249	46.4	103	52.9	+14	46.8	73	50.0	+2	39.0	28	34.9	-14	59.5	109	08.4	+16	16.0									
19	264	48.9	118	52.3		45.8	88	51.0		38.4	43	37.0		59.6	124	10.6		15.9									
20	279	51.3	133	51.8		44.9	103	52.0		37.7	58	39.1		59.7	139	12.7		15.8									
21	294	53.8	148	51.2		43.9	118	53.0		37.1	73	41.2		59.8	154	14.9		15.7									
22	309	56.2	163	50.6		43.0	133	54.0		36.4	88	43.3	-14	59.9	169	17.1		15.6									
23	324	58.7	178	50.1		42.0	148	55.0		35.7	103	45.4	-15	00.1	184	19.2		15.6									
24	340	01.2	193	49.5	+14	41.1	163	56.0	+2	35.1	118	47.5	-15	00.2	199	21.4	+16	15.5									
Dif	—			-6			-9			+10			-7			+21			-1			+22			-1		

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8 PMG: 12 ^h 00 ^m 0			Edad: 8 ^d 2 PHE { 4 ^h : 56/4 12 ^h : 56/7 20 ^h : 56/9 SD: 15 ^h 3 PMG: 18 ^h 27 ^m R°: 58 ^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	57.0	+8 24.5	93	38.6	-26 47.5	59	60 N	19 04	19 49	20 47	16 57 74	19 52 49	
1	194	57.2	23.6	108	06.0	84 53.4	59	58	18 59	41	34	16 18 69	20 31 53	
2	209	57.4	22.6	122	33.3	83 -26 59.1	57	56	55	34	24	15 51 67	20 58 56	
3	224	57.6	21.7	137	00.5	82 -27 04.6	55	54	51	28	14	30 65	21 20 56	
4	239	57.8	20.8	151	27.6	81 10.0	54	52	48	23	20 06	15 12 65	38 57	
5	254	58.0	+8 19.9	165	54.6	80 -27 15.3	53	50	18 44	19 18	19 59	14 57 64	21 53 57	
6	269	58.2	+8 19.0	180	21.5	79 -27 20.5	52	45	18 38	19 08	19 44	14 27 63	22 24 58	
7	284	58.4	18.1	194	48.3	78 25.5	50	40	32	19 00	33	14 03 62	22 48 58	
8	299	58.6	17.2	209	15.0	77 30.3	48	35	27	18 53	23	13 44 61	23 08 58	
9	314	58.8	16.3	223	41.6	76 35.0	47	30	23	47	16	13 27 61	24 59	
10	329	59.0	15.4	238	08.1	75 39.6	46	20	15	38	19 04	12 59 60	23 53 59	
11	344	59.2	+8 14.5	252	34.5	74 -27 44.0	44	10 N	18 09	18 30	18 55	12 35 59	** ** *	
12	359	59.4	+8 13.6	267	00.9	74 -27 48.2	42	0	18 03	18 24	18 48	12 13 58	** ** *	
13	14	59.6	12.7	281	27.1	72 52.3	41	10 S	17 58	19	43	11 51 57	0 06 57	
14	29	59.8	11.8	295	53.2	71 -27 56.3	40	20	52	14	39	27 56	28 60	
15	45	00.0	10.9	310	19.3	71 -28 00.1	38	30	45	09	37	11 00 54	0 55 61	
16	60	00.2	10.0	324	45.3	70 03.7	36	35	41	07	36	10 43 54	1 11 62	
17	75	00.4	+8 09.0	339	11.1	68 -28 07.2	35	40	17 37	18 04	18 35	10 25 52	1 29 64	
18	90	00.6	+8 08.1	353	36.9	68 -28 10.5	33	45	17 32	18 01	18 35	10 02 51	1 51 66	
19	105	00.8	07.2	8	02.6	67 13.7	32	50	26	17 59	36	9 33 49	2 19 69	
20	120	01.0	06.3	22	28.2	66 16.7	30	52	23	57	36	19 47	33 70	
21	135	01.2	05.4	36	53.8	66 19.5	28	54	20	56	37	9 03 45	2 49 72	
22	150	01.4	04.5	51	19.2	64 22.2	27	56	17	55	38	8 43 43	3 08 75	
23	165	01.6	03.6	65	44.6	64 24.7	25	58	13	53	39	8 19 39	3 32 79	
24	180	01.8	+8 02.7	80	09.9	63 -28 27.1	24	60 S	17 09	17 52	18 40	7 48 29	4 03 89	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 1 ^h 19 ^m 7		Mag: -3.9 PMG: 11 ^h 05 ^m			Mag: +1.8 PMG: 13 ^h 03 ^m			Mag: -1.9 PMG: 16 ^h 03 ^m			Mag: +0.5 PMG: 10 ^h 41 ^m		
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'		
0	340	01.2	193 49.5	+14 41.1	163 56.0	+2 35.1	118 47.5	-15 00.2	199 21.4	+16 15.5				
1	355	03.6	208 48.9	40.1	178 57.0	34.4	133 49.6	00.3	214 23.5	15.4				
2	10	06.1	223 48.4	39.2	193 58.0	33.8	148 51.7	00.4	229 25.7	15.3				
3	25	08.6	238 47.8	38.2	208 59.0	33.1	163 53.8	00.5	244 27.9	15.2				
4	40	11.0	253 47.2	37.3	224 00.0	32.5	178 56.0	00.6	259 30.0	15.1				
5	55	13.5	268 46.7	+14 36.3	239 01.0	+2 31.8	193 58.1	-15 00.8	274 32.2	+16 15.0				
6	70	16.0	283 46.1	+14 35.3	254 02.0	+2 31.2	209 00.2	-15 00.9	289 34.3	+16 14.9				
7	85	18.4	298 45.6	34.4	269 03.0	30.5	224 02.3	01.0	304 36.5	14.8				
8	100	20.9	313 45.0	33.4	284 04.0	29.9	239 04.4	01.1	319 38.6	14.7				
9	115	23.4	328 44.4	32.5	299 05.0	29.2	254 06.5	01.2	334 40.8	14.7				
10	130	25.8	343 43.9	31.5	314 06.0	28.6	269 08.6	01.3	349 43.0	14.6				
11	145	28.3	358 43.3	+14 30.5	329 07.0	+2 27.9	284 10.7	-15 01.5	4 45.1	+16 14.5				
12	160	30.7	13 42.7	+14 29.6	344 08.0	+2 27.2	299 12.8	-15 01.6	19 47.3	+16 14.4				
13	175	33.2	28 42.2	28.6	359 09.0	26.6	314 14.9	01.7	34 49.4	14.3				
14	190	35.7	43 41.6	27.7	14 10.0	25.9	329 17.0	01.8	49 51.6	14.2				
15	205	38.1	58 41.1	26.7	29 11.0	25.3	344 19.1	01.9	64 53.7	14.1				
16	220	40.6	73 40.5	25.7	44 12.0	24.6	359 21.2	02.0	79 55.9	14.0				
17	235	43.1	88 39.9	+14 24.8	59 13.0	+2 24.0	14 23.3	-15 02.2	94 58.1	+16 13.9				
18	250	45.5	103 39.4	+14 23.8	74 14.0	+2 23.3	29 25.4	-15 02.3	110 00.2	+16 13.8				
19	265	48.0	118 38.8	22.8	89 15.0	22.7	44 27.5	02.4	125 02.4	13.8				
20	280	50.5	133 38.3	21.9	104 16.0	22.0	59 29.6	02.5	140 04.5	13.7				
21	295	52.9	148 37.7	20.9	119 17.0	21.4	74 31.8	02.6	155 06.7	13.6				
22	310	55.4	163 37.1	19.9	134 18.0	20.7	89 33.9	02.8	170 08.9	13.5				
23	325	57.8	178 36.6	19.0	149 19.0	20.0	104 36.0	02.9	185 11.0	13.4				
24	341	00.3	193 36.0	+14 18.0	164 19.9	+2 19.4	119 38.1	-15 03.0	200 13.2	+16 13.3				
Dif	—		-6	-10	+10	-7	+21	-1	+22	-1				

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15 ^h 9			Edad: 9 ^d 2	PHE { 4 ^h : 57/2 12 ^h : 57/6 20 ^h : 57/9	SD: 15 ^h 5	PMG: 19 ^h 25 ^m	R°: 60 ^m									
	hG ☉	Dec								hG ☾	Dif	Dec	Dif	Náutico	Civil	Hora	R°
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	180	01.8	+8	02.7	80	09.9	-28	27.1	60 N	3	14	4	12	4	57	18	11
1	195	02.0		01.8	94	35.1		29.3	58		26		20	5	01	17	27
2	210	02.2	+8	00.9	109	00.3		31.3	56		37		26		06	16	58
3	225	02.4	+8	00.0	123	25.3		33.2	54		46		32		10		35
4	240	02.6	+7	59.0	137	50.3		34.8	52	3	54	38	13		17	49	
5	255	02.8	+7	58.1	152	15.3	-28	36.4	50	4	01	4	42	5	16	16	01
6	270	03.0	+7	57.2	166	40.1	-28	37.7	45	4	16	4	53	5	23	15	30
7	285	03.2		56.3	181	04.9		38.9	40		28		5	01	28	15	05
8	300	03.4		55.4	195	29.6		39.9	35		37		07	33		14	45
9	315	03.6		54.5	209	54.3		40.7	30		44	13	37			14	28
10	330	03.8		53.6	224	18.9		41.4	20		56	22	45			13	59
11	345	04.0	+7	52.7	238	43.4	-28	41.8	10 N	5	05	5	30	5	51	13	34
12	0	04.2	+7	51.7	253	07.9	-28	42.1	0	5	11	5	36	5	56	13	11
13	15	04.4		50.8	267	32.3		42.3	10 S		16	41	6	02		12	48
14	30	04.6		49.9	281	56.7		42.2	20		20	46	08			12	23
15	45	04.8		49.0	296	21.0		42.0	30		23	50	14			11	54
16	60	05.0		48.1	310	45.3		41.6	35		23	53	18				37
17	75	05.2	+7	47.2	325	09.5	-28	41.0	40	5	24	5	55	6	22	11	17
18	90	05.4	+7	46.3	339	33.7	-28	40.2	45	5	24	5	58	6	27	10	53
19	105	05.6		45.4	353	57.8		39.3	50		23	6	00	33			22
20	120	05.8		44.4	8	21.9		38.1	52		23	01	35			10	06
21	135	06.0		43.5	22	46.0		36.8	54		22	03	38			9	48
22	150	06.2		42.6	37	10.0		35.3	56		21	04	41			9	26
23	165	06.4		41.7	51	34.0		33.6	58		20	05	45			8	58
24	180	06.6	+7	40.8	65	57.9	-28	31.8	60 S	5	19	6	07	6	49	8	17

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 1 ^h 15 ^m 8		Mag: -3.9 PMG: 11 ^h 06 ^m		Mag: +1.8 PMG: 13 ^h 02 ^m		Mag: -1.9 PMG: 15 ^h 59 ^m		Mag: +0.5 PMG: 10 ^h 38 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	341	00.3	193	36.0	+14	18.0	164	19.9	+2	19.4
1	356	02.8	208	35.5		17.0	179	20.9		18.7
2	11	05.2	223	34.9		16.0	194	21.9		18.1
3	26	07.7	238	34.4		15.1	209	22.9		17.4
4	41	10.2	253	33.8		14.1	224	23.9		16.8
5	56	12.6	268	33.3	+14	13.1	239	24.9	+2	16.1
6	71	15.1	283	32.7	+14	12.1	254	25.9	+2	15.5
7	86	17.6	298	32.1		11.2	269	26.9		14.8
8	101	20.0	313	31.6		10.2	284	27.9		14.2
9	116	22.5	328	31.0		09.2	299	28.9		13.5
10	131	25.0	343	30.5		08.2	314	29.9		12.8
11	146	27.4	358	29.9	+14	07.3	329	30.9	+2	12.2
12	161	29.9	13	29.4	+14	06.3	344	31.9	+2	11.5
13	176	32.3	28	28.8		05.3	359	32.9		10.9
14	191	34.8	43	28.3		04.3	14	33.9		10.2
15	206	37.3	58	27.7		03.3	29	34.9		09.6
16	221	39.7	73	27.2		02.4	44	35.9		08.9
17	236	42.2	88	26.6	+14	01.4	59	36.9	+2	08.3
18	251	44.7	103	26.1	+14	00.4	74	37.9	+2	07.6
19	266	47.1	118	25.5	+13	59.4	89	38.9		06.9
20	281	49.6	133	25.0		58.4	104	39.9		06.3
21	296	52.1	148	24.4		57.4	119	40.9		05.6
22	311	54.5	163	23.9		56.5	134	41.9		05.0
23	326	57.0	178	23.3		55.5	149	42.9		04.3
24	341	59.5	193	22.8	+13	54.5	164	43.9	+2	03.7
Dif	—		-6		-10		+10		-7	
							+21		-1	
									+22	
									-1	

UT	SOL			☾ LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 15/9 PMG: 11 ^h 59 ^m 4			Edad: 10 ^d 2 PHE { 4 ^h : 58/2 12 ^h : 58/5 20 ^h : 58/8 PMG: 20 ^h 25 ^m R°: 60 ^m						Civil		Náutico	Hora	R°	Hora	R°
	hG ☉	Dec		hG ☾	Dif	Dec	Dif									
h	°	'	°	'	°	'	°	° N	h m	h m	h m	h m	m	h m	m	
0	180	06.6	+7 40.8	65	57.9	-28 31.8	21	60	18 58	19 42	20 39	18 39	8	22 19	117	
1	195	06.8		80	21.8		49	58	54	35	27	18 07	19	22 51	106	
2	210	07.0		94	45.7		49	56	50	29	17	17 42	27	23 15	99	
3	225	07.2		109	09.5		48	54	46	23	09	23	31	34	94	
4	240	07.5		123	33.4		49	52	43	18	20 01	17 06	35	23 51	89	
5	255	07.7	+7 36.2	137	57.2	-28 19.7	28	50	18 40	19 14	19 54	16 52	37	***	***	
6	270	07.9	+7 35.3	152	21.0	-28 16.7	30	45	18 34	19 04	19 40	16 23	42	***	***	
7	285	08.1		166	44.7		47	40	29	18 56	29	16 00	46	***	***	
8	300	08.3		181	08.5		48	35	24	50	20	15 41	49	0 06	68	
9	315	08.5		195	32.2		47	30	20	45	13	15 25	51	23	66	
10	330	08.7		209	55.9	-28 02.9	38	20	14	36	19 02	14 57	55	0 52	64	
11	345	08.9	+7 30.7	224	19.6	-27 59.0	39	10 N	18 08	18 29	18 54	14 33	58	1 17	62	
12	0	09.1	+7 29.8	238	43.4	-27 54.9	41	0	18 03	18 24	18 48	14 11	60	1 40	60	
13	15	09.3		253	07.1		47	10 S	17 57	19	43	13 49	63	2 02	59	
14	30	09.5		267	30.7		46	20	52	14	40	13 25	66	27	56	
15	45	09.7		281	54.4		47	30	46	10	38	12 57	69	2 55	54	
16	60	09.9		296	18.1		47	35	43	08	37	41	71	3 12	52	
17	75	10.1	+7 25.2	310	41.8	-27 31.7	50	40	17 39	18 06	18 37	12 21	74	3 32	50	
18	90	10.3	+7 24.3	325	05.5	-27 26.5	52	45	17 34	18 04	18 38	11 58	77	3 55	48	
19	105	10.5		339	29.2		54	50	29	01	39	28	82	4 26	43	
20	120	10.7		353	53.0		56	52	26	18 00	39	11 13	84	41	41	
21	135	10.9		8	16.7		58	54	24	17 59	40	10 56	87	4 58	39	
22	150	11.1		22	40.4	-27 03.7	60	56	21	58	41	35	92	5 19	35	
23	165	11.3		37	04.2	-26 57.6	61	58	18	57	43	10 09	98	5 46	28	
24	180	11.5	+7 18.8	51	27.9	-26 51.3	63	60 S	17 14	17 56	18 44	9 32	110	6 22	17	

UT	♈ ARIES		♊ VENUS		♂ MARTE		♃ JÚPITER		♄ SATURNO		
	PMG: 1 ^h 11 ^m 8		Mag: -3.9 PMG: 11 ^h 07 ^m		Mag: +1.8 PMG: 13 ^h 00 ^m		Mag: -1.9 PMG: 15 ^h 56 ^m		Mag: +0.5 PMG: 10 ^h 34 ^m		
	hG ♈		hG ♊	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	
0	341	59.5	193	22.8	+13 54.5	164 43.9	+2 03.7	120 28.5	-15 05.8	201 05.0	+16 11.1
1	357	01.9	208	22.2	53.5	179 44.9	03.0	135 30.6	05.9	216 07.2	11.1
2	12	04.4	223	21.7	52.5	194 45.9	02.4	150 32.7	06.1	231 09.3	11.0
3	27	06.8	238	21.1	51.5	209 46.9	01.7	165 34.8	06.2	246 11.5	10.9
4	42	09.3	253	20.6	50.5	224 47.9	01.1	180 36.9	06.3	261 13.6	10.8
5	57	11.8	268	20.1	+13 49.5	239 48.9	+2 00.4	195 39.0	-15 06.4	276 15.8	+16 10.7
6	72	14.2	283	19.5	+13 48.6	254 49.9	+1 59.7	210 41.1	-15 06.5	291 18.0	+16 10.6
7	87	16.7	298	19.0	47.6	269 50.9	59.1	225 43.2	06.7	306 20.1	10.5
8	102	19.2	313	18.4	46.6	284 51.9	58.4	240 45.3	06.8	321 22.3	10.4
9	117	21.6	328	17.9	45.6	299 52.9	57.8	255 47.4	06.9	336 24.4	10.3
10	132	24.1	343	17.3	44.6	314 53.9	57.1	270 49.5	07.0	351 26.6	10.2
11	147	26.6	358	16.8	+13 43.6	329 54.9	+1 56.5	285 51.6	-15 07.1	6 28.8	+16 10.2
12	162	29.0	13	16.2	+13 42.6	344 55.9	+1 55.8	300 53.7	-15 07.2	21 30.9	+16 10.1
13	177	31.5	28	15.7	41.6	359 56.9	55.1	315 55.8	07.4	36 33.1	10.0
14	192	34.0	43	15.2	40.6	14 57.9	54.5	330 57.9	07.5	51 35.3	09.9
15	207	36.4	58	14.6	39.6	29 58.8	53.8	346 00.0	07.6	66 37.4	09.8
16	222	38.9	73	14.1	38.6	44 59.8	53.2	1 02.0	07.7	81 39.6	09.7
17	237	41.3	88	13.5	+13 37.6	60 00.8	+1 52.5	16 04.1	-15 07.8	96 41.7	+16 09.6
18	252	43.8	103	13.0	+13 36.6	75 01.8	+1 51.9	31 06.2	-15 08.0	111 43.9	+16 09.5
19	267	46.3	118	12.5	35.6	90 02.8	51.2	46 08.3	08.1	126 46.1	09.4
20	282	48.7	133	11.9	34.6	105 03.8	50.6	61 10.4	08.2	141 48.2	09.3
21	297	51.2	148	11.4	33.6	120 04.8	49.9	76 12.5	08.3	156 50.4	09.3
22	312	53.7	163	10.8	32.6	135 05.8	49.2	91 14.6	08.4	171 52.5	09.2
23	327	56.1	178	10.3	31.6	150 06.8	48.6	106 16.7	08.6	186 54.7	09.1
24	342	58.6	193	09.8	+13 30.6	165 07.8	+1 47.9	121 18.8	-15 08.7	201 56.9	+16 09.0
Dif	—		-5 -10		+10 -7		+21 -1		+22 -1		

UT	SOL			O LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 15'9 PMG: 11 ^h 59 ^m 1			Edad: 11 ^d 2 PHE { SD: 16'1 PMG: 21 ^h 25 ^m 4 ^h : 59'2 12 ^h : 59'5 20 ^h : 59'8 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	180	11.5	+7	18.8	51	27.9	-26	51.3	60 N	3	20	4	17	5	01	18	47			
1	195	11.8		17.8	65	51.7	48	44.7	58		32		24		06	26	10			
2	210	12.0		16.9	80	15.5	48	38.1	56		42		31		10	18	09			
3	225	12.2		16.0	94	39.4	49	31.2	54		51		36		13	17	54			
4	240	12.4		15.1	109	03.2	48	24.1	52		58		41		16	41	23			
5	255	12.6	+7	14.2	123	27.1	49	-26	50		4	05	4	46	5	19	17			
6	270	12.8	+7	13.2	137	51.0	49	-26	45		4	19	4	55	5	25	17			
7	285	13.0		12.3	152	15.0	50	-26	40		30		5	03		30	16			
8	300	13.2		11.4	166	38.9	49	-25	35		38		09		35	30	41			
9	315	13.4		10.5	181	02.9	50	46.1	30		46		14		38	16	16			
10	330	13.6		09.6	195	27.0	51	37.9	20		57		23		45	15	52			
11	345	13.8	+7	08.6	209	51.1	51	-25	10 N		5	05	5	29	5	51	15			
12	0	14.0	+7	07.7	224	15.2	51	-25	0		5	11	5	35	5	56	15			
13	15	14.2		06.8	238	39.3	51	12.4	10 S		15		40	6	01	14	52			
14	30	14.4		05.9	253	03.5	52	-25	20		18		44		06	31	67			
15	45	14.7		04.9	267	27.7	52	-24	30		20		48		12	14	06			
16	60	14.9		04.0	281	52.0	53	45.3	35		21		50		15	13	52			
17	75	15.1	+7	03.1	296	16.3	53	-24	40		5	21	5	52	6	19	13			
18	90	15.3	+7	02.2	310	40.7	54	-24	45		5	20	5	54	6	23	13			
19	105	15.5		01.2	325	05.1	54	16.6	50		19		56		29	12	50			
20	120	15.7	+7	00.3	339	29.6	55	-24	52		18		57		31	37	93			
21	135	15.9	+6	59.4	353	54.1	55	-23	54		17		58		33	23	97			
22	150	16.1		58.5	8	18.7	56	46.4	56		16		5	59	36	12	07			
23	165	16.3		57.5	22	43.3	56	36.0	58		15		6	00	39	11	47			
24	180	16.5	+6	56.6	37	08.0	57	-23	60 S		5	13	6	01	6	43	11			
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO								
	PMG 1 ^h 07 ^m 9		Mag: -3.9 PMG: 11 ^h 08 ^m			Mag: +1.8 PMG: 12 ^h 59 ^m			Mag: -1.9 PMG: 15 ^h 53 ^m			Mag: +0.5 PMG: 10 ^h 31 ^m								
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		hG ♅	Dec				
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	342	58.6	193	09.8	+13	30.6	165	07.8	+1	47.9	121	18.8	-15	08.7	201	56.9	+16	09.0		
1	358	01.1	208	09.2		29.6	180	08.8		47.3	136	20.9		08.8	216	59.0		08.9		
2	13	03.5	223	08.7		28.6	195	09.8		46.6	151	23.0		08.9	232	01.2		08.8		
3	28	06.0	238	08.1		27.6	210	10.8		46.0	166	25.1		09.0	247	03.4		08.7		
4	43	08.5	253	07.6		26.6	225	11.8		45.3	181	27.2		09.2	262	05.5		08.6		
5	58	10.9	268	07.1	+13	25.6	240	12.8	+1	44.6	196	29.3	-15	09.3	277	07.7	+16	08.5		
6	73	13.4	283	06.5	+13	24.6	255	13.8	+1	44.0	211	31.4	-15	09.4	292	09.8	+16	08.5		
7	88	15.8	298	06.0		23.6	270	14.8		43.3	226	33.5		09.5	307	12.0		08.4		
8	103	18.3	313	05.5		22.6	285	15.8		42.7	241	35.6		09.6	322	14.2		08.3		
9	118	20.8	328	04.9		21.6	300	16.8		42.0	256	37.6		09.8	337	16.3		08.2		
10	133	23.2	343	04.4		20.5	315	17.8		41.4	271	39.7		09.9	352	18.5		08.1		
11	148	25.7	358	03.9	+13	19.5	330	18.8	+1	40.7	286	41.8	-15	10.0	7	20.6	+16	08.0		
12	163	28.2	13	03.3	+13	18.5	345	19.8	+1	40.1	301	43.9	-15	10.1	22	22.8	+16	07.9		
13	178	30.6	28	02.8		17.5	0	20.8		39.4	316	46.0		10.2	37	25.0		07.8		
14	193	33.1	43	02.3		16.5	15	21.8		38.7	331	48.1		10.4	52	27.1		07.7		
15	208	35.6	58	01.7		15.5	30	22.8		38.1	346	50.2		10.5	67	29.3		07.6		
16	223	38.0	73	01.2		14.5	45	23.8		37.4	1	52.3		10.6	82	31.5		07.6		
17	238	40.5	88	00.7	+13	13.5	60	24.8	+1	36.8	16	54.4	-15	10.7	97	33.6	+16	07.5		
18	253	42.9	103	00.1	+13	12.4	75	25.7	+1	36.1	31	56.5	-15	10.8	112	35.8	+16	07.4		
19	268	45.4	117	59.6		11.4	90	26.7		35.5	46	58.6		11.0	127	37.9		07.3		
20	283	47.9	132	59.1		10.4	105	27.7		34.8	62	00.6		11.1	142	40.1		07.2		
21	298	50.3	147	58.5		09.4	120	28.7		34.1	77	02.7		11.2	157	42.3		07.1		
22	313	52.8	162	58.0		08.4	135	29.7		33.5	92	04.8		11.3	172	44.4		07.0		
23	328	55.3	177	57.5		07.4	150	30.7		32.8	107	06.9		11.4	187	46.6		06.9		
24	343	57.7	192	57.0	+13	06.3	165	31.7	+1	32.2	122	09.0	-15	11.6	202	48.8	+16	06.8		
Dif	—		-5 -10			+10 -7			+21 -1			-1			+22 -1					

UT	SOL		☉ LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15 ^h 9		Edad: 12 ^d 2	PHE {	4 ^h : 60'0 12 ^h : 60'3 20 ^h : 60'5	Final del crepúsculo			Salida de Luna		Puesta de Luna			
	PMG: 11 ^h 58 ^m 7					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	16.5	+6 56.6	37	08.0	-23 25.4	60 N	18 52	19 36	20 32	18 49 0	0 16 118		
1	195	16.7	55.7	51	32.7	57 14.7	58	48	29	21	36 5	37 110		
2	210	16.9	54.8	65	57.5	58 -23 03.8	56	45	23	11	24 10	0 54 104		
3	225	17.2	53.8	80	22.3	58 -22 52.7	54	41	18	20 03	14 14	1 08 99		
4	240	17.4	52.9	94	47.2	59 41.5	52	39	13	19 56	18 04 18	20 96		
5	255	17.6	+6 52.0	109	12.1	59 -22 30.1	50	18 36	19 09	19 49	17 56 20	1 31 92		
6	270	17.8	+6 51.1	123	37.1	60 -22 18.6	45	18 30	19 00	19 36	17 38 27	1 54 85		
7	285	18.0	50.1	138	02.2	61 -22 06.9	40	26	18 53	26	24 31	2 12 80		
8	300	18.2	49.2	152	27.3	61 -21 55.1	35	22	47	17	11 36	27 76		
9	315	18.4	48.3	166	52.5	62 43.0	30	18	42	11	17 00 40	2 40 73		
10	330	18.6	47.4	181	17.8	63 30.9	20	12	34	19 00	16 42 45	3 03 66		
11	345	18.8	+6 46.4	195	43.1	63 -21 18.6	10 N	18 07	18 28	18 53	16 25 51	3 22 61		
12	0	19.0	+6 45.5	210	08.5	64 -21 06.1	0	18 02	18 23	18 47	16 10 55	3 39 57		
13	15	19.2	44.6	224	33.9	64 -20 53.5	10 S	17 57	18	43	15 54 61	3 57 52		
14	30	19.5	43.7	238	59.4	65 40.8	20	52	15	40	38 66	4 16 47		
15	45	19.7	42.7	253	25.0	66 27.9	30	47	11	39	18 73	37 42		
16	60	19.9	41.8	267	50.6	66 14.8	35	44	09	39	15 07 76	4 49 39		
17	75	20.1	+6 40.9	282	16.3	67 -20 01.6	40	17 41	18 08	18 39	14 54 80	5 04 34		
18	90	20.3	+6 39.9	296	42.1	68 -19 48.3	45	17 37	18 06	18 40	14 39 85	5 20 30		
19	105	20.5	39.0	311	07.9	68 34.8	50	32	04	42	20 92	41 23		
20	120	20.7	38.1	325	33.8	69 21.2	52	30	04	43	10 96	5 51 20		
21	135	20.9	37.2	339	59.7	69 -19 07.5	54	27	03	44	14 00 100	6 02 16		
22	150	21.1	36.2	354	25.7	70 -18 53.6	56	25	02	45	13 49 103	14 13		
23	165	21.4	35.3	8	51.8	71 39.6	58	22	01	47	35 109	28 8		
24	180	21.6	+6 34.4	23	18.0	72 -18 25.5	60 S	17 19	18 00	18 49	13 20 115	6 45 1		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO				
	PMG: 1 ^h 04 ^m 0		Mag: -3.9 PMG: 11 ^h 09 ^m		Mag: +1.8 PMG: 12 ^h 57 ^m		Mag: -1.9 PMG: 15 ^h 49 ^m		Mag: +0.5 PMG: 10 ^h 27 ^m				
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec			
h	°	'	°	'	°	'	°	'	°	'			
0	343	57.7	192	57.0	+13 06.3	165	31.7	+1 32.2	122	09.0	-15 11.6		
1	359	00.2	207	56.4	05.3	180	32.7	31.5	137	11.1	11.7		
2	14	02.7	222	55.9	04.3	195	33.7	30.9	152	13.2	11.8		
3	29	05.1	237	55.4	03.3	210	34.7	30.2	167	15.3	11.9		
4	44	07.6	252	54.8	02.3	225	35.7	29.5	182	17.4	12.1		
5	59	10.1	267	54.3	+13 01.2	240	36.7	+1 28.9	197	19.5	-15 12.2		
6	74	12.5	282	53.8	+13 00.2	255	37.7	+1 28.2	212	21.5	-15 12.3		
7	89	15.0	297	53.3	+12 59.2	270	38.7	27.6	227	23.6	12.4		
8	104	17.4	312	52.7	58.2	285	39.7	26.9	242	25.7	12.5		
9	119	19.9	327	52.2	57.2	300	40.7	26.3	257	27.8	12.7		
10	134	22.4	342	51.7	56.1	315	41.7	25.6	272	29.9	12.8		
11	149	24.8	357	51.2	+12 55.1	330	42.7	+1 24.9	287	32.0	-15 12.9		
12	164	27.3	12	50.6	+12 54.1	345	43.7	+1 24.3	302	34.1	-15 13.0		
13	179	29.8	27	50.1	53.1	0	44.7	23.6	317	36.2	13.1		
14	194	32.2	42	49.6	52.0	15	45.7	23.0	332	38.2	13.3		
15	209	34.7	57	49.1	51.0	30	46.7	22.3	347	40.3	13.4		
16	224	37.2	72	48.5	50.0	45	47.6	21.7	2	42.4	13.5		
17	239	39.6	87	48.0	+12 48.9	60	48.6	+1 21.0	17	44.5	-15 13.6		
18	254	42.1	102	47.5	+12 47.9	75	49.6	+1 20.3	32	46.6	-15 13.7		
19	269	44.6	117	47.0	46.9	90	50.6	19.7	47	48.7	13.9		
20	284	47.0	132	46.5	45.9	105	51.6	19.0	62	50.8	14.0		
21	299	49.5	147	45.9	44.8	120	52.6	18.4	77	52.8	14.1		
22	314	51.9	162	45.4	43.8	135	53.6	17.7	92	54.9	14.2		
23	329	54.4	177	44.9	42.8	150	54.6	17.1	107	57.0	14.4		
24	344	56.9	192	44.4	+12 41.7	165	55.6	+1 16.4	122	59.1	-15 14.5		
Dif	—		-5	-10		+10	-7		+21	-1		+22	-1

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15 ^h 9			Edad: 13 ^d 2	PHE {	4 ^h : 60 ^m 8 12 ^h : 61 ^m 0 20 ^h : 61 ^m 1	R°: 53 ^m										
	PMG: 11 ^h 58 ^m 4							SD: 16 ^h 5		PMG: 23 ^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
0	180	21.6	+6 34.4	23	18.0	72	-18	25.5	60 N	3	26	4	22	5	06	18	49 **
1	195	21.8		37	44.2	72	-18	11.2	58	37	29		10		41	4	
2	210	22.0		52	10.5	73	-17	56.9	56	47	35		14		34	7	
3	225	22.2		66	36.8	73		42.3	54	3	55	40	17		28	10	
4	240	22.4		81	03.2	74		27.7	52	4	02	45	19		22	14	
5	255	22.6	+6 29.7	95	29.7	75	-17	13.0	50	4	09	4	49	5	22	18	16
6	270	22.8	+6 28.8	109	56.3	76	-16	58.1	45	4	22	4	58	5	28	18	05
7	285	23.0		124	22.9	76		43.1	40	32	5	05	32		17	55	
8	300	23.3		138	49.5	76		28.0	35	40	10		36		47	32	
9	315	23.5		153	16.3	78	-16	12.8	30	47	15		40		40	35	
10	330	23.7		167	43.1	78	-15	57.4	20	4	57	23	45		27	42	
11	345	23.9	+6 24.1	182	09.9	78	-15	42.0	10 N	5	05	5	29	5	50	17	16
12	0	24.1	+6 23.2	196	36.8	79	-15	26.4	0	5	10	5	34	5	55	17	05
13	15	24.3		211	03.8	80	-15	10.8	10 S	14	39	6	00		16	55	
14	30	24.5		225	30.9	81	-14	55.0	20	17	42		04		44	64	
15	45	24.7		239	58.0	81		39.2	30	18	46		10		31	71	
16	60	25.0		254	25.2	82		23.2	35	18	47		13		23	75	
17	75	25.2	+6 18.5	268	52.4	82	-14	07.1	40	5	18	5	49	6	16	16	14
18	90	25.4	+6 17.6	283	19.7	83	-13	51.0	45	5	17	5	50	6	20	16	04
19	105	25.6		297	47.0	83		34.7	50	15	52		24		15	52	
20	120	25.8		312	14.4	84		18.4	52	14	53		26		46	95	
21	135	26.0		326	41.9	85	-13	01.9	54	12	53		29		40	98	
22	150	26.2		341	09.4	85	-12	45.4	56	11	54		31		32	102	
23	165	26.4		355	37.0	86		28.8	58	09	55		34		24	107	
24	180	26.7	+6 12.0	10	04.6	86	-12	12.1	60 S	5	07	5	55	6	37	15	15

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 1 ^h 00 ^m 0		Mag: -3.9 PMG: 11 ^h 09 ^m		Mag: +1.8 PMG: 12 ^h 55 ^m		Mag: -1.9 PMG: 15 ^h 46 ^m		Mag: +0.5 PMG: 10 ^h 24 ^m	
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄	
h	°	'	°	'	°	'	°	'	°	'
0	344	56.9	192	44.4	+12	41.7	165	55.6	+1	16.4
1	359	59.3	207	43.9		40.7	180	56.6		15.7
2	15	01.8	222	43.3		39.7	195	57.6		15.1
3	30	04.3	237	42.8		38.6	210	58.6		14.4
4	45	06.7	252	42.3		37.6	225	59.6		13.8
5	60	09.2	267	41.8	+12	36.6	241	00.6	+1	13.1
6	75	11.7	282	41.3	+12	35.5	256	01.6	+1	12.4
7	90	14.1	297	40.7		34.5	271	02.6		11.8
8	105	16.6	312	40.2		33.4	286	03.6		11.1
9	120	19.0	327	39.7		32.4	301	04.6		10.5
10	135	21.5	342	39.2		31.4	316	05.5		09.8
11	150	24.0	357	38.7	+12	30.3	331	06.5	+1	09.2
12	165	26.4	12	38.2	+12	29.3	346	07.5	+1	08.5
13	180	28.9	27	37.7		28.2	1	08.5		07.8
14	195	31.4	42	37.1		27.2	16	09.5		07.2
15	210	33.8	57	36.6		26.2	31	10.5		06.5
16	225	36.3	72	36.1		25.1	46	11.5		05.9
17	240	38.8	87	35.6	+12	24.1	61	12.5	+1	05.2
18	255	41.2	102	35.1	+12	23.0	76	13.5	+1	04.5
19	270	43.7	117	34.6		22.0	91	14.5		03.9
20	285	46.2	132	34.1		20.9	106	15.5		03.2
21	300	48.6	147	33.5		19.9	121	16.5		02.6
22	315	51.1	162	33.0		18.8	136	17.5		01.9
23	330	53.5	177	32.5		17.8	151	18.5		01.3
24	345	56.0	192	32.0	+12	16.7	166	19.5	+1	00.6
Dif	—		-5		-10		+10		-7	
							+21		-1	
									+22	
									-1	

UT	SOL			☉ LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna					
	SD: 15'9 PMG: 11 ^h 58 ^m 1			Edad: 14 ^d 2 PHE { 4 ^h : 61'2 12 ^h : 61'3 20 ^h : 61'4 PMG: **h **m R°: **m															
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°				
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m	h m	h m					
0	180	26.7	+6	12.0	10	04.6	-12	12.1	60 N	18 46	19 30	20 24	18 48 **	4 08 110					
1	195	26.9			24	32.3	87	-11	55.4 ¹⁶⁷	58	43	23	14	45 2 15 105					
2	210	27.1			39	00.1	88		38.5 ¹⁶⁹	56	39	18	20 05	41 7 21 101					
3	225	27.3			53	27.8	87		21.6 ¹⁶⁹	54	36	13	19 57	38 10 26 97					
4	240	27.5			67	55.7	89	-11	04.6 ¹⁷⁰	52	34	08	50	36 12 31 94					
5	255	27.7	+6	07.3	82	23.6	89	-10	47.5 ¹⁷¹	50	18 32	19 05	19 44	18 33 15 4 35 91					
6	270	27.9	+6	06.4	96	51.5	89	-10	30.3 ¹⁷²	45	18 27	18 56	19 32	18 28 20 4 45 84					
7	285	28.2			111	19.5	90	-10	13.1 ¹⁷²	40	22	50	22	23 26 52 79					
8	300	28.4			125	47.6	91	-9	55.8 ¹⁷³	35	19	44	14	19 30 4 59 74					
9	315	28.6			140	15.7	91		38.5 ¹⁷³	30	16	40	19 08	15 34 5 05 70					
10	330	28.8			154	43.8	91		21.1 ¹⁷⁴	20	10	32	18 58	09 41 14 64					
11	345	29.0	+6	01.7	169	12.0	92	-9	03.6 ¹⁷⁵	10 N	18 06	18 27	18 51	18 04 46 5 23 58					
12	0	29.2	+6	00.8	183	40.2	92	-8	46.0 ¹⁷⁶	0	18 01	18 22	18 46	17 59 51 5 31 52					
13	15	29.4	+5	59.9	198	08.5	93		28.5 ¹⁷⁵	10 S	17 57	18	43	53 58 39 46					
14	30	29.7			212	36.8	93	-8	10.8 ¹⁷⁷	20	53	15	41	48 63 47 41					
15	45	29.9			227	05.2	94	-7	53.1 ¹⁷⁷	30	48	12	40	42 70 5 56 35					
16	60	30.1			241	33.6	94		35.4 ¹⁷⁷	35	45	11	40	38 74 6 02 30					
17	75	30.3	+5	56.1	256	02.0	94	-7	17.6 ¹⁷⁸	40	17 42	18 09	18 41	17 34 78 6 08 26					
18	90	30.5	+5	55.2	270	30.5	95	-6	59.7 ¹⁷⁹	45	17 39	18 08	18 42	17 29 84 6 15 21					
19	105	30.7			284	59.0	95		41.8 ¹⁷⁹	50	35	07	45	23 90 23 15					
20	120	30.9			299	27.6	96		23.9 ¹⁷⁹	52	33	07	46	21 93 27 13					
21	135	31.2			313	56.2	96	-6	05.9 ¹⁸⁰	54	31	06	47	18 96 31 10					
22	150	31.4			328	24.8	96	-5	47.9 ¹⁸⁰	56	29	06	49	14 100 35 7					
23	165	31.6			342	53.5	97		29.9 ¹⁸⁰	58	26	05	51	11 104 40 3					
24	180	31.8	+5	49.6	357	22.1	96	-5	11.8 ¹⁸¹	60 S	17 23	18 05	18 53	17 07 108 6 46 **					
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO							
	PMG: 0 ^h 56 ^m 1		Mag: -3.9 PMG: 11 ^h 10 ^m			Mag: +1.8 PMG: 12 ^h 54 ^m			Mag: -1.9 PMG: 15 ^h 43 ^m			Mag: +0.5 PMG: 10 ^h 20 ^m							
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec						
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'					
0	345	56.0	192	32.0	+12	16.7	166	19.5	+1	00.6	123	49.1	-15	17.4	204	32.6	+16	02.6	
1	0	58.5	207	31.5		15.7	181	20.5	+0	59.9	138	51.2		17.5	219	34.8		02.5	
2	16	00.9	222	31.0		14.7	196	21.4		59.3	153	53.2		17.7	234	37.0		02.4	
3	31	03.4	237	30.5		13.6	211	22.4		58.6	168	55.3		17.8	249	39.1		02.3	
4	46	05.9	252	30.0		12.6	226	23.4		58.0	183	57.4		17.9	264	41.3		02.2	
5	61	08.3	267	29.5	+12	11.5	241	24.4	+0	57.3	198	59.5	-15	18.0	279	43.5	+16	02.1	
6	76	10.8	282	28.9	+12	10.5	256	25.4	+0	56.6	214	01.6	-15	18.1	294	45.6	+16	02.0	
7	91	13.3	297	28.4		09.4	271	26.4		56.0	229	03.6		18.3	309	47.8		02.0	
8	106	15.7	312	27.9		08.3	286	27.4		55.3	244	05.7		18.4	324	50.0		01.9	
9	121	18.2	327	27.4		07.3	301	28.4		54.7	259	07.8		18.5	339	52.1		01.8	
10	136	20.7	342	26.9		06.2	316	29.4		54.0	274	09.9		18.6	354	54.3		01.7	
11	151	23.1	357	26.4	+12	05.2	331	30.4	+0	53.4	289	12.0	-15	18.8	9	56.5	+16	01.6	
12	166	25.6	12	25.9	+12	04.1	346	31.4	+0	52.7	304	14.0	-15	18.9	24	58.6	+16	01.5	
13	181	28.0	27	25.4		03.1	1	32.4		52.0	319	16.1		19.0	40	00.8		01.4	
14	196	30.5	42	24.9		02.0	16	33.4		51.4	334	18.2		19.1	55	03.0		01.3	
15	211	33.0	57	24.4	+12	01.0	31	34.4		50.7	349	20.3		19.3	70	05.1		01.2	
16	226	35.4	72	23.9	+11	59.9	46	35.4		50.1	4	22.3		19.4	85	07.3		01.2	
17	241	37.9	87	23.4	+11	58.8	61	36.3	+0	49.4	19	24.4	-15	19.5	100	09.5	+16	01.1	
18	256	40.4	102	22.9	+11	57.8	76	37.3	+0	48.7	34	26.5	-15	19.6	115	11.6	+16	01.0	
19	271	42.8	117	22.4		56.7	91	38.3		48.1	49	28.6		19.7	130	13.8		00.9	
20	286	45.3	132	21.9		55.7	106	39.3		47.4	64	30.7		19.9	145	16.0		00.8	
21	301	47.8	147	21.4		54.6	121	40.3		46.8	79	32.7		20.0	160	18.1		00.7	
22	316	50.2	162	20.8		53.6	136	41.3		46.1	94	34.8		20.1	175	20.3		00.6	
23	331	52.7	177	20.3		52.5	151	42.3		45.4	109	36.9		20.2	190	22.5		00.5	
24	346	55.1	192	19.8	+11	51.4	166	43.3	+0	44.8	124	39.0	-15	20.4	205	24.6	+16	00.4	
Dif	—		-5		-11		+10		-7		+21		-1			+22		-1	

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna				
	SD: 15 ^h 9			Edad: 15 ^d 2 PHE { 4 ^h : 61 ^m 4 12 ^h : 61 ^m 4 20 ^h : 61 ^m 3															
	PMG: 11 ^h 57 ^m 7			SD: 16 ^d 7 PMG: 0 ^h 11 ^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	31.8	+5 49.6	357	22.1	-5 11.8			60 N	3 32	4 27	5 11	18 47	**	5 58	108			
1	195	32.0		11	50.9 98	-4 53.7 181			58	43	34	14	47	3	6 00	103			
2	210	32.2		26	19.6 97		35.6 181		56	52	39	17	48	6	02	99			
3	225	32.5		40	48.4 98	-4 17.4 182			54	3 59	44	20	48	9	03	96			
4	240	32.7		55	17.2 98	-3 59.3 181			52	4 06	48	23	48	12	05	92			
5	255	32.9	+5 44.9	69	46.0 98	-3 41.0 183			50	4 12	4 52	5 25	18 48	15	6 06	90			
6	270	33.1	+5 43.9	84	14.9 99	-3 22.8 182			45	4 24	5 00	5 30	18 48	21	6 09	83			
7	285	33.3		98	43.7 98	-3 04.6 182			40	34	07	34	49	25	11	78			
8	300	33.5		113	12.6 99	-2 46.3 183			35	42	12	38	49	30	13	74			
9	315	33.7		127	41.6 100		28.0 183		30	48	16	41	49	34	15	70			
10	330	34.0		142	10.5 99	-2 09.8 182			20	4 58	24	46	50	40	18	63			
11	345	34.2	+5 39.2	156	39.5 100	-1 51.5 183			10 N	5 05	5 29	5 50	18 50	46	6 21	57			
12	0	34.4	+5 38.3	171	08.4 99	-1 33.2 183			0	5 10	5 34	5 54	18 50	52	6 23	51			
13	15	34.6		185	37.4 100	-1 14.9 183			10 S	13	37	5 58	51	56	25	46			
14	30	34.8		200	06.4 100	-0 56.5 184			20	15	41	6 03	51	63	28	40			
15	45	35.0		214	35.5 101		38.2 183		30	16	43	07	52	69	31	33			
16	60	35.3		229	04.5 100		19.9 183		35	15	45	10	52	73	32	30			
17	75	35.5	+5 33.6	243	33.5 100	-0 01.6 183			40	5 14	5 46	6 13	18 52	78	6 34	25			
18	90	35.7	+5 32.7	258	02.6 101	+0 16.7 183			45	5 13	5 47	6 16	18 53	83	6 36	21			
19	105	35.9		272	31.7 101		35.0 183		50	10	48	20	53	90	38	15			
20	120	36.1		287	00.7 100	+0 53.3 183			52	09	48	22	54	92	40	12			
21	135	36.3		301	29.8 101	+1 11.6 183			54	08	49	24	54	96	41	9			
22	150	36.6		315	58.9 101		29.8 182		56	06	49	26	54	99	42	6			
23	165	36.8		330	28.0 101	+1 48.1 183			58	04	49	28	55	103	43	3			
24	180	37.0	+5 27.0	344	57.1 101	+2 06.3 182			60 S	5 01	5 50	6 31	18 55	108	6 45	**			
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO							
	PMG: 0 ^h 52 ^m 2		Mag: -3.9 PMG: 11 ^h 11 ^m			Mag: +1.8 PMG: 12 ^h 52 ^m			Mag: -1.9 PMG: 15 ^h 39 ^m			Mag: +0.5 PMG: 10 ^h 17 ^m							
	hG ♈		hG ♀			hG ♂			hG ♃			hG ♄							
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°	°	'		
0	346	55.1	192	19.8	+11 51.4	166	43.3	+0 44.8	124	39.0	-15 20.4	205	24.6	+16 00.4					
1	1	57.6	207	19.3		181	44.3	44.1	139	41.0	20.5	220	26.8	00.4					
2	17	00.1	222	18.8		196	45.3	43.5	154	43.1	20.6	235	29.0	00.3					
3	32	02.5	237	18.3		211	46.3	42.8	169	45.2	20.7	250	31.1	00.2					
4	47	05.0	252	17.8		226	47.3	42.2	184	47.3	20.9	265	33.3	+16 00.1					
5	62	07.5	267	17.3	+11 46.1	241	48.3	+0 41.5	199	49.3	-15 21.0	280	35.5	+16 00.0					
6	77	09.9	282	16.8	+11 45.0	256	49.2	+0 40.8	214	51.4	-15 21.1	295	37.6	+15 59.9					
7	92	12.4	297	16.3		271	50.2	40.2	229	53.5	21.2	310	39.8	59.8					
8	107	14.9	312	15.8		286	51.2	39.5	244	55.6	21.4	325	42.0	59.7					
9	122	17.3	327	15.3		301	52.2	38.9	259	57.6	21.5	340	44.1	59.7					
10	137	19.8	342	14.8		316	53.2	38.2	274	59.7	21.6	355	46.3	59.6					
11	152	22.3	357	14.3	+11 39.7	331	54.2	+0 37.5	290	01.8	-15 21.7	10	48.5	+15 59.5					
12	167	24.7	12	13.8	+11 38.6	346	55.2	+0 36.9	305	03.9	-15 21.8	25	50.6	+15 59.4					
13	182	27.2	27	13.3		1	56.2	36.2	320	05.9	22.0	40	52.8	59.3					
14	197	29.6	42	12.8		16	57.2	35.6	335	08.0	22.1	55	55.0	59.2					
15	212	32.1	57	12.3		31	58.2	34.9	350	10.1	22.2	70	57.1	59.1					
16	227	34.6	72	11.8		46	59.2	34.2	5	12.1	22.3	85	59.3	59.0					
17	242	37.0	87	11.3	+11 33.3	62	00.2	+0 33.6	20	14.2	-15 22.5	101	01.5	+15 58.9					
18	257	39.5	102	10.9	+11 32.2	77	01.1	+0 32.9	35	16.3	-15 22.6	116	03.6	+15 58.9					
19	272	42.0	117	10.4		92	02.1	32.3	50	18.4	22.7	131	05.8	58.8					
20	287	44.4	132	09.9		107	03.1	31.6	65	20.4	22.8	146	08.0	58.7					
21	302	46.9	147	09.4		122	04.1	30.9	80	22.5	23.0	161	10.1	58.6					
22	317	49.4	162	08.9		137	05.1	30.3	95	24.6	23.1	176	12.3	58.5					
23	332	51.8	177	08.4		152	06.1	29.6	110	26.6	23.2	191	14.5	58.4					
24	347	54.3	192	07.9	+11 25.8	167	07.1	+0 29.0	125	28.7	-15 23.3	206	16.7	+15 58.3					
Dif	—		-5			-11			+21			-1			+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 2 PHE	SD: 16 ^h 7				Civil		Náutico		Hora R°	
	PMG: 11 ^h 57 ^m 4	PMG: 1 ^h 02 ^m	R°: 52 ^m		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	180	37.0	+5 27.0	344	57.1	+2 06.3		60 N	18 40	19 23	20 17	18 46	**	7 46 108
1	195	37.2	26.1	359	26.2 ¹⁰¹	24.5 ¹⁸²		58	37	17	20 07	50	4	43 104
2	210	37.4	25.1	13	55.2 ¹⁰⁰	+2 42.7 ¹⁸²		56	34	12	19 59	54	7	41 99
3	225	37.6	24.2	28	24.3 ¹⁰¹	+3 00.8 ¹⁸¹		54	32	08	52	18 57	11	39 96
4	240	37.9	23.2	42	53.4 ¹⁰¹	19.0 ¹⁸²		52	29	04	45	19 00	14	37 93
5	255	38.1	+5 22.3	57	22.5 ¹⁰¹	+3 37.1 ¹⁸¹		50	18 27	19 00	19 40	19 03	17	7 36 89
6	270	38.3	+5 21.4	71	51.6 ¹⁰¹	+3 55.2 ¹⁸¹		45	18 23	18 52	19 28	19 09	23	7 32 83
7	285	38.5	20.4	86	20.7 ¹⁰¹	+4 13.2 ¹⁸⁰		40	19	46	19	14	28	29 78
8	300	38.7	19.5	100	49.7 ¹⁰⁰	31.2 ¹⁸⁰		35	16	41	11	19	31	27 73
9	315	39.0	18.5	115	18.8 ¹⁰¹	+4 49.2 ¹⁸⁰		30	13	37	19 05	23	35	25 69
10	330	39.2	17.6	129	47.8 ¹⁰⁰	+5 07.2 ¹⁸⁰		20	08	31	18 56	30	41	21 63
11	345	39.4	+5 16.6	144	16.9 ¹⁰¹	+5 25.1 ¹⁷⁹		10 N	18 04	18 25	18 50	19 36	47	7 18 57
12	0	39.6	+5 15.7	158	45.9 ¹⁰⁰	+5 42.9 ¹⁷⁸		0	18 01	18 21	18 45	19 42	52	7 14 52
13	15	39.8	14.8	173	14.9 ¹⁰⁰	+6 00.7 ¹⁷⁸		10 S	17 57	18	42	47	58	11 47
14	30	40.0	13.8	187	43.9 ¹⁰⁰	18.5 ¹⁷⁸		20	53	15	41	19 54	63	08 41
15	45	40.3	12.9	202	12.9 ¹⁰⁰	36.2 ¹⁷⁷		30	49	13	41	20 01	70	04 34
16	60	40.5	11.9	216	41.9 ¹⁰⁰	+6 53.9 ¹⁷⁷		35	47	12	41	05	74	7 02 30
17	75	40.7	+5 11.0	231	10.8 ⁹⁹	+7 11.5 ¹⁷⁶		40	17 44	18 11	18 43	20 10	78	6 59 27
18	90	40.9	+5 10.0	245	39.7 ⁹⁹	+7 29.1 ¹⁷⁶		45	17 41	18 11	18 45	20 16	83	6 57 21
19	105	41.1	09.1	260	08.7 ¹⁰⁰	+7 46.6 ¹⁷⁵		50	38	10	47	23	89	53 16
20	120	41.3	08.1	274	37.5 ⁹⁸	+8 04.0 ¹⁷⁴		52	36	10	49	26	93	52 13
21	135	41.6	07.2	289	06.4 ⁹⁹	21.4 ¹⁷⁴		54	34	10	51	30	96	50 10
22	150	41.8	06.3	303	35.3 ⁹⁹	38.8 ¹⁷⁴		56	32	10	53	33	100	48 7
23	165	42.0	05.3	318	04.1 ⁹⁸	+8 56.0 ¹⁷²		58	30	10	55	38	104	46 3
24	180	42.2	+5 04.4	332	32.9 ⁹⁸	+9 13.2 ¹⁷²		60 S	17 28	18 10	18 58	20 43	109	6 44 **

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 0 ^h 48 ^m 2	Mag: -3.9	PMG: 11 ^h 12 ^m	Mag: +1.8	PMG: 12 ^h 51 ^m	Mag: -1.9	PMG: 15 ^h 36 ^m	Mag: +0.5	PMG: 10 ^h 13 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	347	54.3	192	07.9	167	07.1	125	28.7	206	16.7
1	2	56.7	207	07.4	182	08.1	140	30.8	221	18.8
2	17	59.2	222	06.9	197	09.1	155	32.9	236	21.0
3	33	01.7	237	06.4	212	10.1	170	34.9	251	23.2
4	48	04.1	252	05.9	227	11.1	185	37.0	266	25.3
5	63	06.6	267	05.4	242	12.1	200	39.1	281	27.5
6	78	09.1	282	04.9	257	13.0	215	41.1	296	29.7
7	93	11.5	297	04.4	272	14.0	230	43.2	311	31.8
8	108	14.0	312	03.9	287	15.0	245	45.3	326	34.0
9	123	16.5	327	03.4	302	16.0	260	47.4	341	36.2
10	138	18.9	342	03.0	317	17.0	275	49.4	356	38.3
11	153	21.4	357	02.5	332	18.0	290	51.5	11	40.5
12	168	23.9	12	02.0	347	19.0	305	53.6	26	42.7
13	183	26.3	27	01.5	2	20.0	320	55.6	41	44.8
14	198	28.8	42	01.0	17	21.0	335	57.7	56	47.0
15	213	31.2	57	00.5	32	22.0	350	59.8	71	49.2
16	228	33.7	72	00.0	47	23.0	6	01.8	86	51.4
17	243	36.2	86	59.5	62	23.9	21	03.9	101	53.5
18	258	38.6	101	59.0	77	24.9	36	06.0	116	55.7
19	273	41.1	116	58.5	92	25.9	51	08.0	131	57.9
20	288	43.6	131	58.1	107	26.9	66	10.1	147	00.0
21	303	46.0	146	57.6	122	27.9	81	12.2	162	02.2
22	318	48.5	161	57.1	137	28.9	96	14.2	177	04.4
23	333	51.0	176	56.6	152	29.9	111	16.3	192	06.5
24	348	53.4	191	56.1	167	30.9	126	18.4	207	08.7
Dif	—		-5	-11	+10	-7	+21	-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 57 ^m 0			Edad: 17 ^d 2 PHE { 4 ^h : 60'7 12 ^h : 60'5 20 ^h : 60'3 SD: 16'6 PMG: 1 ^h 54 ^m R°: 52 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico		Civil	Hora		R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	180	42.2	+5	04.4	332	32.9	+9	13.2	60 N	3 38	4 32	5 16	18 45	1	9 34	111	
1	195	42.4		03.4	347	01.7	98	30.4	58	48	38	19	18 54	6	27	105	
2	210	42.7		02.5	1	30.4	97	+9	47.5	56	3 56	43	21	19 01	11	20	101
3	225	42.9		01.5	15	59.1	97	+10	04.5	54	4 04	48	24	08 14	15	96	
4	240	43.1	+5	00.6	30	27.8	97	21.4	52	10	52	26	14 17	10	92		
5	255	43.3	+4	59.6	44	56.5	97	+10	38.2	50	4 15	4 55	5 28	19 20	20	9 05	90
6	270	43.5	+4	58.7	59	25.1	96	+10	55.0	45	4 27	5 03	5 32	19 32	26	8 55	83
7	285	43.8		57.7	73	53.7	96	+11	11.7	40	36	09	36	42 31	47	78	
8	300	44.0		56.8	88	22.2	95	28.3	35	43	13	39	50 35	40	74		
9	315	44.2		55.8	102	50.8	96	+11	44.9	30	49	18	42	19 58	38	34	70
10	330	44.4		54.9	117	19.3	95	+12	01.3	20	4 58	24	46	20 11	44	24	63
11	345	44.6	+4	54.0	131	47.7	94	+12	17.7	10 N	5 05	5 29	5 50	20 23	49	8 15	58
12	0	44.8	+4	53.0	146	16.1	94	+12	34.0	0	5 09	5 33	5 54	20 34	54	8 06	53
13	15	45.1		52.1	160	44.5	94	+12	50.2	10 S	12	36	5 57	45 59	7 58	48	
14	30	45.3		51.1	175	12.9	94	+13	06.3	20	13	39	6 01	20 57	64	49	42
15	45	45.5		50.2	189	41.2	93	22.3	30	13	41	05	21 11	69	38	37	
16	60	45.7		49.2	204	09.4	92	38.2	35	12	42	07	19 73	32	33		
17	75	45.9	+4	48.3	218	37.7	93	+13	54.1	40	5 11	5 42	6 09	21 28	78	7 26	29
18	90	46.2	+4	47.3	233	05.9	92	+14	09.8	45	5 09	5 43	6 12	21 39	83	7 18	24
19	105	46.4		46.4	247	34.0	91	25.4	50	06	43	16	52 89	09	18		
20	120	46.6		45.4	262	02.1	91	41.0	52	05	44	17	21 59	92	05	15	
21	135	46.8		44.5	276	30.2	91	+14	56.4	54	03	44	19	22 06	96	7 00	12
22	150	47.0		43.5	290	58.2	90	+15	11.7	56	5 01	44	21	13 101	6 55	8	
23	165	47.3		42.6	305	26.2	90	27.0	58	4 58	44	23	22 106	49	4		
24	180	47.5	+4	41.6	319	54.1	89	+15	42.1	60 S	4 55	5 44	6 25	22 32	113	6 43	**
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO					
	PMG 0 ^h 44 ^m 3		Mag: -3.9 PMG: 11 ^h 13 ^m			Mag: +1.8 PMG: 12 ^h 49 ^m			Mag: -1.9 PMG: 15 ^h 33 ^m			Mag: +0.5 PMG: 10 ^h 10 ^m					
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	348	53.4	191	56.1	+10	59.8	167	30.9	+0	13.1	126	18.4	-15	26.3	207	08.7	
1	3	55.9	206	55.6		58.7	182	31.9		12.5	141	20.4		26.5	222	10.9	
2	18	58.3	221	55.1		57.6	197	32.9		11.8	156	22.5		26.6	237	13.1	
3	34	00.8	236	54.7		56.5	212	33.8		11.2	171	24.6		26.7	252	15.2	
4	49	03.3	251	54.2		55.4	227	34.8		10.5	186	26.6		26.8	267	17.4	
5	64	05.7	266	53.7	+10	54.4	242	35.8	+0	09.8	201	28.7	-15	27.0	282	19.6	
6	79	08.2	281	53.2	+10	53.3	257	36.8	+0	09.2	216	30.8	-15	27.1	297	21.7	
7	94	10.7	296	52.7		52.2	272	37.8		08.5	231	32.8		27.2	312	23.9	
8	109	13.1	311	52.2		51.1	287	38.8		07.8	246	34.9		27.3	327	26.1	
9	124	15.6	326	51.7		50.0	302	39.8		07.2	261	37.0		27.5	342	28.2	
10	139	18.1	341	51.3		48.9	317	40.8		06.5	276	39.0		27.6	357	30.4	
11	154	20.5	356	50.8	+10	47.8	332	41.8	+0	05.9	291	41.1	-15	27.7	12	32.6	
12	169	23.0	11	50.3	+10	46.7	347	42.7	+0	05.2	306	43.2	-15	27.8	27	34.8	
13	184	25.5	26	49.8		45.6	2	43.7		04.5	321	45.2		28.0	42	36.9	
14	199	27.9	41	49.3		44.5	17	44.7		03.9	336	47.3		28.1	57	39.1	
15	214	30.4	56	48.9		43.4	32	45.7		03.2	351	49.4		28.2	72	41.3	
16	229	32.8	71	48.4		42.3	47	46.7		02.6	6	51.4		28.3	87	43.4	
17	244	35.3	86	47.9	+10	41.2	62	47.7	+0	01.9	21	53.5	-15	28.5	102	45.6	
18	259	37.8	101	47.4	+10	40.1	77	48.7	+0	01.2	36	55.6	-15	28.6	117	47.8	
19	274	40.2	116	46.9		39.0	92	49.7	+0	00.6	51	57.6		28.7	132	50.0	
20	289	42.7	131	46.5		37.9	107	50.7	-0	00.1	66	59.7		28.8	147	52.1	
21	304	45.2	146	46.0		36.8	122	51.6		00.7	82	01.7		29.0	162	54.3	
22	319	47.6	161	45.5		35.7	137	52.6		01.4	97	03.8		29.1	177	56.5	
23	334	50.1	176	45.0		34.6	152	53.6		02.1	112	05.9		29.2	192	58.6	
24	349	52.6	191	44.5	+10	33.5	167	54.6	-0	02.7	127	07.9	-15	29.3	208	00.8	
Dif	—		-5 -11			+10 -7			+21 -1			-1 +22			-1 +		

UT	SOL		LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15 ^h 9		Edad: 18 ^d 2 PHE { 4 ^h : 60 ⁰ 0 12 ^h : 59 ⁷ 7 20 ^h : 59 ⁴ 4											
	PMG: 11 ^h 56 ^m 7		PMG: 2 ^h 46 ^m R°: 55 ^m											
	hG ☉	Dec	hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	h m	h m	h m	h m m		h m m	
0	180	47.5	+4 41.6	319 54.1	+15 42.1	89	60 N	18 34	19 17	20 10	18 46 3	11 25	112	
1	195	47.7	40.7	334 22.0	+15 57.1	150	58	31	11	20 01	19 00 10	12	105	
2	210	47.9	39.7	348 49.8	+16 12.0	149	56	29	07	19 53	12 15	11 01	99	
3	225	48.1	38.8	3 17.6	26.8	148	54	27	19 03	46	22 20	10 51	95	
4	240	48.4	37.8	17 45.3	41.5	147	52	25	18 59	40	31 24	42	92	
5	255	48.6	+4 36.9	32 13.0	+16 56.0	145	50	18 23	18 56	19 35	19 40 26	10 35	88	
6	270	48.8	+4 35.9	46 40.7	+17 10.5	145	45	18 19	18 49	19 24	19 58 32	10 18	82	
7	285	49.0	35.0	61 08.3	24.8	143	40	16	43	15	20 13 36	10 05	77	
8	300	49.2	34.0	75 35.8	39.0	142	35	13	38	08	25 40	9 54	73	
9	315	49.5	33.1	90 03.3	+17 53.1	141	30	11	35	19 03	36 43	44	70	
10	330	49.7	32.1	104 30.8	+18 07.1	140	20	07	29	18 54	20 55 48	27	64	
11	345	49.9	+4 31.2	118 58.2	+18 20.9	138	10 N	18 03	18 24	18 49	21 12 52	9 13	59	
12	0	50.1	+4 30.2	133 25.5	+18 34.7	138	0	18 00	18 21	18 45	21 28 56	8 59	55	
13	15	50.3	29.3	147 52.8	+18 48.3	136	10 S	17 57	18	42	21 44 59	46	50	
14	30	50.6	28.3	162 20.1	+19 01.7	134	20	54	16	41	22 01 64	31	46	
15	45	50.8	27.4	176 47.3	15.1	134	30	50	14	42	20 69	15	41	
16	60	51.0	26.4	191 14.5	28.3	132	35	48	14	43	32 72	8 05	38	
17	75	51.2	+4 25.5	205 41.6	+19 41.4	131	40	17 46	18 13	18 45	22 46 75	7 55	33	
18	90	51.4	+4 24.5	220 08.6	+19 54.3	129	45	17 44	18 13	18 47	23 02 80	7 42	29	
19	105	51.7	23.6	234 35.6	+20 07.1	128	50	41	13	50	21 86	27	23	
20	120	51.9	22.6	249 02.6	19.8	127	52	39	13	52	31 89	20	20	
21	135	52.1	21.7	263 29.5	32.4	126	54	38	13	54	42 93	12	16	
22	150	52.3	20.7	277 56.3	44.8	124	56	36	13	57	23 54 98	7 03	12	
23	165	52.6	19.8	292 23.1	+20 57.1	123	58	35	14	18 59	*** ** *	6 53	8	
24	180	52.8	+4 18.8	306 49.9	+21 09.2	121	60 S	17 33	18 14	19 03	*** ** *	6 42	1	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 0 ^h 40 ^m 4		Mag: -3.9 PMG: 11 ^h 13 ^m		Mag: +1.8 PMG: 12 ^h 48 ^m		Mag: -1.9 PMG: 15 ^h 29 ^m		Mag: +0.5 PMG: 10 ^h 06 ^m	
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	°	°	°	°	°	°	°	°	
0	349 52.6	191 44.5	+10 33.5	167 54.6	-0 02.7	127 07.9	-15 29.3	208 00.8	+15 54.1	
1	4 55.0	206 44.1	32.4	182 55.6	03.4	142 10.0	29.5	223 03.0	54.0	
2	19 57.5	221 43.6	31.3	197 56.6	04.0	157 12.1	29.6	238 05.2	53.9	
3	35 00.0	236 43.1	30.2	212 57.6	04.7	172 14.1	29.7	253 07.3	53.9	
4	50 02.4	251 42.6	29.1	227 58.6	05.4	187 16.2	29.9	268 09.5	53.8	
5	65 04.9	266 42.1	+10 28.0	242 59.6	-0 06.0	202 18.2	-15 30.0	283 11.7	+15 53.7	
6	80 07.3	281 41.7	+10 26.9	258 00.5	-0 06.7	217 20.3	-15 30.1	298 13.8	+15 53.6	
7	95 09.8	296 41.2	25.8	273 01.5	07.3	232 22.4	30.2	313 16.0	53.5	
8	110 12.3	311 40.7	24.7	288 02.5	08.0	247 24.4	30.4	328 18.2	53.4	
9	125 14.7	326 40.2	23.6	303 03.5	08.7	262 26.5	30.5	343 20.4	53.3	
10	140 17.2	341 39.8	22.5	318 04.5	09.3	277 28.6	30.6	358 22.5	53.3	
11	155 19.7	356 39.3	+10 21.4	333 05.5	-0 10.0	292 30.6	-15 30.7	13 24.7	+15 53.2	
12	170 22.1	11 38.8	+10 20.3	348 06.5	-0 10.6	307 32.7	-15 30.9	28 26.9	+15 53.1	
13	185 24.6	26 38.3	19.2	3 07.5	11.3	322 34.7	31.0	43 29.1	53.0	
14	200 27.1	41 37.9	18.1	18 08.4	12.0	337 36.8	31.1	58 31.2	52.9	
15	215 29.5	56 37.4	16.9	33 09.4	12.6	352 38.9	31.2	73 33.4	52.8	
16	230 32.0	71 36.9	15.8	48 10.4	13.3	7 40.9	31.4	88 35.6	52.7	
17	245 34.4	86 36.4	+10 14.7	63 11.4	-0 13.9	22 43.0	-15 31.5	103 37.7	+15 52.6	
18	260 36.9	101 36.0	+10 13.6	78 12.4	-0 14.6	37 45.0	-15 31.6	118 39.9	+15 52.6	
19	275 39.4	116 35.5	12.5	93 13.4	15.3	52 47.1	31.8	133 42.1	52.5	
20	290 41.8	131 35.0	11.4	108 14.4	15.9	67 49.2	31.9	148 44.3	52.4	
21	305 44.3	146 34.6	10.3	123 15.4	16.6	82 51.2	32.0	163 46.4	52.3	
22	320 46.8	161 34.1	09.2	138 16.3	17.3	97 53.3	32.1	178 48.6	52.2	
23	335 49.2	176 33.6	08.1	153 17.3	17.9	112 55.3	32.3	193 50.8	52.1	
24	350 51.7	191 33.1	+10 06.9	168 18.3	-0 18.6	127 57.4	-15 32.4	208 53.0	+15 52.0	
Dif	—	-5	-11	+10	-7	+21	-1	+22	-1	

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15 ^h 9			Edad: 19 ^d 2	PHE { 4 ^h : 59 ^m 1 12 ^h : 58 ^m 8 20 ^h : 58 ^m 5	SD: 16 ^d 1	PMG: 3 ^h 41 ^m	R°: 56 ^m									
	hG ☉	Dec								hG ☾	Dif		Dec	Dif	Náutico	Civil	Hora
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	180	52.8	+4	18.8	306	49.9	+21	09.2	60 N	3 44	4 37	5 20	18 49	9	13 17	11	11
1	195	53.0		17.9	321	16.6	77	21.2	58	3 53	43	23	19 10	19	12 57	100	
2	210	53.2		16.9	335	43.2	76	33.0	56	4 01	47	25	27 25		40 94		
3	225	53.4		16.0	350	09.8	76	44.7	54	08	51	27	42 30		26 89		
4	240	53.7		15.0	4	36.4	76	+21 56.3	52	14	55	29	19 55	33	14 85		
5	255	53.9	+4	14.0	19	02.9	75	+22 07.7	50	4 19	4 58	5 31	20 06	36	12 03	82	
6	270	54.1	+4	13.1	33	29.3	74	+22 19.0	45	4 30	5 05	5 35	20 30	41	11 40	77	
7	285	54.3		12.1	47	55.8	75	30.1	40	38	11	38	20 49	44	22 73		
8	300	54.5		11.2	62	22.1	73	41.1	35	45	15	40	21 05	47	11 07	70	
9	315	54.8		10.2	76	48.4	73	+22 51.9	30	51	19	43	19 49		10 54	67	
10	330	55.0		09.3	91	14.7	73	+23 02.6	20	4 59	25	47	21 43	53	31 64		
11	345	55.2	+4	08.3	105	40.9	72	+23 13.1	10 N	5 04	5 29	5 50	22 04	55	10 12	60	
12	0	55.4	+4	07.4	120	07.1	72	+23 23.5	0	5 08	5 32	5 53	22 24	57	9 54	57	
13	15	55.6		06.4	134	33.2	71	33.7	10 S	11	35	56	22 43	61	36 54		
14	30	55.9		05.5	148	59.3	71	43.7	20	11	37	5 59	23 05	62	9 17	51	
15	45	56.1		04.5	163	25.3	70	+23 53.6	30	11	38	6 02	29 66		8 56	45	
16	60	56.3		03.6	177	51.3	70	+24 03.4	35	10	39	04	23 44	68	43 43		
17	75	56.5	+4	02.6	192	17.3	70	+24 13.0	40	5 08	5 39	6 06	** ** *	**	8 28	40	
18	90	56.8	+4	01.6	206	43.2	69	+24 22.4	45	5 05	5 39	6 09	** ** *	**	8 11	36	
19	105	57.0	+4	00.7	221	09.1	69	31.7	50	02	39	11	** ** *	**	7 50	30	
20	120	57.2	+3	59.7	235	34.9	68	40.8	52	5 00	39	13	** ** *	**	40 27		
21	135	57.4		58.8	250	00.7	68	49.7	54	4 58	39	14	** ** *	**	28 24		
22	150	57.6		57.8	264	26.5	68	+24 58.5	56	55	39	15	** ** *	**	15 20		
23	165	57.9		56.9	278	52.2	67	+25 07.2	58	53	38	17	0 08	104	7 01	13	
24	180	58.1	+3	55.9	293	17.9	67	+25 15.6	60 S	4 49	5 38	6 19	0 25	113	6 43	4	

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG 0 ^h 36 ^m 5		Mag: -3.9 PMG: 11 ^h 14 ^m			Mag: +1.8 PMG: 12 ^h 46 ^m			Mag: -1.9 PMG: 15 ^h 26 ^m			Mag: +0.5 PMG: 10 ^h 03 ^m						
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	350	51.7	191	33.1	+10	06.9	168	18.3	-0	18.6	127	57.4	-15	32.4	208	53.0	+15	52.0
1	5	54.2	206	32.7		05.8	183	19.3		19.2	142	59.4		32.5	223	55.1		51.9
2	20	56.6	221	32.2		04.7	198	20.3		19.9	158	01.5		32.6	238	57.3		51.9
3	35	59.1	236	31.7		03.6	213	21.3		20.6	173	03.6		32.8	253	59.5		51.8
4	51	01.6	251	31.3		02.5	228	22.3		21.2	188	05.6		32.9	269	01.6		51.7
5	66	04.0	266	30.8	+10	01.4	243	23.3	-0	21.9	203	07.7	-15	33.0	284	03.8	+15	51.6
6	81	06.5	281	30.3	+10	00.3	258	24.2	-0	22.5	218	09.7	-15	33.1	299	06.0	+15	51.5
7	96	08.9	296	29.8	+9	59.1	273	25.2		23.2	233	11.8		33.3	314	08.2		51.4
8	111	11.4	311	29.4		58.0	288	26.2		23.9	248	13.8		33.4	329	10.3		51.3
9	126	13.9	326	28.9		56.9	303	27.2		24.5	263	15.9		33.5	344	12.5		51.3
10	141	16.3	341	28.4		55.8	318	28.2		25.2	278	18.0		33.7	359	14.7		51.2
11	156	18.8	356	28.0	+9	54.7	333	29.2	-0	25.8	293	20.0	-15	33.8	14	16.9	+15	51.1
12	171	21.3	11	27.5	+9	53.5	348	30.2	-0	26.5	308	22.1	-15	33.9	29	19.0	+15	51.0
13	186	23.7	26	27.0		52.4	3	31.1		27.2	323	24.1		34.0	44	21.2		50.9
14	201	26.2	41	26.6		51.3	18	32.1		27.8	338	26.2		34.2	59	23.4		50.8
15	216	28.7	56	26.1		50.2	33	33.1		28.5	353	28.2		34.3	74	25.6		50.7
16	231	31.1	71	25.6		49.1	48	34.1		29.2	8	30.3		34.4	89	27.7		50.6
17	246	33.6	86	25.2	+9	47.9	63	35.1	-0	29.8	23	32.4	-15	34.5	104	29.9	+15	50.6
18	261	36.1	101	24.7	+9	46.8	78	36.1	-0	30.5	38	34.4	-15	34.7	119	32.1	+15	50.5
19	276	38.5	116	24.2		45.7	93	37.1		31.1	53	36.5		34.8	134	34.3		50.4
20	291	41.0	131	23.8		44.6	108	38.0		31.8	68	38.5		34.9	149	36.4		50.3
21	306	43.4	146	23.3		43.5	123	39.0		32.5	83	40.6		35.1	164	38.6		50.2
22	321	45.9	161	22.8		42.3	138	40.0		33.1	98	42.6		35.2	179	40.8		50.1
23	336	48.4	176	22.4		41.2	153	41.0		33.8	113	44.7		35.3	194	43.0		50.0
24	351	50.8	191	21.9	+9	40.1	168	42.0	-0	34.4	128	46.7	-15	35.4	209	45.1	+15	50.0
Dif	—		-5		-11	+10		-7	+21		-1		+22		-1			

UT	SOL		LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna					
	SD: 15'9 PMG: 11 ^h 56 ^m 0		Edad: 20 ^d 2 PHE { 4 ^h : 58'2 12 ^h : 57'9 20 ^h : 57'6 PMG: 4 ^h 37 ^m R°: 58 ^m															
	hG ☉	Dec	hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°				
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m					
0	180	58.1	+3	55.9	293	17.9	+25	15.6	60 N	18 28	19 10	20 03	18 58 27	15 08 93				
1	195	58.3		55.0	307	43.6	67	23.9	83	58	26	05	19 54	19 29 37	14 37 83			
2	210	58.5		54.0	322	09.2	66	32.1	80	56	24	19 01	47	19 52 43	14 14 78			
3	225	58.7		53.1	336	34.8	66	40.1	82	54	22	18 57	41	20 12 45	13 55 75			
4	240	59.0		52.1	351	00.3	65	47.9	78	52	20	54	35	28 47	39 73			
5	255	59.2	+3	51.1	5	25.8	65	+25	55.5	76	50	18 18	18 51	19 30	20 42 48	13 25 72		
6	270	59.4	+3	50.2	19	51.3	65	+26	03.0	73	45	18 15	18 45	19 20	21 11 50	12 57 69		
7	285	59.6		49.2	34	16.8	65		10.3	75	40	12	40	12	33 52	35 67		
8	300	59.9		48.3	48	42.3	65		17.4	71	35	10	36	05	21 52 53	17 65		
9	316	00.1		47.3	63	07.7	64		24.4	70	30	08	32	19 00	22 08 54	12 01 64		
10	331	00.3		46.4	77	33.1	64		31.2	68	20	05	27	18 53	36 55	11 35 61		
11	346	00.5	+3	45.4	91	58.4	63	+26	37.9	67	10 N	18 02	18 23	18 47	22 59 57	11 12 60		
12	1	00.7	+3	44.4	106	23.8	64	+26	44.3	64	0	17 59	18 20	18 44	23 21 58	10 51 58		
13	16	01.0		43.5	120	49.1	63		50.6	63	10 S	57	18	42	23 44 58	30 56		
14	31	01.2		42.5	135	14.4	63	+26	56.8	62	20	54	16	42	*** **	10 08 54		
15	46	01.4		41.6	149	39.7	63	+27	02.7	59	30	51	15	43	*** **	9 41 52		
16	61	01.6		40.6	164	05.0	63		08.5	58	35	50	15	44	*** **	26 50		
17	76	01.9	+3	39.7	178	30.3	63	+27	14.1	56	40	17 48	18 15	18 46	0 01 70	9 08 49		
18	91	02.1	+3	38.7	192	55.5	62	+27	19.6	55	45	17 46	18 15	18 49	0 22 73	8 47 46		
19	106	02.3		37.7	207	20.8	63		24.8	52	50	44	16	53	0 47 78	20 42		
20	121	02.5		36.8	221	46.0	62		29.9	51	52	43	16	55	1 00 80	8 07 40		
21	136	02.7		35.8	236	11.2	62		34.9	50	54	41	17	18 58	15 83	7 52 37		
22	151	03.0		34.9	250	36.4	62		39.6	47	56	40	17	19 01	32 87	35 32		
23	166	03.2		33.9	265	01.6	62		44.2	46	58	39	18	04	1 52 94	7 14 26		
24	181	03.4	+3	33.0	279	26.8	62	+27	48.6	44	60 S	17 37	18 19	19 07	2 18 107	6 47 14		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 0 ^h 32 ^m 5		Mag: -3.9 PMG: 11 ^h 15 ^m			Mag: +1.7 PMG: 12 ^h 44 ^m			Mag: -1.9 PMG: 15 ^h 23 ^m			Mag: +0.5 PMG: 10 ^h 00 ^m						
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec						
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	351	50.8	191	21.9	+9	40.1	168	42.0	-0	34.4	128	46.7	-15	35.4	209	45.1	+15	50.0
1	6	53.3	206	21.5		39.0	183	43.0		35.1	143	48.8		35.6	224	47.3		49.9
2	21	55.8	221	21.0		37.8	198	44.0		35.8	158	50.8		35.7	239	49.5		49.8
3	36	58.2	236	20.5		36.7	213	44.9		36.4	173	52.9		35.8	254	51.7		49.7
4	52	00.7	251	20.1		35.6	228	45.9		37.1	188	54.9		36.0	269	53.8		49.6
5	67	03.2	266	19.6	+9	34.4	243	46.9	-0	37.8	203	57.0	-15	36.1	284	56.0	+15	49.5
6	82	05.6	281	19.1	+9	33.3	258	47.9	-0	38.4	218	59.1	-15	36.2	299	58.2	+15	49.4
7	97	08.1	296	18.7		32.2	273	48.9		39.1	234	01.1		36.3	315	00.4		49.3
8	112	10.5	311	18.2		31.1	288	49.9		39.7	249	03.2		36.5	330	02.5		49.3
9	127	13.0	326	17.8		29.9	303	50.9		40.4	264	05.2		36.6	345	04.7		49.2
10	142	15.5	341	17.3		28.8	318	51.8		41.1	279	07.3		36.7	0	06.9		49.1
11	157	17.9	356	16.8	+9	27.7	333	52.8	-0	41.7	294	09.3	-15	36.8	15	09.1	+15	49.0
12	172	20.4	11	16.4	+9	26.5	348	53.8	-0	42.4	309	11.4	-15	37.0	30	11.2	+15	48.9
13	187	22.9	26	15.9		25.4	3	54.8		43.0	324	13.4		37.1	45	13.4		48.8
14	202	25.3	41	15.4		24.3	18	55.8		43.7	339	15.5		37.2	60	15.6		48.7
15	217	27.8	56	15.0		23.1	33	56.8		44.4	354	17.5		37.4	75	17.8		48.7
16	232	30.3	71	14.5		22.0	48	57.7		45.0	9	19.6		37.5	90	19.9		48.6
17	247	32.7	86	14.1	+9	20.9	63	58.7	-0	45.7	24	21.6	-15	37.6	105	22.1	+15	48.5
18	262	35.2	101	13.6	+9	19.7	78	59.7	-0	46.4	39	23.7	-15	37.7	120	24.3	+15	48.4
19	277	37.7	116	13.2		18.6	94	00.7		47.0	54	25.7		37.9	135	26.5		48.3
20	292	40.1	131	12.7		17.5	109	01.7		47.7	69	27.8		38.0	150	28.6		48.2
21	307	42.6	146	12.2		16.3	124	02.7		48.3	84	29.8		38.1	165	30.8		48.1
22	322	45.0	161	11.8		15.2	139	03.6		49.0	99	31.9		38.3	180	33.0		48.1
23	337	47.5	176	11.3		14.1	154	04.6		49.7	114	33.9		38.4	195	35.2		48.0
24	352	50.0	191	10.9	+9	12.9	169	05.6	-0	50.3	129	36.0	-15	38.5	210	37.3	+15	47.9
Dif	—		-5		-11		+10		-7		+21		-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 55 ^m 6			Edad: 21 ^d 2 PHE { SD: 15'7 PMG: 5 ^h 35 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°
h	°	'	°	°	'	°	°	h	m	h	m	h	m	h	m
0	181	03.4	+3	279	26.8	+27	48.6	3	50	4	42	5	25	19	25
1	196	03.6		293	52.1		52.9	3	58		47	27	20	06	65
2	211	03.9		308	17.3	+27	57.0	4	05		51	29	35	63	15
3	226	04.1		322	42.5	+28	00.9		12		55	31	20	57	62
4	241	04.3		337	07.7		04.6	17		4	58	32	21	15	61
5	256	04.5	+3	351	32.9	+28	08.1	4	22	5	01	5	21	30	61
6	271	04.7	+3	5	58.1	+28	11.5	4	32	5	08	5	22	01	60
7	286	05.0		20	23.4		14.7		40		12	40	25	60	13
8	301	05.2		34	48.6		17.8		47		16	42	22	45	59
9	316	05.4		49	13.9		20.6		52		20	44	23	02	59
10	331	05.6		63	39.1		23.3	4	59		25	47	31	58	12
11	346	05.9	+3	78	04.4	+28	25.9	5	04	5	29	5	23	56	57
12	1	06.1	+3	92	29.7	+28	28.2	5	08	5	32	5	**	**	**
13	16	06.3		106	55.1		30.4		09		34	55	**	**	**
14	31	06.5		121	20.4		32.4	10			35	5	0	07	60
15	46	06.7		135	45.8		34.2		08		36	6	35	61	10
16	61	07.0		150	11.2		35.9		07		36	01	0	52	61
17	76	07.2	+3	164	36.6	+28	37.4	5	05	5	36	6	1	11	62
18	91	07.4	+3	179	02.0	+28	38.7	5	02	5	36	6	1	35	62
19	106	07.6		193	27.5		39.9	4	57		35	07	2	05	64
20	121	07.9		207	53.0		40.9		55		34	08	20	65	8
21	136	08.1		222	18.5		41.7		53		34	09	38	65	29
22	151	08.3		236	44.1		42.4		50		33	10	2	59	67
23	166	08.5		251	09.7		42.9	47			33	12	3	26	69
24	181	08.7	+3	265	35.4	+28	43.2	4	43	5	32	6	4	05	74
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 0 ^h 28 ^m 6			Mag: -3.9 PMG: 11 ^h 16 ^m			Mag: +1.7 PMG: 12 ^h 43 ^m			Mag: -1.9 PMG: 15 ^h 20 ^m			Mag: +0.5 PMG: 9 ^h 56 ^m		
	hG ♈			hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°
0	352	50.0		191	10.9	+9	169	05.6	-0	129	36.0	-15	210	37.3	+15
1	7	52.4		206	10.4		184	06.6		144	38.0		225	39.5	
2	22	54.9		221	09.9		199	07.6		159	40.1		240	41.7	
3	37	57.4		236	09.5		214	08.6		174	42.1		255	43.9	
4	52	59.8		251	09.0		229	09.6		189	44.2		270	46.1	
5	68	02.3		266	08.6	+9	244	10.5	-0	204	46.2	-15	285	48.2	+15
6	83	04.8		281	08.1	+9	259	11.5	-0	219	48.3	-15	300	50.4	+15
7	98	07.2		296	07.7		274	12.5		234	50.3		315	52.6	
8	113	09.7		311	07.2		289	13.5		249	52.4		330	54.8	
9	128	12.2		326	06.8		304	14.5		264	54.4		345	56.9	
10	143	14.6		341	06.3		319	15.5		279	56.5		0	59.1	
11	158	17.1		356	05.9	+9	334	16.4	-0	294	58.5	-15	16	01.3	+15
12	173	19.5		11	05.4	+8	349	17.4	-0	310	00.6	-15	31	03.5	+15
13	188	22.0		26	04.9		4	18.4		325	02.6		46	05.6	
14	203	24.5		41	04.5		19	19.4	-0	340	04.7		61	07.8	
15	218	26.9		56	04.0		34	20.4	-1	355	06.7		76	10.0	
16	233	29.4		71	03.6		49	21.3		10	08.8		91	12.2	
17	248	31.9		86	03.1	+8	64	22.3	-1	25	10.8	-15	106	14.4	+15
18	263	34.3		101	02.7	+8	79	23.3	-1	40	12.8	-15	121	16.5	+15
19	278	36.8		116	02.2		94	24.3		55	14.9		136	18.7	
20	293	39.3		131	01.8		109	25.3		70	16.9		151	20.9	
21	308	41.7		146	01.3		124	26.3		85	19.0		166	23.1	
22	323	44.2		161	00.9		139	27.2		100	21.0		181	25.2	
23	338	46.7		176	00.4		154	28.2		115	23.1		196	27.4	
24	353	49.1		191	00.0	+8	169	29.2	-1	130	25.1	-15	211	29.6	+15
Dif	—			-5	-11		+10	-7		+20	-1		+22	-1	

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15°9 PMG: 11 ^h 55 ^m 2			Edad: 22 ^d 2 PHE { 4 ^h : 56/5 12 ^h : 56/3 20 ^h : 56/0 SD: 15/4 PMG: 6 ^h 33 ^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	181	08.7	+3 09.9	265	35.4	+28 43.2	1	60 N	18 22	19 04	19 56	20 33 94	17 32 17		
1	196	09.0	09.0	280	01.0	66 43.3	1	58	20	19 00	48	21 11 84	16 54 27		
2	211	09.2	08.0	294	26.8	68 43.3	0	56	18	18 56	41	38 78	27 33		
3	226	09.4	07.0	308	52.5	67 43.2	1	54	17	52	35	21 59 74	16 05 37		
4	241	09.6	06.1	323	18.4	69 42.8	4	52	15	49	30	22 16 72	15 48 39		
5	256	09.9	+3 05.1	337	44.2	68 42.3	5	50	18 14	18 47	19 25	22 31 70	15 33 40		
6	271	10.1	+3 04.1	352	10.1	69 41.7	6	45	18 11	18 41	19 16	23 01 66	15 02 44		
7	286	10.3	03.2	6 36.1	70 40.8	9	10	40	09	36	08	25 63	14 38 47		
8	301	10.5	02.2	21 02.1	70 39.8	10	9	35	07	33	19 02	23 44 62	19 48		
9	316	10.8	01.3	35 28.1	70 38.7	11	11	30	06	30	18 58	*** ** *	14 02 49		
10	331	11.0	+3 00.3	49 54.3	72 37.4	13	13	20	03	25	51	*** ** *	13 33 52		
11	346	11.2	+2 59.3	64 20.4	71 35.9	15	15	10 N	18 01	18 22	18 46	*** ** *	13 09 53		
12	1	11.4	+2 58.4	78 46.6	72 34.3	16	16	0	17 58	18 19	18 43	0 19 56	12 46 55		
13	16	11.6	57.4	93 12.9	73 32.5	18	18	10 S	57	18	42	0 42 55	12 23 56		
14	31	11.9	56.5	107 39.3	74 30.5	20	20	20	55	17	42	1 07 54	11 59 57		
15	46	12.1	55.5	122 05.7	74 28.4	21	21	30	52	16	44	36 53	30 59		
16	61	12.3	54.5	136 32.1	74 26.2	22	22	35	51	16	46	1 53 52	11 13 60		
17	76	12.5	+2 53.6	150 58.7	76 23.7	25	25	40	17 50	18 17	18 48	2 13 51	10 53 62		
18	91	12.8	+2 52.6	165 25.3	76 21.2	25	25	45	17 48	18 18	18 52	2 37 50	10 28 64		
19	106	13.0	51.6	179 51.9	76 18.4	28	28	50	47	19	56	3 09 48	9 57 66		
20	121	13.2	50.7	194 18.6	77 15.6	28	28	52	46	19	58 59	25 46	41 68		
21	136	13.4	49.7	208 45.4	78 12.5	31	31	54	45	20	19 01	3 43 45	23 69		
22	151	13.6	48.8	223 12.3	79 09.4	31	31	56	44	21	05	4 06 42	9 00 73		
23	166	13.9	47.8	237 39.2	79 06.0	34	34	58	43	22	08	4 35 38	8 31 77		
24	181	14.1	+2 46.8	252 06.2	80 2.6	34	34	60 S	17 42	18 23	19 12	5 19 28	7 47 87		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 0 ^h 24 ^m 7		Mag: -3.9 PMG: 11 ^h 16 ^m			Mag: +1.7 PMG: 12 ^h 41 ^m			Mag: -1.9 PMG: 15 ^h 16 ^m			Mag: +0.5 PMG: 9 ^h 53 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	353	49.1	191 00.0	+8 45.5	169 29.2	-1 06.2	130 25.1	-15 41.6	211 29.6	+15 45.8					
1	8	51.6	205 59.5	44.4	184 30.2	06.9	145 27.2	41.7	226 31.8	45.7					
2	23	54.0	220 59.1	43.2	199 31.2	07.5	160 29.2	41.9	241 34.0	45.6					
3	38	56.5	235 58.6	42.1	214 32.2	08.2	175 31.3	42.0	256 36.1	45.6					
4	53	59.0	250 58.2	40.9	229 33.1	08.8	190 33.3	42.1	271 38.3	45.5					
5	69	01.4	265 57.7	+8 39.8	244 34.1	-1 09.5	205 35.4	-15 42.3	286 40.5	+15 45.4					
6	84	03.9	280 57.3	+8 38.6	259 35.1	-1 10.2	220 37.4	-15 42.4	301 42.7	+15 45.3					
7	99	06.4	295 56.8	37.5	274 36.1	10.8	235 39.4	42.5	316 44.9	45.2					
8	114	08.8	310 56.4	36.3	289 37.1	11.5	250 41.5	42.6	331 47.0	45.1					
9	129	11.3	325 55.9	35.2	304 38.0	12.2	265 43.5	42.8	346 49.2	45.0					
10	144	13.8	340 55.5	34.0	319 39.0	12.8	280 45.6	42.9	1	51.4	45.0				
11	159	16.2	355 55.0	+8 32.9	334 40.0	-1 13.5	295 47.6	-15 43.0	16 53.6	+15 44.9					
12	174	18.7	10 54.6	+8 31.7	349 41.0	-1 14.1	310 49.7	-15 43.2	31 55.7	+15 44.8					
13	189	21.2	25 54.1	30.6	4 42.0	14.8	325 51.7	43.3	46 57.9	44.7					
14	204	23.6	40 53.7	29.4	19 42.9	15.5	340 53.7	43.4	62 00.1	44.6					
15	219	26.1	55 53.2	28.3	34 43.9	16.1	355 55.8	43.6	77 02.3	44.5					
16	234	28.5	70 52.8	27.1	49 44.9	16.8	10 57.8	43.7	92 04.5	44.4					
17	249	31.0	85 52.4	+8 26.0	64 45.9	-1 17.5	25 59.9	-15 43.8	107 06.6	+15 44.4					
18	264	33.5	100 51.9	+8 24.8	79 46.9	-1 18.1	41 01.9	-15 43.9	122 08.8	+15 44.3					
19	279	35.9	115 51.5	23.7	94 47.9	18.8	56 04.0	44.1	137 11.0	44.2					
20	294	38.4	130 51.0	22.5	109 48.8	19.4	71 06.0	44.2	152 13.2	44.1					
21	309	40.9	145 50.6	21.4	124 49.8	20.1	86 08.0	44.3	167 15.4	44.0					
22	324	43.3	160 50.1	20.2	139 50.8	20.8	101 10.1	44.5	182 17.5	43.9					
23	339	45.8	175 49.7	19.0	154 51.8	21.4	116 12.1	44.6	197 19.7	43.9					
24	354	48.3	190 49.2	+8 17.9	169 52.8	-1 22.1	131 14.2	-15 44.7	212 21.9	+15 43.8					
Dif	—		-4	-12	+10	-7	+20	-1	+22	-1					

UT	SOL			☾ LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15 ^h 9			Edad: 23 ^d 2	PHE { 4 ^h : 55 ^m /8 12 ^h : 55 ^m /6 20 ^h : 55 ^m /4	SD: 15 ^h 2	PMG: 7 ^h 28 ^m	R°: 52 ^m		Náutico	Civil		Hora	R°	Hora	R°
	hG ☉	Dec	Dif													
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m
0	181	14.1	+2 46.8	252	06.2	+28 02.6	37	60 N	3 55	4 47	5 30	22 07 98	17 49 5			
1	196	14.3	45.9	266	33.3	+27 58.9	37	58	4 03	52	31	35 89	21 14			
2	211	14.5	44.9	281	00.5	55.2	37	56	10	55	33	22 56 83	17 00 19			
3	226	14.8	43.9	295	27.7	51.2	40	54	16	4 59	34	23 13 80	16 42 23			
4	241	15.0	43.0	309	55.0	47.2	40	52	21	5 02	36	28 76	27 26			
5	256	15.2	+2 42.0	324	22.4	+27 43.0	42	50	4 26	5 04	5 37	23 41 74	16 13 29			
6	271	15.4	+2 41.0	338	49.8	+27 38.6	44	45	4 35	5 10	5 39	** ** *	15 46 34			
7	286	15.7	40.1	353	17.4	34.1	45	40	42	14	42	** ** *	25 37			
8	301	15.9	39.1	7	45.0	29.5	46	35	48	18	43	** ** *	15 07 39			
9	316	16.1	38.1	22	12.7	24.7	48	30	4 53	21	45	0 01 59	14 51 42			
10	331	16.3	37.2	36	40.5	19.8	49	20	5 00	25	48	29 57	25 45			
11	346	16.5	+2 36.2	51	08.4	+27 14.7	51	10 N	5 04	5 29	5 50	0 53 54	14 02 48			
12	1	16.8	+2 35.3	65	36.3	+27 09.6	51	0	5 07	5 31	5 52	1 15 53	13 41 51			
13	16	17.0	34.3	80	04.3	+27 04.2	54	10 S	08	32	53	1 37 51	13 19 54			
14	31	17.2	33.3	94	32.5	+26 58.8	54	20	08	33	55	2 01 48	12 56 57			
15	46	17.4	32.4	109	00.7	53.2	56	30	06	33	57	29 45	29 60			
16	61	17.7	31.4	123	28.9	47.5	57	35	04	33	5 58	2 45 44	12 13 62			
17	76	17.9	+2 30.4	137	57.3	+26 41.6	59	40	5 01	5 33	6 00	3 04 42	11 55 64			
18	91	18.1	+2 29.5	152	25.8	+26 35.6	60	45	4 58	5 32	6 01	3 27 39	11 32 68			
19	106	18.3	28.5	166	54.3	29.5	61	50	53	30	03	3 57 34	11 03 73			
20	121	18.6	27.5	181	23.0	23.2	63	52	51	30	03	4 11 32	10 49 75			
21	136	18.8	26.6	195	51.7	16.9	63	54	48	29	04	28 29	32 79			
22	151	19.0	25.6	210	20.5	10.4	65	56	45	28	05	4 48 25	10 13 82			
23	166	19.2	24.6	224	49.4	+26 03.7	67	58	41	27	06	5 13 19	9 48 89			
24	181	19.4	+2 23.7	239	18.4	+25 57.0	67	60 S	4 37	5 26	6 07	5 47 8	9 14 100			

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO		
	PMG 0 ^h 20 ^m 7		Mag: -3.9 PMG: 11 ^h 17 ^m		Mag: +1.7 PMG: 12 ^h 40 ^m		Mag: -1.9 PMG: 15 ^h 13 ^m		Mag: +0.5 PMG: 9 ^h 49 ^m		
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	
0	354	48.3	190	49.2	+8 17.9	169	52.8	-1 22.1	212	21.9	+15 43.8
1	9	50.7	205	48.8	16.7	184	53.7	22.7	227	24.1	43.7
2	24	53.2	220	48.3	15.6	199	54.7	23.4	242	26.3	43.6
3	39	55.6	235	47.9	14.4	214	55.7	24.1	257	28.4	43.5
4	54	58.1	250	47.5	13.3	229	56.7	24.7	272	30.6	43.4
5	70	00.6	265	47.0	+8 12.1	244	57.7	-1 25.4	287	32.8	+15 43.3
6	85	03.0	280	46.6	+8 10.9	259	58.6	-1 26.1	302	35.0	+15 43.3
7	100	05.5	295	46.1	09.8	274	59.6	26.7	317	37.2	43.2
8	115	08.0	310	45.7	08.6	290	00.6	27.4	332	39.3	43.1
9	130	10.4	325	45.2	07.5	305	01.6	28.0	347	41.5	43.0
10	145	12.9	340	44.8	06.3	320	02.6	28.7	2	43.7	42.9
11	160	15.4	355	44.4	+8 05.1	335	03.5	-1 29.4	17	45.9	+15 42.8
12	175	17.8	10	43.9	+8 04.0	350	04.5	-1 30.0	32	48.1	+15 42.7
13	190	20.3	25	43.5	02.8	5	05.5	30.7	47	50.3	42.7
14	205	22.8	40	43.0	01.6	20	06.5	31.4	62	52.4	42.6
15	220	25.2	55	42.6	+8 00.5	35	07.4	32.0	77	54.6	42.5
16	235	27.7	70	42.2	+7 59.3	50	08.4	32.7	92	56.8	42.4
17	250	30.1	85	41.7	+7 58.2	65	09.4	-1 33.3	107	59.0	+15 42.3
18	265	32.6	100	41.3	+7 57.0	80	10.4	-1 34.0	123	01.2	+15 42.2
19	280	35.1	115	40.8	55.8	95	11.4	34.7	138	03.3	42.1
20	295	37.5	130	40.4	54.7	110	12.3	35.3	153	05.5	42.1
21	310	40.0	145	40.0	53.5	125	13.3	36.0	168	07.7	42.0
22	325	42.5	160	39.5	52.3	140	14.3	36.7	183	09.9	41.9
23	340	44.9	175	39.1	51.2	155	15.3	37.3	198	12.1	41.8
24	355	47.4	190	38.6	+7 50.0	170	16.3	-1 38.0	213	14.2	+15 41.7
Dif	—		-4 -12		+10 -7		+20 -1		+22 -1		

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 15°9 PMG: 11 ^h 54 ^m 5			Edad: 24 ^d 2 PHE { 4 ^h : 55'2 12 ^h : 55'0 20 ^h : 54'9 SD: 15°1 PMG: 8 ^h 20 ^m R°: 48 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	h m	h m	h m	h m	h m	m	h m	m
0	181	19.4	+2	23.7	239	18.4	+25 57.0	60 N	18 16	18 58	19 49	23 45	94	17 54	2
1	196	19.7		22.7	253	47.5 ¹⁰¹	50.1	58	14	54	42	** ** *	**	35	7
2	211	19.9		21.7	268	16.6 ¹⁰¹	43.1	56	13	50	35	** ** *	**	19	12
3	226	20.1		20.8	282	45.9 ¹⁰³	36.0	54	12	47	30	** ** *	**	17 05	16
4	241	20.3		19.8	297	15.3 ¹⁰⁴	28.8	52	11	44	25	** ** *	**	16 53	18
5	256	20.6	+2	18.8	311	44.7 ¹⁰⁴	+25 21.4	50	18 10	18 42	19 21	** ** *	**	16 42	21
6	271	20.8	+2	17.9	326	14.2 ¹⁰⁵	+25 14.0	45	18 08	18 37	19 12	0 07	69	16 20	26
7	286	21.0		16.9	340	43.9 ¹⁰⁷	+25 06.4	40	06	33	19 05	28	65	16 02	30
8	301	21.2		15.9	355	13.6 ¹⁰⁷	+24 58.7	35	04	30	18 59	0 46	61	15 46	33
9	316	21.4		15.0	9	43.4 ¹⁰⁸	50.9	30	03	27	55	1 00	60	33	36
10	331	21.7		14.0	24	13.3 ¹⁰⁹	43.0	20	18 01	23	49	26	55	15 10	40
11	346	21.9	+2	13.0	38	43.3 ¹¹⁰	+24 34.9	10 N	17 59	18 20	18 45	1 47	53	14 50	44
12	1	22.1	+2	12.1	53	13.4 ¹¹¹	+24 26.8	0	17 58	18 18	18 42	2 08	49	14 32	47
13	16	22.3		11.1	67	43.5 ¹¹¹	18.5	10 S	56	17	42	28	46	14 13	51
14	31	22.6		10.1	82	13.8 ¹¹³	10.2	20	55	17	42	2 49	43	13 53	54
15	46	22.8		09.2	96	44.2 ¹¹⁴	+24 01.7	30	53	17	45	3 14	39	29	59
16	61	23.0		08.2	111	14.6 ¹¹⁴	+23 53.1	35	53	18	47	29	36	13 15	62
17	76	23.2	+2	07.2	125	45.2 ¹¹⁶	+23 44.4	40	17 52	18 19	18 50	3 46	33	12 59	65
18	91	23.5	+2	06.3	140	15.8 ¹¹⁶	+23 35.7	45	17 51	18 20	18 54	4 06	29	12 40	69
19	106	23.7		05.3	154	46.5 ¹¹⁷	26.8	50	50	22	19 00	31	24	16	74
20	121	23.9		04.3	169	17.3 ¹¹⁸	17.8	52	49	23	02	43	22	12 04	77
21	136	24.1		03.4	183	48.2 ¹¹⁹	+23 08.7	54	49	24	05	4 57	18	11 51	80
22	151	24.3		02.4	198	19.2 ¹²⁰	+22 59.5	56	48	25	09	5 13	14	35	84
23	166	24.6		01.4	212	50.3 ¹²¹	50.2	58	47	26	13	32	9	11 17	89
24	181	24.8	+2	00.5	227	21.5 ¹²²	+22 40.8	60 S	17 46	18 28	19 17	5 55	3	10 54	97
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 0 ^h 16 ^m 8		Mag: -3.9 PMG: 11 ^h 18 ^m			Mag: +1.7 PMG: 12 ^h 38 ^m			Mag: -1.9 PMG: 15 ^h 10 ^m			Mag: +0.5 PMG: 9 ^h 46 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'	'	°	'
0	355	47.4	190	38.6	+7 50.0	170	16.3	-1 38.0	132	03.1	-15 47.9	213	14.2	+15 41.7	
1	10	49.9	205	38.2	48.8	185	17.2	38.6	147	05.2	48.0	228	16.4	41.6	
2	25	52.3	220	37.8	47.7	200	18.2	39.3	162	07.2	48.1	243	18.6	41.6	
3	40	54.8	235	37.3	46.5	215	19.2	40.0	177	09.2	48.2	258	20.8	41.5	
4	55	57.3	250	36.9	45.3	230	20.2	40.6	192	11.3	48.4	273	23.0	41.4	
5	70	59.7	265	36.5	+7 44.2	245	21.1	-1 41.3	207	13.3	-15 48.5	288	25.2	+15 41.3	
6	86	02.2	280	36.0	+7 43.0	260	22.1	-1 41.9	222	15.3	-15 48.6	303	27.3	+15 41.2	
7	101	04.6	295	35.6	41.8	275	23.1	42.6	237	17.4	48.8	318	29.5	41.1	
8	116	07.1	310	35.1	40.6	290	24.1	43.3	252	19.4	48.9	333	31.7	41.0	
9	131	09.6	325	34.7	39.5	305	25.1	43.9	267	21.5	49.0	348	33.9	41.0	
10	146	12.0	340	34.3	38.3	320	26.0	44.6	282	23.5	49.2	3	36.1	40.9	
11	161	14.5	355	33.8	+7 37.1	335	27.0	-1 45.3	297	25.5	-15 49.3	18	38.3	+15 40.8	
12	176	17.0	10	33.4	+7 36.0	350	28.0	-1 45.9	312	27.6	-15 49.4	33	40.4	+15 40.7	
13	191	19.4	25	33.0	34.8	5	29.0	46.6	327	29.6	49.6	48	42.6	40.6	
14	206	21.9	40	32.5	33.6	20	29.9	47.2	342	31.6	49.7	63	44.8	40.5	
15	221	24.4	55	32.1	32.4	35	30.9	47.9	357	33.7	49.8	78	47.0	40.5	
16	236	26.8	70	31.7	31.3	50	31.9	48.6	12	35.7	49.9	93	49.2	40.4	
17	251	29.3	85	31.2	+7 30.1	65	32.9	-1 49.2	27	37.7	-15 50.1	108	51.4	+15 40.3	
18	266	31.8	100	30.8	+7 28.9	80	33.9	-1 49.9	42	39.8	-15 50.2	123	53.5	+15 40.2	
19	281	34.2	115	30.4	27.8	95	34.8	50.6	57	41.8	50.3	138	55.7	40.1	
20	296	36.7	130	29.9	26.6	110	35.8	51.2	72	43.8	50.5	153	57.9	40.0	
21	311	39.1	145	29.5	25.4	125	36.8	51.9	87	45.9	50.6	169	00.1	40.0	
22	326	41.6	160	29.1	24.2	140	37.8	52.5	102	47.9	50.7	184	02.3	39.9	
23	341	44.1	175	28.6	23.1	155	38.7	53.2	117	49.9	50.9	199	04.5	39.8	
24	356	46.5	190	28.2	+7 21.9	170	39.7	-1 53.9	132	52.0	-15 51.0	214	06.6	+15 39.7	
Dif	—		-4		-12	+10		-7	+20		-1	+22		-1	

UT	SOL		☉ LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna								
	SD: 15'9		Edad: 25 ^d 2	PHE { 4 ^h : 54'7 12 ^h : 54'6 20 ^h : 54'5	SD: 14'9			Principio del crepúsculo			Salida de Luna		Puesta de Luna								
	PMG: 11 ^h 54 ^m 2	PMG: 9 ^h 08 ^m			R°: 44 ^m	Náutico		Civil	Hora		R°	Hora	R°								
	hG ☉	Dec	hG ☾	Dif	Dec	Dif															
h	°	'	°	'	°	'	°	h	m	h	m	h	m	m							
0	181	24.8	+2	00.5	227	21.5	+22	40.8	58	4	01	4	52	5	34	**	**	**			
1	196	25.0	+1	59.5	241	52.8 ¹²³		31.4 ⁹⁴	58	08		56	36		0	04	88	42	4		
2	211	25.2		58.5	256	24.1 ¹²³		21.8 ⁹⁶	56	14	4	59	37		19	83		31	7		
3	226	25.5		57.6	270	55.5 ¹²⁴		12.1 ⁹⁷	54	20	5	02	38		33	79		21	10		
4	241	25.7		56.6	285	27.1 ¹²⁶	+22	02.4 ⁹⁷	52	25		05	39		44	76		11	14		
5	256	25.9	+1	55.6	299	58.7 ¹²⁶	+21	52.5 ⁹⁹	50	4	29	5	07	5	40	0	55	73	17	03	16
6	271	26.1	+1	54.7	314	30.4 ¹²⁷	+21	42.6 ⁹⁹	45	4	38	5	12	5	42	1	16	68	16	46	21
7	286	26.3		53.7	329	02.2 ¹²⁸		32.6 ¹⁰⁰	40	44		16	43		33	64		32	24		
8	301	26.6		52.7	343	34.1 ¹²⁹		22.4 ¹⁰²	35	50		19	45		1	47	61		19	28	
9	316	26.8		51.8	358	06.0 ¹²⁹		12.2 ¹⁰²	30	4	54	22	46		2	00	58		16	09	31
10	331	27.0		50.8	12	38.1 ¹³¹	+21	02.0 ¹⁰²	20	5	00	26	48		21	53		15	50	36	
11	346	27.2	+1	49.8	27	10.2 ¹³¹	+20	51.6 ¹⁰⁴	10 N	5	04	5	29	5	50	2	40	49	15	34	40
12	1	27.5	+1	48.9	41	42.4 ¹³²	+20	41.1 ¹⁰⁵	0	5	06	5	30	5	51	2	57	45	15	19	44
13	16	27.7		47.9	56	14.8 ¹³⁴		30.6 ¹⁰⁵	10 S		07	31	52		3	14	41		15	04	47
14	31	27.9		46.9	70	47.1 ¹³³		20.0 ¹⁰⁶	20		06	32	53		3	32	37		14	47	52
15	46	28.1		46.0	85	19.6 ¹³⁵	+20	09.3 ¹⁰⁷	30		03	31	55		3	53	33		28	57	
16	61	28.3		45.0	99	52.2 ¹³⁶	+19	58.5 ¹⁰⁸	35	5	01	30	56		4	05	30		17	60	
17	76	28.6	+1	44.0	114	24.8 ¹³⁶	+19	47.6 ¹⁰⁹	40	4	58	5	29	5	56	4	19	27	14	04	63
18	91	28.8	+1	43.0	128	57.5 ¹³⁷	+19	36.7 ¹⁰⁹	45	4	54	5	28	5	57	4	35	23	13	49	67
19	106	29.0		42.1	143	30.3 ¹³⁸		25.7 ¹¹⁰	50		48	26	58		4	55	18		30	72	
20	121	29.2		41.1	158	03.2 ¹³⁹		14.6 ¹¹¹	52		46	25	59		5	05	15		21	75	
21	136	29.5		40.1	172	36.2 ¹⁴⁰	+19	03.4 ¹¹²	54		43	24	5	59		15	13		13	11	78
22	151	29.7		39.2	187	09.2 ¹⁴⁰	+18	52.2 ¹¹²	56		39	23	6	00		27	9		12	59	82
23	166	29.9		38.2	201	42.3 ¹⁴¹		40.9 ¹¹³	58		35	21	00		41	5		46	86		
24	181	30.1	+1	37.2	216	15.5 ¹⁴²	+18	29.5 ¹¹⁴	60 S	4	30	5	20	6	01	5	58	**	12	31	91
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO									
	PMG: 0 ^h 12 ^m 9		Mag: -3.9 PMG: 11 ^h 18 ^m			Mag: +1.7 PMG: 12 ^h 37 ^m			Mag: -1.9 PMG: 15 ^h 06 ^m			Mag: +0.5 PMG: 9 ^h 42 ^m									
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec								
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'							
0	356	46.5	190	28.2	+7	21.9	170	39.7	-1	53.9	132	52.0	-15	51.0	214	06.6	+15	39.7			
1	11	49.0	205	27.8		20.7	185	40.7		54.5	147	54.0		51.1	229	08.8		39.6			
2	26	51.5	220	27.3		19.5	200	41.7		55.2	162	56.0		51.3	244	11.0		39.5			
3	41	53.9	235	26.9		18.3	215	42.6		55.9	177	58.1		51.4	259	13.2		39.4			
4	56	56.4	250	26.5		17.2	230	43.6		56.5	193	00.1		51.5	274	15.4		39.4			
5	71	58.9	265	26.0	+7	16.0	245	44.6	-1	57.2	208	02.1	-15	51.7	289	17.6	+15	39.3			
6	87	01.3	280	25.6	+7	14.8	260	45.6	-1	57.8	223	04.2	-15	51.8	304	19.7	+15	39.2			
7	102	03.8	295	25.2		13.6	275	46.6		58.5	238	06.2		51.9	319	21.9		39.1			
8	117	06.2	310	24.7		12.5	290	47.5		59.2	253	08.2		52.0	334	24.1		39.0			
9	132	08.7	325	24.3		11.3	305	48.5	-1	59.8	268	10.3		52.2	349	26.3		38.9			
10	147	11.2	340	23.9		10.1	320	49.5	-2	00.5	283	12.3		52.3	4	28.5		38.9			
11	162	13.6	355	23.4	+7	08.9	335	50.5	-2	01.1	298	14.3	-15	52.4	19	30.7	+15	38.8			
12	177	16.1	10	23.0	+7	07.7	350	51.4	-2	01.8	313	16.4	-15	52.6	34	32.8	+15	38.7			
13	192	18.6	25	22.6		06.6	5	52.4		02.5	328	18.4		52.7	49	35.0		38.6			
14	207	21.0	40	22.2		05.4	20	53.4		03.1	343	20.4		52.8	64	37.2		38.5			
15	222	23.5	55	21.7		04.2	35	54.4		03.8	358	22.5		53.0	79	39.4		38.4			
16	237	26.0	70	21.3		03.0	50	55.3		04.5	13	24.5		53.1	94	41.6		38.4			
17	252	28.4	85	20.9	+7	01.8	65	56.3	-2	05.1	28	26.5	-15	53.2	109	43.8	+15	38.3			
18	267	30.9	100	20.4	+7	00.7	80	57.3	-2	05.8	43	28.5	-15	53.4	124	46.0	+15	38.2			
19	282	33.4	115	20.0	+6	59.5	95	58.3		06.4	58	30.6		53.5	139	48.1		38.1			
20	297	35.8	130	19.6		58.3	110	59.2		07.1	73	32.6		53.6	154	50.3		38.0			
21	312	38.3	145	19.2		57.1	126	00.2		07.8	88	34.6		53.8	169	52.5		37.9			
22	327	40.7	160	18.7		55.9	141	01.2		08.4	103	36.7		53.9	184	54.7		37.9			
23	342	43.2	175	18.3		54.7	156	02.2		09.1	118	38.7		54.0	199	56.9		37.8			
24	357	45.7	190	17.9	+6	53.5	171	03.1	-2	09.8	133	40.7	-15	54.2	214	59.1	+15	37.7			
Dif	—		-4	-12			+10	-7			+20	-1			+22	-1					

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15'9 PMG: 11 ^h 53 ^m 8			Edad: 26 ^d 2 PHE { SD: 14'8 PMG: 9 ^h 52 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	Rº	Hora
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m
0	181	30.1	+1 37.2	216	15.5	+18 29.5	18.1 ¹¹⁴	60 N	18 10	18 51	19 42	1 19 88	17 55	**
1	196	30.4		230	48.8 ¹⁴³		18.1 ¹¹⁴	58	09	48	35	32 83	46	3
2	211	30.6	35.3	245	22.1 ¹⁴³	+18 06.5 ¹¹⁶		56	08	45	29	42 80	38	6
3	226	30.8	34.3	259	55.5 ¹⁴⁴	+17 54.9 ¹¹⁶		54	07	42	24	1 52 77	31	9
4	241	31.0	33.4	274	29.0 ¹⁴⁵	43.3 ¹¹⁶		52	06	40	20	2 00 74	25	11
5	256	31.2	+1 32.4	289	02.6 ¹⁴⁶	+17 31.6 ¹¹⁷		50	18 05	18 38	19 16	2 08 71	17 19	13
6	271	31.5	+1 31.4	303	36.2 ¹⁴⁶	+17 19.8 ¹¹⁸		45	18 04	18 33	19 08	2 24 66	17 07	17
7	286	31.7	30.4	318	09.9 ¹⁴⁷	+17 07.9 ¹¹⁹		40	03	30	19 01	37 62	16 56	22
8	301	31.9	29.5	332	43.7 ¹⁴⁸	+16 56.0 ¹¹⁹		35	02	27	18 56	48 59	47	25
9	316	32.1	28.5	347	17.6 ¹⁴⁹	44.0 ¹²⁰		30	18 01	25	52	2 58 55	40	27
10	331	32.3	27.5	1	51.5 ¹⁴⁹	32.0 ¹²⁰		20	17 59	21	47	3 14 51	26	33
11	346	32.6	+1 26.6	16	25.5 ¹⁵⁰	+16 19.9 ¹²¹		10 N	17 58	18 19	18 43	3 29 46	16 14	37
12	1	32.8	+1 25.6	30	59.5 ¹⁵⁰	+16 07.7 ¹²²		0	17 57	18 18	18 42	3 42 42	16 03	41
13	16	33.0	24.6	45	33.7 ¹⁵²	+15 55.5 ¹²²		10 S	56	17	42	3 55 39	15 51	45
14	31	33.2	23.7	60	07.9 ¹⁵²	43.3 ¹²²		20	55	17	43	4 09 34	39	50
15	46	33.5	22.7	74	42.1 ¹⁵²	30.9 ¹²⁴		30	55	18	46	26 29	25	54
16	61	33.7	21.7	89	16.4 ¹⁵³	18.5 ¹²⁴		35	54	19	49	35 26	17	57
17	76	33.9	+1 20.7	103	50.8 ¹⁵⁴	+15 06.1 ¹²⁴		40	17 54	18 21	18 52	4 46 22	15 07	61
18	91	34.1	+1 19.8	118	25.3 ¹⁵⁵	+14 53.6 ¹²⁵		45	17 53	18 22	18 57	4 58 19	14 56	65
19	106	34.3	18.8	132	59.8 ¹⁵⁵	41.1 ¹²⁵		50	53	25	19 03	5 13 14	42	71
20	121	34.6	17.8	147	34.4 ¹⁵⁶	28.5 ¹²⁶		52	52	26	06	20 12	36	73
21	136	34.8	16.9	162	09.0 ¹⁵⁶	15.8 ¹²⁷		54	52	27	09	28 9	29	76
22	151	35.0	15.9	176	43.7 ¹⁵⁷	+14 03.1 ¹²⁷		56	52	29	13	36 7	21	79
23	166	35.2	14.9	191	18.4 ¹⁵⁷	+13 50.3 ¹²⁸		58	51	31	17	46 3	12	82
24	181	35.5	+1 14.0	205	53.2 ¹⁵⁸	+13 37.5 ¹²⁸		60 S	17 51	18 33	19 22	5 57 **	14 02	86
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 0 ^h 08 ^m 9		Mag: -3.9 PMG: 11 ^h 19 ^m			Mag: +1.7 PMG: 12 ^h 35 ^m			Mag: -1.9 PMG: 15 ^h 03 ^m			Mag: +0.5 PMG: 9 ^h 39 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	'	°	'	'	°	°	'	°	'	°	'
0	357	45.7	190	17.9	+6 53.5	171	03.1	-2 09.8	133	40.7	-15 54.2	214	59.1	+15 37.7
1	12	48.1	205	17.4	52.4	186	04.1	10.4	148	42.8	54.3	230	01.3	37.6
2	27	50.6	220	17.0	51.2	201	05.1	11.1	163	44.8	54.4	245	03.4	37.5
3	42	53.1	235	16.6	50.0	216	06.1	11.7	178	46.8	54.6	260	05.6	37.4
4	57	55.5	250	16.2	48.8	231	07.0	12.4	193	48.8	54.7	275	07.8	37.3
5	72	58.0	265	15.7	+6 47.6	246	08.0	-2 13.1	208	50.9	-15 54.8	290	10.0	+15 37.3
6	88	00.5	280	15.3	+6 46.4	261	09.0	-2 13.7	223	52.9	-15 54.9	305	12.2	+15 37.2
7	103	02.9	295	14.9	45.2	276	09.9	14.4	238	54.9	55.1	320	14.4	37.1
8	118	05.4	310	14.5	44.1	291	10.9	15.0	253	57.0	55.2	335	16.6	37.0
9	133	07.9	325	14.0	42.9	306	11.9	15.7	268	59.0	55.3	350	18.7	36.9
10	148	10.3	340	13.6	41.7	321	12.9	16.4	284	01.0	55.5	5	20.9	36.8
11	163	12.8	355	13.2	+6 40.5	336	13.8	-2 17.0	299	03.0	-15 55.6	20	23.1	+15 36.8
12	178	15.2	10	12.8	+6 39.3	351	14.8	-2 17.7	314	05.1	-15 55.7	35	25.3	+15 36.7
13	193	17.7	25	12.3	38.1	6	15.8	18.4	329	07.1	55.9	50	27.5	36.6
14	208	20.2	40	11.9	36.9	21	16.8	19.0	344	09.1	56.0	65	29.7	36.5
15	223	22.6	55	11.5	35.7	36	17.7	19.7	359	11.2	56.1	80	31.9	36.4
16	238	25.1	70	11.1	34.6	51	18.7	20.3	14	13.2	56.3	95	34.1	36.3
17	253	27.6	85	10.6	+6 33.4	66	19.7	-2 21.0	29	15.2	-15 56.4	110	36.2	+15 36.3
18	268	30.0	100	10.2	+6 32.2	81	20.7	-2 21.7	44	17.2	-15 56.5	125	38.4	+15 36.2
19	283	32.5	115	09.8	31.0	96	21.6	22.3	59	19.3	56.7	140	40.6	36.1
20	298	35.0	130	09.4	29.8	111	22.6	23.0	74	21.3	56.8	155	42.8	36.0
21	313	37.4	145	08.9	28.6	126	23.6	23.7	89	23.3	56.9	170	45.0	35.9
22	328	39.9	160	08.5	27.4	141	24.5	24.3	104	25.3	57.1	185	47.2	35.8
23	343	42.3	175	08.1	26.2	156	25.5	25.0	119	27.4	57.2	200	49.4	35.8
24	358	44.8	190	07.7	+6 25.0	171	26.5	-2 25.6	134	29.4	-15 57.3	215	51.6	+15 35.7
Dif	—		-4		-12	+10		-7	+20		-1	+22		-1

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15'9 PMG: 11 ^h 53 ^m 5			Edad: 27 ^d 2 PHE { 4 ^h : 54'1 12 ^h : 54'1 20 ^h : 54'0 R°: 40 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	
0	181	35.5	+1	14.0	205	53.2	+13	37.5	60 N	4 06	4 57	5 39	2 47	85	17 54	**
1	196	35.7		13.0	220	28.1 ¹⁵⁹		24.7 ¹²⁸	58	13	5 01	40	2 55	81	49	1
2	211	35.9		12.0	235	03.0 ¹⁵⁹	+13	11.8 ¹²⁹	56	19	03	41	3 02	77	44	4
3	226	36.1		11.0	249	38.0 ¹⁶⁰	+12	58.9 ¹²⁹	54	24	06	42	09	74	40	6
4	241	36.3		10.1	264	13.0 ¹⁶⁰		45.9 ¹³⁰	52	28	08	42	14	72	36	9
5	256	36.6	+1	09.1	278	48.1 ¹⁶¹	+12	32.8 ¹³¹	50	4 32	5 11	5 43	3 19	69	17 32	11
6	271	36.8	+1	08.1	293	23.2 ¹⁶¹	+12	19.8 ¹³⁰	45	4 40	5 15	5 44	3 30	64	17 24	16
7	286	37.0		07.2	307	58.4 ¹⁶²	+12	06.7 ¹³¹	40	47	18	45	39	60	18	19
8	301	37.2		06.2	322	33.7 ¹⁶³	+11	53.5 ¹³²	35	51	21	46	47	56	12	23
9	316	37.5		05.2	337	09.0 ¹⁶³		40.3 ¹³²	30	4 55	23	47	3 53	54	17 07	26
10	331	37.7		04.2	351	44.3 ¹⁶³		27.1 ¹³²	20	5 01	26	48	4 05	48	16 59	30
11	346	37.9	+1	03.3	6	19.7 ¹⁶⁴	+11	13.8 ¹³³	10 N	5 04	5 28	5 49	4 15	44	16 51	35
12	1	38.1	+1	02.3	20	55.1 ¹⁶⁴	+11	00.5 ¹³³	0	5 06	5 30	5 50	4 24	40	16 44	39
13	16	38.3		01.3	35	30.6 ¹⁶⁵	+10	47.1 ¹³⁴	10 S	06	30	51	34	35	36	44
14	31	38.6	+1	00.4	50	06.1 ¹⁶⁵		33.7 ¹³⁴	20	04	30	52	43	32	29	48
15	46	38.8	+0	59.4	64	41.7 ¹⁶⁶		20.3 ¹³⁴	30	5 01	28	52	4 55	26	19	54
16	61	39.0		58.4	79	17.3 ¹⁶⁶	+10	06.8 ¹³⁵	35	4 58	27	53	5 01	24	14	56
17	76	39.2	+0	57.4	93	52.9 ¹⁶⁶	+9	53.4 ¹³⁴	40	4 55	5 26	5 53	5 08	21	16 08	60
18	91	39.4	+0	56.5	108	28.6 ¹⁶⁷	+9	39.8 ¹³⁶	45	4 50	5 24	5 53	5 17	16	16 01	64
19	106	39.7		55.5	123	04.3 ¹⁶⁷		26.3 ¹³⁵	50	44	22	54	27	12	15 53	68
20	121	39.9		54.5	137	40.1 ¹⁶⁸	+9	12.7 ¹³⁶	52	41	20	54	32	10	49	71
21	136	40.1		53.6	152	15.9 ¹⁶⁸	+8	59.1 ¹³⁶	54	37	19	54	37	7	45	73
22	151	40.3		52.6	166	51.7 ¹⁶⁸		45.4 ¹³⁷	56	34	17	54	43	4	40	76
23	166	40.5		51.6	181	27.6 ¹⁶⁹		31.7 ¹³⁷	58	29	16	55	49	2	34	80
24	181	40.8	+0	50.6	196	03.5 ¹⁶⁹	+8	18.0 ¹³⁷	60 S	4 24	5 13	5 55	5 56	**	15 28	83

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO										
	PMG 0 ^h 05 ^m 0		Mag: -3.9 PMG: 11 ^h 20 ^m		Mag: +1.7 PMG: 12 ^h 33 ^m		Mag: -1.8 PMG: 15 ^h 00 ^m		Mag: +0.5 PMG: 9 ^h 35 ^m										
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec									
h	°	'	°	'	°	'	°	'	°	'									
0	358	44.8	190	07.7	+6	25.0	171	26.5	-2	25.6	134	29.4	-15	57.3	215	51.6	+15	35.7	
1	13	47.3	205	07.3		23.8	186	27.5		26.3	149	31.4		57.5	230	53.7		35.6	
2	28	49.7	220	06.8		22.6	201	28.4		27.0	164	33.4		57.6	245	55.9		35.5	
3	43	52.2	235	06.4		21.4	216	29.4		27.6	179	35.5		57.7	260	58.1		35.4	
4	58	54.7	250	06.0		20.2	231	30.4		28.3	194	37.5		57.9	276	00.3		35.3	
5	73	57.1	265	05.6	+6	19.1	246	31.4	-2	28.9	209	39.5	-15	58.0	291	02.5	+15	35.3	
6	88	59.6	280	05.1	+6	17.9	261	32.3	-2	29.6	224	41.5	-15	58.1	306	04.7	+15	35.2	
7	104	02.1	295	04.7		16.7	276	33.3		30.3	239	43.6		58.3	321	06.9		35.1	
8	119	04.5	310	04.3		15.5	291	34.3		30.9	254	45.6		58.4	336	09.1		35.0	
9	134	07.0	325	03.9		14.3	306	35.2		31.6	269	47.6		58.5	351	11.2		34.9	
10	149	09.5	340	03.5		13.1	321	36.2		32.3	284	49.6		58.7	6	13.4		34.9	
11	164	11.9	355	03.0	+6	11.9	336	37.2	-2	32.9	299	51.7	-15	58.8	21	15.6	+15	34.8	
12	179	14.4	10	02.6	+6	10.7	351	38.2	-2	33.6	314	53.7	-15	58.9	36	17.8	+15	34.7	
13	194	16.8	25	02.2		09.5	6	39.1		34.2	329	55.7		59.1	51	20.0		34.6	
14	209	19.3	40	01.8		08.3	21	40.1		34.9	344	57.7		59.2	66	22.2		34.5	
15	224	21.8	55	01.4		07.1	36	41.1		35.6	359	59.8		59.3	81	24.4		34.4	
16	239	24.2	70	00.9		05.9	51	42.0		36.2	15	01.8		59.5	96	26.6		34.4	
17	254	26.7	85	00.5	+6	04.7	66	43.0	-2	36.9	30	03.8	-15	59.6	111	28.8	+15	34.3	
18	269	29.2	100	00.1	+6	03.5	81	44.0	-2	37.6	45	05.8	-15	59.7	126	30.9	+15	34.2	
19	284	31.6	114	59.7		02.3	96	45.0		38.2	60	07.8	-15	59.9	141	33.1		34.1	
20	299	34.1	129	59.3	+6	01.1	111	45.9		38.9	75	09.9	-16	00.0	156	35.3		34.0	
21	314	36.6	144	58.9	+5	59.9	126	46.9		39.5	90	11.9	-16	00.1	171	37.5		33.9	
22	329	39.0	159	58.4		58.7	141	47.9		40.2	105	13.9		00.3	186	39.7		33.9	
23	344	41.5	174	58.0		57.5	156	48.8		40.9	120	15.9		00.4	201	41.9		33.8	
24	359	43.9	189	57.6	+5	56.3	171	49.8	-2	41.5	135	18.0	-16	00.5	216	44.1	+15	33.7	
Dif	—		-4	-12		+10	-7			-7	+20		-1		+22			-1	

UT	SOL		● LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15'9		Edad: 28 ^d 2	PHE { 4 ^h : 54'0 12 ^h : 54'0 20 ^h : 53'9	SD: 14'7				Final del crepúsculo		Salida de Luna		Puesta de Luna	
	PMG: 11 ^h 53 ^m 1				PMG: 11 ^h 14 ^m				Rº: 38 ^m					
	hG ☉	Dec	hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	Rº	Hora	Rº
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	m	h m m	m
0	181	40.8	+0	50.6	196	03.5	+8 18.0	60 N	18 04	18 45	19 35	4 12 82	17 52	**
1	196	41.0		49.7	210	39.5 ¹⁷⁰	+8 04.3 ¹³⁷	58	03	42	29	16 78	50	1
2	211	41.2		48.7	225	15.5 ¹⁷⁰	+7 50.5 ¹³⁸	56	02	39	24	19 76	48	4
3	226	41.4		47.7	239	51.5 ¹⁷⁰	36.7 ¹³⁸	54	02	37	19	23 72	46	7
4	241	41.7		46.8	254	27.5 ¹⁷⁰	22.9 ¹³⁸	52	01	35	15	26 70	45	8
5	256	41.9	+0	45.8	269	03.6 ¹⁷¹	+7 09.1 ¹³⁸	50	18 01	18 33	19 11	4 28 69	17 43	11
6	271	42.1	+0	44.8	283	39.7 ¹⁷¹	+6 55.2 ¹³⁹	45	18 00	18 29	19 04	4 34 64	17 40	15
7	286	42.3		43.8	298	15.8 ¹⁷¹	41.3 ¹³⁹	40	17 59	26	18 58	39 59	37	19
8	301	42.5		42.9	312	52.0 ¹⁷²	27.4 ¹³⁹	35	59	24	53	43 56	35	22
9	316	42.8		41.9	327	28.2 ¹⁷²	+6 13.5 ¹³⁹	30	58	22	50	47 53	33	25
10	331	43.0		40.9	342	04.4 ¹⁷²	+5 59.5 ¹⁴⁰	20	57	19	45	53 48	29	30
11	346	43.2	+0	39.9	356	40.6 ¹⁷²	+5 45.6 ¹³⁹	10 N	17 57	18 18	18 42	4 59 43	17 26	35
12	1	43.4	+0	39.0	11	16.9 ¹⁷³	+5 31.6 ¹⁴⁰	0	17 56	18 17	18 41	5 04 39	17 23	39
13	16	43.6		38.0	25	53.2 ¹⁷³	17.6 ¹⁴⁰	10 S	56	17	41	09 35	20	43
14	31	43.9		37.0	40	29.5 ¹⁷³	+5 03.6 ¹⁴⁰	20	56	18	43	15 30	17	47
15	46	44.1		36.1	55	05.8 ¹⁷³	+4 49.5 ¹⁴¹	30	56	19	47	21 25	13	52
16	61	44.3		35.1	69	42.1 ¹⁷³	35.5 ¹⁴⁰	35	56	21	50	25 22	10	56
17	76	44.5	+0	34.1	84	18.5 ¹⁷⁴	+4 21.4 ¹⁴¹	40	17 56	18 23	18 54	5 29 19	17 08	59
18	91	44.7	+0	33.1	98	54.9 ¹⁷⁴	+4 07.3 ¹⁴¹	45	17 56	18 25	18 59	5 33 16	17 05	63
19	106	45.0		32.2	113	31.3 ¹⁷⁴	+3 53.2 ¹⁴¹	50	56	28	19 06	39 11	01	68
20	121	45.2		31.2	128	07.7 ¹⁷⁴	39.1 ¹⁴¹	52	56	29	09	42 8	17 00	70
21	136	45.4		30.2	142	44.1 ¹⁷⁴	25.0 ¹⁴¹	54	56	31	13	44 7	16 58	72
22	151	45.6		29.2	157	20.5 ¹⁷⁴	+3 10.8 ¹⁴²	56	56	33	17	47 4	56	75
23	166	45.8		28.3	171	57.0 ¹⁷⁵	+2 56.7 ¹⁴¹	58	56	35	22	51 1	54	78
24	181	46.1	+0	27.3	186	33.5 ¹⁷⁵	+2 42.5 ¹⁴²	60 S	17 56	18 37	19 27	5 55 **	16 51	82
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 0 ^h 01 ^m 1		Mag: -3.9 PMG: 11 ^h 20 ^m			Mag: +1.7 PMG: 12 ^h 32 ^m			Mag: -1.8 PMG: 14 ^h 57 ^m			Mag: +0.5 PMG: 9 ^h 32 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	359	43.9	189	57.6	+5	56.3	171	49.8	-2	41.5	135	18.0	-16	00.5
1	14	46.4	204	57.2		55.1	186	50.8		42.2	150	20.0		00.7
2	29	48.9	219	56.8		53.9	201	51.7		42.8	165	22.0		00.8
3	44	51.3	234	56.3		52.7	216	52.7		43.5	180	24.0		00.9
4	59	53.8	249	55.9		51.5	231	53.7		44.2	195	26.0		01.1
5	74	56.3	264	55.5	+5	50.3	246	54.7	-2	44.8	210	28.1	-16	01.2
6	89	58.7	279	55.1	+5	49.1	261	55.6	-2	45.5	225	30.1	-16	01.3
7	105	01.2	294	54.7		47.9	276	56.6		46.2	240	32.1		01.5
8	120	03.7	309	54.3		46.7	291	57.6		46.8	255	34.1		01.6
9	135	06.1	324	53.8		45.5	306	58.5		47.5	270	36.1		01.7
10	150	08.6	339	53.4		44.3	321	59.5		48.1	285	38.2		01.9
11	165	11.1	354	53.0	+5	43.1	337	00.5	-2	48.8	300	40.2	-16	02.0
12	180	13.5	9	52.6	+5	41.9	352	01.4	-2	49.5	315	42.2	-16	02.1
13	195	16.0	24	52.2		40.7	7	02.4		50.1	330	44.2		02.3
14	210	18.4	39	51.8		39.5	22	03.4		50.8	345	46.2		02.4
15	225	20.9	54	51.4		38.3	37	04.4		51.4	0	48.3		02.5
16	240	23.4	69	50.9		37.1	52	05.3		52.1	15	50.3		02.7
17	255	25.8	84	50.5	+5	35.8	67	06.3	-2	52.8	30	52.3	-16	02.8
18	270	28.3	99	50.1	+5	34.6	82	07.3	-2	53.4	45	54.3	-16	02.9
19	285	30.8	114	49.7		33.4	97	08.2		54.1	60	56.3		03.1
20	300	33.2	129	49.3		32.2	112	09.2		54.7	75	58.4		03.2
21	315	35.7	144	48.9		31.0	127	10.2		55.4	91	00.4		03.3
22	330	38.2	159	48.5		29.8	142	11.1		56.1	106	02.4		03.5
23	345	40.6	174	48.0		28.6	157	12.1		56.7	121	04.4		03.6
24	0	43.1	189	47.6	+5	27.4	172	13.1	-2	57.4	136	06.4	-16	03.7
Dif	—		-4		-12		+10		-7		+20		-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 8			Edad: 29 ^d 2 PHE { 4 ^h : 53 ^m 9 12 ^h : 53 ^m 9 20 ^h : 54 ^m 0 Rº: 39 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	Rº	Hora	Rº
h	°	'	°	°	'	°	°	h	m	h	m	h	m	h	m
0	181	46.1	+0 27.3	186	33.5	+2 42.5	60 N	4 12	5 02	5 44		5 34	81	17 51	**
1	196	46.3		201	09.9 ¹⁷⁴	28.4 ¹⁴¹	58	18	05	44		34	78	51	2
2	211	46.5		215	46.4 ¹⁷⁵	+2 14.2 ¹⁴²	56	23	08	45		35	75	52	4
3	226	46.7		230	22.9 ¹⁷⁵	+2 00.0 ¹⁴²	54	28	10	45		35	73	53	6
4	241	46.9		244	59.4 ¹⁷⁵	+1 45.8 ¹⁴²	52	32	12	46		36	70	53	9
5	256	47.2	+0 22.4	259	35.9 ¹⁷⁵	+1 31.6 ¹⁴²	50	4 35	5 14	5 46	5 37	67	17 54	11	
6	271	47.4	+0 21.5	274	12.4 ¹⁷⁵	+1 17.4 ¹⁴²	45	4 43	5 17	5 47	5 38	63	17 55	16	
7	286	47.6		288	48.9 ¹⁷⁵	+1 03.2 ¹⁴²	40	49	20	47	38	60	56	19	
8	301	47.8		303	25.4 ¹⁷⁵	+0 49.0 ¹⁴²	35	53	22	48	39	56	57	22	
9	316	48.0		318	02.0 ¹⁷⁶	34.8 ¹⁴²	30	4 56	24	48	40	53	58	25	
10	331	48.3		332	38.5 ¹⁷⁵	20.6 ¹⁴²	20	5 01	27	49	41	48	17 59	31	
11	346	48.5	+0 16.6	347	15.0 ¹⁷⁵	+0 06.4 ¹⁴²	10 N	5 04	5 28	5 49	5 42	43	18 01	34	
12	1	48.7	+0 15.6	1	51.5 ¹⁷⁵	-0 07.8 ¹⁴²	0	5 05	5 29	5 50	5 43	39	18 02	39	
13	16	48.9		16	28.1 ¹⁷⁶	22.0 ¹⁴²	10 S	04	29	50	44	35	03	43	
14	31	49.1		31	04.6 ¹⁷⁵	36.3 ¹⁴³	20	5 02	28	50	45	30	04	48	
15	46	49.4		45	41.1 ¹⁷⁵	-0 50.5 ¹⁴²	30	4 58	26	50	46	25	05	53	
16	61	49.6		60	17.6 ¹⁷⁵	-1 04.7 ¹⁴²	35	55	25	50	47	22	06	56	
17	76	49.8	+0 10.8	74	54.1 ¹⁷⁵	-1 18.9 ¹⁴²	40	4 51	5 23	5 50	5 48	19	18 07	59	
18	91	50.0	+0 09.8	89	30.6 ¹⁷⁵	-1 33.1 ¹⁴²	45	4 46	5 20	5 50	5 49	15	18 08	63	
19	106	50.2		104	07.1 ¹⁷⁵	-1 47.3 ¹⁴²	50	39	17	49	50	10	09	68	
20	121	50.5		118	43.6 ¹⁷⁵	-2 01.5 ¹⁴²	52	36	16	49	50	9	10	70	
21	136	50.7		133	20.0 ¹⁷⁴	15.7 ¹⁴²	54	32	14	49	51	6	10	73	
22	151	50.9		147	56.5 ¹⁷⁵	29.8 ¹⁴¹	56	28	12	49	51	4	11	76	
23	166	51.1		162	33.0 ¹⁷⁵	44.0 ¹⁴²	58	23	10	49	52	1	12	78	
24	181	51.3	+0 03.9	177	09.4 ¹⁷⁴	-2 58.2 ¹⁴²	60 S	4 18	5 07	5 49	5 53	**	18 13	82	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 23 ^h 53 ^m 2		Mag: -3.9 PMG: 11 ^h 21 ^m			Mag: +1.7 PMG: 12 ^h 30 ^m			Mag: -1.8 PMG: 14 ^h 54 ^m			Mag: +0.5 PMG: 9 ^h 28 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	
0	0	43.1	189	47.6	+5 27.4	172	13.1	-2 57.4	136	06.4	-16 03.7	217	36.7	+15 31.7	
1	15	45.5	204	47.2	26.2	187	14.0	58.1	151	08.5	03.9	232	38.9	31.6	
2	30	48.0	219	46.8	25.0	202	15.0	58.7	166	10.5	04.0	247	41.0	31.6	
3	45	50.5	234	46.4	23.8	217	16.0	-2 59.4	181	12.5	04.1	262	43.2	31.5	
4	60	52.9	249	46.0	22.6	232	16.9	-3 00.0	196	14.5	04.3	277	45.4	31.4	
5	75	55.4	264	45.6	+5 21.4	247	17.9	-3 00.7	211	16.5	-16 04.4	292	47.6	+15 31.3	
6	90	57.9	279	45.1	+5 20.2	262	18.9	-3 01.4	226	18.5	-16 04.5	307	49.8	+15 31.2	
7	106	00.3	294	44.7	18.9	277	19.8	02.0	241	20.6	04.7	322	52.0	31.1	
8	121	02.8	309	44.3	17.7	292	20.8	02.7	256	22.6	04.8	337	54.2	31.1	
9	136	05.3	324	43.9	16.5	307	21.8	03.3	271	24.6	04.9	352	56.4	31.0	
10	151	07.7	339	43.5	15.3	322	22.7	04.0	286	26.6	05.1	7	58.6	30.9	
11	166	10.2	354	43.1	+5 14.1	337	23.7	-3 04.7	301	28.6	-16 05.2	23	00.8	+15 30.8	
12	181	12.7	9	42.7	+5 12.9	352	24.7	-3 05.3	316	30.6	-16 05.3	38	03.0	+15 30.7	
13	196	15.1	24	42.3	11.7	7	25.6	06.0	331	32.7	05.5	53	05.2	30.7	
14	211	17.6	39	41.9	10.5	22	26.6	06.7	346	34.7	05.6	68	07.4	30.6	
15	226	20.0	54	41.4	09.3	37	27.6	07.3	1	36.7	05.7	83	09.5	30.5	
16	241	22.5	69	41.0	08.0	52	28.5	08.0	16	38.7	05.9	98	11.7	30.4	
17	256	25.0	84	40.6	+5 06.8	67	29.5	-3 08.6	31	40.7	-16 06.0	113	13.9	+15 30.3	
18	271	27.4	99	40.2	+5 05.6	82	30.5	-3 09.3	46	42.7	-16 06.1	128	16.1	+15 30.2	
19	286	29.9	114	39.8	04.4	97	31.4	10.0	61	44.7	06.3	143	18.3	30.2	
20	301	32.4	129	39.4	03.2	112	32.4	10.6	76	46.8	06.4	158	20.5	30.1	
21	316	34.8	144	39.0	02.0	127	33.4	11.3	91	48.8	06.5	173	22.7	30.0	
22	331	37.3	159	38.6	+5 00.8	142	34.3	11.9	106	50.8	06.7	188	24.9	29.9	
23	346	39.8	174	38.2	+4 59.6	157	35.3	12.6	121	52.8	06.8	203	27.1	29.8	
24	1	42.2	189	37.8	+4 58.3	172	36.3	-3 13.3	136	54.8	-16 06.9	218	29.3	+15 29.8	
Dif	—		-4	-12		+10	-7		+20	-1		+22	-1		

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15'9 PMG: 11 ^h 52 ^m 4			Edad: 30 ^d 2 PHE { 4 ^h : 54'0 12 ^h : 54'0 20 ^h : 54'1 Rº: 40 ^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		
0	181	51.3	+0 03.9	177	09.4	-2 58.2	60 N	17 57	18 39	19 29	6 55 83		17 49 **		
1	196	51.5	03.0	191	45.8 ¹⁷⁴	-3 12.3 ¹⁴¹	58	57	36	23	52 80		53 1		
2	211	51.8	02.0	206	22.2 ¹⁷⁴	26.5 ¹⁴²	56	57	34	18	50 76		56 5		
3	226	52.0	01.0	220	58.6 ¹⁷⁴	40.6 ¹⁴¹	54	57	32	14	48 74		17 59 8		
4	241	52.2	+0 00.1	235	35.0 ¹⁷⁴	-3 54.8 ¹⁴²	52	57	30	10	46 71		18 02 10		
5	256	52.4	-0 00.9	250	11.4 ¹⁷⁴	-4 08.9 ¹⁴¹	50	17 56	18 29	19 07	6 44 69		18 05 12		
6	271	52.6	-0 01.9	264	47.7 ¹⁷³	-4 23.0 ¹⁴¹	45	17 56	18 25	19 00	6 41 64		18 11 16		
7	286	52.9	02.9	279	24.0 ¹⁷³	37.1 ¹⁴¹	40	56	23	18 54	38 59		15 21		
8	301	53.1	03.8	294	00.3 ¹⁷³	-4 51.1 ¹⁴⁰	35	56	21	50	35 56		19 24		
9	316	53.3	04.8	308	36.6 ¹⁷³	-5 05.2 ¹⁴¹	30	56	20	47	33 53		23 27		
10	331	53.5	05.8	323	12.9 ¹⁷³	19.2 ¹⁴⁰	20	56	18	43	29 48		30 31		
11	346	53.7	-0 06.8	337	49.1 ¹⁷²	-5 33.2 ¹⁴⁰	10 N	17 56	18 17	18 41	6 25 44		18 35 36		
12	1	54.0	-0 07.7	352	25.3 ¹⁷²	-5 47.3 ¹⁴¹	0	17 56	18 16	18 40	6 22 39		18 41 40		
13	16	54.2	08.7	7	01.5 ¹⁷²	-6 01.2 ¹³⁹	10 S	56	17	41	19 35		46 44		
14	31	54.4	09.7	21	37.7 ¹⁷²	15.2 ¹⁴⁰	20	56	18	44	15 31		52 49		
15	46	54.6	10.7	36	13.8 ¹⁷¹	29.2 ¹⁴⁰	30	57	21	48	11 26		18 58 54		
16	61	54.8	11.6	50	49.9 ¹⁷¹	43.1 ¹³⁹	35	57	22	52	09 23		19 02 57		
17	76	55.0	-0 12.6	65	26.0 ¹⁷¹	-6 57.0 ¹³⁹	40	17 57	18 24	18 56	6 07 19		19 06 61		
18	91	55.3	-0 13.6	80	02.0 ¹⁷⁰	-7 10.9 ¹³⁹	45	17 58	18 27	19 02	6 04 16		19 11 65		
19	106	55.5	14.6	94	38.1 ¹⁷¹	24.8 ¹³⁹	50	59	31	09	6 00 12		17 70		
20	121	55.7	15.5	109	14.0 ¹⁶⁹	38.6 ¹³⁸	52	59	33	13	5 59 9		20 72		
21	136	55.9	16.5	123	50.0 ¹⁷⁰	-7 52.4 ¹³⁸	54	17 59	35	17	57 7		23 75		
22	151	56.1	17.5	138	25.9 ¹⁶⁹	-8 06.2 ¹³⁸	56	18 00	37	21	55 5		27 77		
23	166	56.4	18.4	153	01.8 ¹⁶⁹	20.0 ¹³⁸	58	00	39	26	53 2		30 81		
24	181	56.6	-0 19.4	167	37.6 ¹⁶⁸	-8 33.7 ¹³⁷	60 S	18 01	18 42	19 32	5 51 **		19 35 84		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 23 ^h 49 ^m 3		Mag: -3.9 PMG: 11 ^h 22 ^m			Mag: +1.7 PMG: 12 ^h 29 ^m			Mag: -1.8 PMG: 14 ^h 50 ^m			Mag: +0.5 PMG: 9 ^h 25 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	°	'	°	°	'	°	'	°	'	°	'	
0	1	42.2	189	37.8	+4 58.3	172	36.3	-3 13.3	136	54.8	-16 06.9	218	29.3	+15 29.8	
1	16	44.7	204	37.3	57.1	187	37.2	13.9	151	56.8	07.1	233	31.5	29.7	
2	31	47.1	219	36.9	55.9	202	38.2	14.6	166	58.8	07.2	248	33.7	29.6	
3	46	49.6	234	36.5	54.7	217	39.2	15.2	182	00.9	07.3	263	35.9	29.5	
4	61	52.1	249	36.1	53.5	232	40.1	15.9	197	02.9	07.5	278	38.1	29.4	
5	76	54.5	264	35.7	+4 52.3	247	41.1	-3 16.6	212	04.9	-16 07.6	293	40.3	+15 29.4	
6	91	57.0	279	35.3	+4 51.1	262	42.1	-3 17.2	227	06.9	-16 07.7	308	42.5	+15 29.3	
7	106	59.5	294	34.9	49.8	277	43.0	17.9	242	08.9	07.9	323	44.7	29.2	
8	122	01.9	309	34.5	48.6	292	44.0	18.5	257	10.9	08.0	338	46.8	29.1	
9	137	04.4	324	34.1	47.4	307	45.0	19.2	272	12.9	08.1	353	49.0	29.0	
10	152	06.9	339	33.7	46.2	322	45.9	19.9	287	15.0	08.3	8	51.2	28.9	
11	167	09.3	354	33.3	+4 45.0	337	46.9	-3 20.5	302	17.0	-16 08.4	23	53.4	+15 28.9	
12	182	11.8	9	32.9	+4 43.8	352	47.9	-3 21.2	317	19.0	-16 08.5	38	55.6	+15 28.8	
13	197	14.3	24	32.4	42.5	7	48.8	21.9	332	21.0	08.7	53	57.8	28.7	
14	212	16.7	39	32.0	41.3	22	49.8	22.5	347	23.0	08.8	69	00.0	28.6	
15	227	19.2	54	31.6	40.1	37	50.8	23.2	2	25.0	09.0	84	02.2	28.5	
16	242	21.6	69	31.2	38.9	52	51.7	23.8	17	27.0	09.1	99	04.4	28.5	
17	257	24.1	84	30.8	+4 37.7	67	52.7	-3 24.5	32	29.0	-16 09.2	114	06.6	+15 28.4	
18	272	26.6	99	30.4	+4 36.4	82	53.7	-3 25.2	47	31.1	-16 09.4	129	08.8	+15 28.3	
19	287	29.0	114	30.0	35.2	97	54.6	25.8	62	33.1	09.5	144	11.0	28.2	
20	302	31.5	129	29.6	34.0	112	55.6	26.5	77	35.1	09.6	159	13.2	28.1	
21	317	34.0	144	29.2	32.8	127	56.5	27.1	92	37.1	09.8	174	15.4	28.1	
22	332	36.4	159	28.8	31.6	142	57.5	27.8	107	39.1	09.9	189	17.6	28.0	
23	347	38.9	174	28.4	30.3	157	58.5	28.5	122	41.1	10.0	204	19.8	27.9	
24	2	41.4	189	28.0	+4 29.1	172	59.4	-3 29.1	137	43.1	-16 10.2	219	22.0	+15 27.8	
Dif	—		-4		-12	+10		-7	+20		-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: 1 ^d 5 PHE { SD: 14 ^h 7 PMG: 13 ^h 11 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	Rº	Hora	Rº
h	°	'	°	°	'	°	'	h	m	h	m	h	m	m	
0	181	56.6	-0 19.4	167	37.6	-8 33.7	137	60 N	4 17	5 07	5 48	8 18	87	17 47	**
1	196	56.8	20.4	182	13.4	-8 47.4	137	58	23	09	49	12 83	17 54	3	
2	211	57.0	21.4	196	49.2	-9 01.1	137	56	27	12	49	06 80	18 01	6	
3	226	57.2	22.3	211	24.9	14.7	136	54	32	13	49	8 02	76	07	9
4	241	57.4	23.3	226	00.6	28.4	137	52	35	15	49	7 57	73	12	12
5	256	57.7	-0 24.3	240	36.3	-9 41.9	135	50	4 39	5 17	5 49	7 53	71	18 17	14
6	271	57.9	-0 25.3	255	11.9	-9 55.5	136	45	4 45	5 20	5 49	7 45	65	18 27	19
7	286	58.1	26.2	269	47.4	-10 09.0	135	40	51	22	49	37 62	36	23	
8	301	58.3	27.2	284	22.9	22.5	135	35	55	24	49	31 58	43	27	
9	316	58.5	28.2	298	58.4	36.0	135	30	4 58	25	49	26 55	18 50	29	
10	331	58.7	29.2	313	33.8	-10 49.4	134	20	5 02	27	49	17 50	19 01	35	
11	346	59.0	-0 30.1	328	09.2	-11 02.8	134	10 N	5 04	5 28	5 49	7 09	45	19 11	39
12	1	59.2	-0 31.1	342	44.5	-11 16.1	133	0	5 04	5 28	5 49	7 01	42	19 21	42
13	16	59.4	32.1	357	19.8	29.4	133	10 S	03	27	48	6 54	37	30	47
14	31	59.6	33.1	11	55.1	42.7	133	20	5 00	26	48	46 33	41	51	
15	46	59.8	34.0	26	30.2	-11 55.9	132	30	4 56	23	47	37 28	52	56	
16	62	00.0	35.0	41	05.4	-12 09.1	132	35	52	22	47	32 25	19 59	59	
17	77	00.3	-0 36.0	55	40.5	-12 22.3	132	40	4 48	5 19	5 46	6 26	22	20 07	62
18	92	00.5	-0 37.0	70	15.5	-12 35.4	131	45	4 42	5 16	5 46	6 20	17	20 16	67
19	107	00.7	37.9	84	50.5	-12 48.5	131	50	35	13	45	12 13	27	72	
20	122	00.9	38.9	99	25.4	-13 01.5	130	52	31	11	45	08 11	32	74	
21	137	01.1	39.9	114	00.2	14.5	130	54	27	09	44	04 8	38	77	
22	152	01.3	40.9	128	35.0	27.4	129	56	22	07	44	6 00	5	44	81
23	167	01.6	41.8	143	09.8	40.3	129	58	17	04	43	5 55	2	51	85
24	182	01.8	-0 42.8	157	44.5	-13 53.1	128	60 S	4 11	5 01	5 43	5 49	**	20 59	89
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG 23 ^h 45 ^m 3		Mag: -3.9 PMG: 11 ^h 22 ^m		Mag: +1.7 PMG: 12 ^h 27 ^m		Mag: -1.8 PMG: 14 ^h 47 ^m		Mag: +0.5 PMG: 9 ^h 21 ^m						
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'					
0	2	41.4	189	28.0	+4	29.1	137	43.1	-16	10.2					
1	17	43.8	204	27.6		27.9	152	45.1		10.3					
2	32	46.3	219	27.2		26.7	167	47.1		10.4					
3	47	48.8	234	26.8		25.5	182	49.1		10.6					
4	62	51.2	249	26.3		24.2	197	51.2		10.7					
5	77	53.7	264	25.9	+4	23.0	212	53.2	-16	10.8					
6	92	56.1	279	25.5	+4	21.8	227	55.2	-16	11.0					
7	107	58.6	294	25.1		20.6	242	57.2		11.1					
8	123	01.1	309	24.7		19.4	257	59.2		11.2					
9	138	03.5	324	24.3		18.1	273	01.2		11.4					
10	153	06.0	339	23.9		16.9	288	03.2		11.5					
11	168	08.5	354	23.5	+4	15.7	303	05.2	-16	11.6					
12	183	10.9	9	23.1	+4	14.5	318	07.2	-16	11.8					
13	198	13.4	24	22.7		13.2	333	09.2		11.9					
14	213	15.9	39	22.3		12.0	348	11.2		12.0					
15	228	18.3	54	21.9		10.8	3	13.3		12.2					
16	243	20.8	69	21.5		09.6	18	15.3		12.3					
17	258	23.2	84	21.1	+4	08.4	33	17.3	-16	12.5					
18	273	25.7	99	20.7	+4	07.1	48	19.3	-16	12.6					
19	288	28.2	114	20.3		05.9	63	21.3		12.7					
20	303	30.6	129	19.9		04.7	78	23.3		12.9					
21	318	33.1	144	19.5		03.5	93	25.3		13.0					
22	333	35.6	159	19.1		02.2	108	27.3		13.1					
23	348	38.0	174	18.7	+4	01.0	123	29.3		13.3					
24	3	40.5	189	18.3	+3	59.8	138	31.3	-16	13.4					
Dif	—		-4	-12	+10	-7	+20	-1	+22	-1					

UT	SOL		● LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15'9 PMG: 11 ^h 51 ^m 7		Edad: 2 ^d 5 PHE { 4 ^h : 54'3 12 ^h : 54'4 20 ^h : 54'5 R°: 45 ^m											
	hG ☉	Dec	hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	
0	182	01.8	-0 42.8	157	44.5	-13 53.1	60 N	17 51	18 33	19 22	9 45 92	17 46 0		
1	197	02.0	43.8	172	19.1 ¹⁵⁶	-14 05.9 ¹²⁸	58	51	31	17	35 86	17 57 6	0	
2	212	02.2	44.8	186	53.6 ¹⁵⁵	18.6 ¹²⁷	56	52	29	12	26 82	18 07 10		
3	227	02.4	45.7	201	28.1 ¹⁵⁵	31.3 ¹²⁷	54	52	27	08	18 78	16 13		
4	242	02.6	46.7	216	02.6 ¹⁵⁵	44.0 ¹²⁷	52	52	25	05	10 76	24 16		
5	257	02.9	-0 47.7	230	37.0 ¹⁵⁴	-14 56.6 ¹²⁶	50	17 52	18 24	19 02	9 04 73	18 31 18		
6	272	03.1	-0 48.6	245	11.3 ¹⁵³	-15 09.1 ¹²⁵	45	17 52	18 22	18 56	8 50 68	18 46 24		
7	287	03.3	49.6	259	45.5 ¹⁵²	21.6 ¹²⁵	40	53	20	51	39 63	18 59 27		
8	302	03.5	50.6	274	19.7 ¹⁵²	34.0 ¹²⁴	35	53	18	47	29 60	19 10 30		
9	317	03.7	51.6	288	53.8 ¹⁵¹	46.4 ¹²⁴	30	53	17	45	21 57	19 34		
10	332	03.9	52.5	303	27.8 ¹⁵⁰	-15 58.7 ¹²³	20	54	16	41	8 07 52	36 38		
11	347	04.1	-0 53.5	318	01.8 ¹⁵⁰	-16 10.9 ¹²²	10 N	17 54	18 15	18 40	7 54 48	19 50 42		
12	2	04.4	-0 54.5	332	35.7 ¹⁴⁹	-16 23.1 ¹²²	0	17 55	18 16	18 40	7 43 44	20 03 46		
13	17	04.6	55.5	347	09.6 ¹⁴⁹	35.2 ¹²¹	10 S	56	17	41	31 40	17 49		
14	32	04.8	56.4	1	43.3 ¹⁴⁷	47.3 ¹²¹	20	57	19	44	19 36	32 53		
15	47	05.0	57.4	16	17.0 ¹⁴⁷	-16 59.3 ¹²⁰	30	58	22	50	7 05 31	48 58		
16	62	05.2	58.4	30	50.6 ¹⁴⁶	-17 11.3 ¹²⁰	35	59	24	53	6 57 28	20 58 61		
17	77	05.4	-0 59.4	45	24.2 ¹⁴⁶	-17 23.2 ¹¹⁹	40	17 59	18 26	18 58	6 48 25	21 09 65		
18	92	05.7	-1 00.3	59	57.7 ¹⁴⁵	-17 35.0 ¹¹⁸	45	18 00	18 30	19 04	6 37 22	21 23 68		
19	107	05.9	01.3	74	31.1 ¹⁴⁴	46.7 ¹¹⁷	50	02	34	12	25 16	39 74		
20	122	06.1	02.3	89	04.4 ¹⁴³	-17 58.4 ¹¹⁷	52	02	36	16	19 14	46 77		
21	137	06.3	03.3	103	37.6 ¹⁴²	-18 10.1 ¹¹⁷	54	03	38	21	12 12	21 55 80		
22	152	06.5	04.2	118	10.8 ¹⁴²	21.6 ¹¹⁵	56	04	41	26	6 05 8	22 05 83		
23	167	06.7	05.2	132	43.9 ¹⁴¹	33.1 ¹¹⁵	58	04	44	31	5 57 4	16 88		
24	182	06.9	-1 06.2	147	16.9 ¹⁴⁰	-18 44.5 ¹¹⁴	60 S	18 05	18 47	19 38	5 48 0	22 28 95		
UT	ARIES		VENUS		MARTE		JÚPITER			SATURNO				
	PMG: 23 ^h 41 ^m 4		Mag: -3.9 PMG: 11 ^h 23 ^m		Mag: +1.7 PMG: 12 ^h 26 ^m		Mag: -1.8 PMG: 14 ^h 44 ^m			Mag: +0.5 PMG: 9 ^h 18 ^m				
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♎	Dec	hG ♊	Dec	hG ♋	Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	
0	3	40.5	189 18.3	+3 59.8	173 22.5	-3 45.0	138 31.3	-16 13.4	220 14.7	+15 25.9				
1	18	43.0	204 17.9	58.5	188 23.5	45.6	153 33.3	13.5	235 16.9	25.8				
2	33	45.4	219 17.5	57.3	203 24.5	46.3	168 35.3	13.7	250 19.1	25.7				
3	48	47.9	234 17.1	56.1	218 25.4	46.9	183 37.3	13.8	265 21.3	25.6				
4	63	50.4	249 16.7	54.9	233 26.4	47.6	198 39.4	13.9	280 23.5	25.6				
5	78	52.8	264 16.3	+3 53.6	248 27.3	-3 48.3	213 41.4	-16 14.1	295 25.7	+15 25.5				
6	93	55.3	279 15.9	+3 52.4	263 28.3	-3 48.9	228 43.4	-16 14.2	310 27.9	+15 25.4				
7	108	57.7	294 15.5	51.2	278 29.3	49.6	243 45.4	14.3	325 30.1	25.3				
8	124	00.2	309 15.1	50.0	293 30.2	50.2	258 47.4	14.5	340 32.3	25.2				
9	139	02.7	324 14.6	48.7	308 31.2	50.9	273 49.4	14.6	355 34.5	25.2				
10	154	05.1	339 14.2	47.5	323 32.1	51.6	288 51.4	14.8	10 36.7	25.1				
11	169	07.6	354 13.8	+3 46.3	338 33.1	-3 52.2	303 53.4	-16 14.9	25 38.9	+15 25.0				
12	184	10.1	9 13.4	+3 45.1	353 34.1	-3 52.9	318 55.4	-16 15.0	40 41.1	+15 24.9				
13	199	12.5	24 13.0	43.8	8 35.0	53.5	333 57.4	15.2	55 43.3	24.8				
14	214	15.0	39 12.6	42.6	23 36.0	54.2	348 59.4	15.3	70 45.5	24.8				
15	229	17.5	54 12.2	41.4	38 36.9	54.9	4 01.4	15.4	85 47.7	24.7				
16	244	19.9	69 11.8	40.1	53 37.9	55.5	19 03.4	15.6	100 49.9	24.6				
17	259	22.4	84 11.4	+3 38.9	68 38.9	-3 56.2	34 05.4	-16 15.7	115 52.1	+15 24.5				
18	274	24.8	99 11.0	+3 37.7	83 39.8	-3 56.8	49 07.4	-16 15.8	130 54.3	+15 24.4				
19	289	27.3	114 10.6	36.4	98 40.8	57.5	64 09.4	16.0	145 56.5	24.4				
20	304	29.8	129 10.2	35.2	113 41.7	58.2	79 11.4	16.1	160 58.7	24.3				
21	319	32.2	144 09.8	34.0	128 42.7	58.8	94 13.4	16.2	176 00.9	24.2				
22	334	34.7	159 09.4	32.8	143 43.7	-3 59.5	109 15.4	16.4	191 03.1	24.1				
23	349	37.2	174 09.0	31.5	158 44.6	-4 00.1	124 17.4	16.5	206 05.3	24.0				
24	4	39.6	189 08.6	+3 30.3	173 45.6	-4 00.8	139 19.4	-16 16.6	221 07.5	+15 24.0				
Dif	—	—	-4	-12	+10	-7	+20	-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 51 ^m 4			Edad: 3 ^d 5 SD: 14'9 PMG: 14 ^h 38 ^m	PHE { 4 ^h : 54'6 12 ^h : 54'8 20 ^h : 54'9 R°: 48 ^m															
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°					
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m				
0	182	06.9	-1	06.2	147	16.9	-18	44.5	60 N	4	22	5	53	11	17	98	17	46	2	
1	197	07.2		07.2	161	49.8 ¹³⁹	-18	55.8 ¹¹³	58		27	14	53	11	01	91	18	03	9	
2	212	07.4		08.1	176	22.7 ¹³⁹	-19	07.1 ¹¹³	56		32	16	53	10	48	85		17	15	
3	227	07.6		09.1	190	55.4 ¹³⁷		18.3 ¹¹²	54		35	17	52		36	81		29	19	
4	242	07.8		10.1	205	28.1 ¹³⁷		29.4 ¹¹¹	52		39	19	52		26	77		40	22	
5	257	08.0	-1	11.1	220	00.7 ¹³⁶	-19	40.5 ¹¹¹	50		4	42	5	52	10	17	75	18	49	25
6	272	08.2	-1	12.0	234	33.2 ¹³⁵	-19	51.4 ¹⁰⁹	45		4	48	5	52	9	58	69	19	10	30
7	287	08.4		13.0	249	05.7 ¹³⁵	-20	02.3 ¹⁰⁹	40		53	24	51		42	66		26	34	
8	302	08.7		14.0	263	38.0 ¹³³		13.1 ¹⁰⁸	35		56	25	51		29	62		40	37	
9	317	08.9		15.0	278	10.3 ¹³³		23.8 ¹⁰⁷	30		4	59	26	50	9	18	59	19	53	39
10	332	09.1		15.9	292	42.5 ¹³²		34.5 ¹⁰⁷	20		5	02	28	50	8	59	55	20	14	43
11	347	09.3	-1	16.9	307	14.6 ¹³¹	-20	45.0 ¹⁰⁵	10 N		5	04	5	49	8	42	51	20	32	46
12	2	09.5	-1	17.9	321	46.6 ¹³⁰	-20	55.5 ¹⁰⁵	0		5	03	5	48	8	27	47	20	49	50
13	17	09.7		18.8	336	18.5 ¹²⁹	-21	05.9 ¹⁰⁴	10 S		5	02	26	47	8	11	45	21	06	53
14	32	09.9		19.8	350	50.3 ¹²⁸		16.2 ¹⁰³	20		4	59	24	46	7	55	41		25	56
15	47	10.2		20.8	5	22.1 ¹²⁸		26.4 ¹⁰²	30		53	21	45		36	36		46	60	
16	62	10.4		21.8	19	53.7 ¹²⁶		36.6 ¹⁰²	35		49	19	44		25	34		21	59	62
17	77	10.6	-1	22.7	34	25.3 ¹²⁶	-21	46.6 ¹⁰⁰	40		4	44	5	43	7	13	31	22	14	65
18	92	10.8	-1	23.7	48	56.8 ¹²⁵	-21	56.6 ¹⁰⁰	45		4	38	5	42	6	59	26	22	31	69
19	107	11.0		24.7	63	28.2 ¹²⁴	-22	06.4 ⁹⁸	50		30	08	41		41	21		22	53	74
20	122	11.2		25.7	77	59.5 ¹²³		16.2 ⁹⁸	52		26	06	40		33	19		23	03	77
21	137	11.4		26.6	92	30.7 ¹²²		25.9 ⁹⁷	54		22	04	39		24	15		15	80	
22	152	11.6		27.6	107	01.8 ¹²¹		35.5 ⁹⁶	56		17	5	01	38	13	12		28	84	
23	167	11.9		28.6	121	32.8 ¹²⁰		45.0 ⁹⁵	58		11	4	58	38	6	01	8	23	44	90
24	182	12.1	-1	29.6	136	03.7 ¹¹⁹	-22	54.3 ⁹³	60 S		4	04	4	55	5	48	1	**	**	**

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO										
	PMG: 23 ^h 37 ^m 5		Mag: -3.9 PMG: 11 ^h 24 ^m		Mag: +1.7 PMG: 12 ^h 24 ^m		Mag: -1.8 PMG: 14 ^h 41 ^m		Mag: +0.5 PMG: 9 ^h 14 ^m										
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec									
h	°	'	°	'	°	'	°	'	°	'									
0	4	39.6	189	08.6	+3	30.3	173	45.6	-4	00.8	139	19.4	-16	16.6	221	07.5	+15	24.0	
1	19	42.1	204	08.2		29.1	188	46.5		01.5	154	21.5		16.8	236	09.7		23.9	
2	34	44.6	219	07.8		27.8	203	47.5		02.1	169	23.5		16.9	251	11.9		23.8	
3	49	47.0	234	07.4		26.6	218	48.5		02.8	184	25.5		17.1	266	14.1		23.7	
4	64	49.5	249	07.0		25.4	233	49.4		03.4	199	27.5		17.2	281	16.3		23.6	
5	79	52.0	264	06.6	+3	24.1	248	50.4	-4	04.1	214	29.5	-16	17.3	296	18.5	+15	23.6	
6	94	54.4	279	06.2	+3	22.9	263	51.3	-4	04.8	229	31.5	-16	17.5	311	20.7	+15	23.5	
7	109	56.9	294	05.8		21.7	278	52.3		05.4	244	33.5		17.6	326	22.9		23.4	
8	124	59.3	309	05.4		20.4	293	53.2		06.1	259	35.5		17.7	341	25.1		23.3	
9	140	01.8	324	05.0		19.2	308	54.2		06.7	274	37.5		17.9	356	27.3		23.2	
10	155	04.3	339	04.6		18.0	323	55.2		07.4	289	39.5		18.0	11	29.5		23.2	
11	170	06.7	354	04.2	+3	16.7	338	56.1	-4	08.0	304	41.5	-16	18.1	26	31.7	+15	23.1	
12	185	09.2	9	03.8	+3	15.5	353	57.1	-4	08.7	319	43.5	-16	18.3	41	33.9	+15	23.0	
13	200	11.7	24	03.4		14.3	8	58.0		09.4	334	45.5		18.4	56	36.1		22.9	
14	215	14.1	39	03.1		13.0	23	59.0		10.0	349	47.5		18.5	71	38.3		22.8	
15	230	16.6	54	02.7		11.8	39	00.0		10.7	4	49.5		18.7	86	40.5		22.8	
16	245	19.1	69	02.3		10.6	54	00.9		11.3	19	51.5		18.8	101	42.7		22.7	
17	260	21.5	84	01.9	+3	09.3	69	01.9	-4	12.0	34	53.5	-16	19.0	116	44.9	+15	22.6	
18	275	24.0	99	01.5	+3	08.1	84	02.8	-4	12.7	49	55.5	-16	19.1	131	47.1	+15	22.5	
19	290	26.5	114	01.1		06.9	99	03.8		13.3	64	57.5		19.2	146	49.3		22.5	
20	305	28.9	129	00.7		05.6	114	04.7		14.0	79	59.5		19.4	161	51.5		22.4	
21	320	31.4	144	00.3		04.4	129	05.7		14.6	95	01.5		19.5	176	53.7		22.3	
22	335	33.8	158	59.9		03.2	144	06.7		15.3	110	03.5		19.6	191	55.9		22.2	
23	350	36.3	173	59.5		01.9	159	07.6		16.0	125	05.5		19.8	206	58.1		22.1	
24	5	38.8	188	59.1	+3	00.7	174	08.6	-4	16.6	140	07.5	-16	19.9	222	00.3	+15	22.1	
Dif	—		-4	-12		+10	-7			+20	-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 0			Edad: 4 ^d 5 PHE { 4 ^h : 55°1 12 ^h : 55°2 20 ^h : 55°4 R°: 53 ^m SD: 15°0 PMG: 15 ^h 26 ^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	12.1	-1	29.6	136	03.7	-22	54.3	60 N	17 45	18 27	19 16	12 55	100	17 48 9			
1	197	12.3		30.5	150	34.6 ¹¹⁹	-23	03.6 ⁹³	58	46	25	11	32	89	18 12 20			
2	212	12.5		31.5	165	05.3 ¹¹⁷		12.8 ⁹²	56	46	23	07	12 13	83	32 25			
3	227	12.7		32.5	179	36.0 ¹¹⁷		21.9 ⁹¹	54	47	22	03	11 57	79	18 48 30			
4	242	12.9		33.5	194	06.5 ¹¹⁵		30.9 ⁹⁰	52	47	21	19 00	43	76	19 02 33			
5	257	13.1	-1	34.4	208	37.0 ¹¹⁵	-23	39.8 ⁸⁹	50	17 48	18 20	18 57	11 32	73	19 14 35			
6	272	13.3	-1	35.4	223	07.4 ¹¹⁴	-23	48.6 ⁸⁸	45	17 49	18 18	18 52	11 07	68	19 40 39			
7	287	13.6		36.4	237	37.7 ¹¹³	-23	57.3 ⁸⁷	40	49	16	48	10 48	65	20 00 42			
8	302	13.8		37.3	252	07.8 ¹¹¹	-24	05.8 ⁸⁵	35	50	15	45	31	63	17 44			
9	317	14.0		38.3	266	37.9 ¹¹¹		14.3 ⁸⁵	30	51	15	42	10 17	61	32 46			
10	332	14.2		39.3	281	07.9 ¹¹⁰		22.6 ⁸³	20	52	14	39	9 54	57	20 57 49			
11	347	14.4	-1	40.3	295	37.9 ¹¹⁰	-24	30.9 ⁸³	10 N	17 53	18 14	18 38	9 33	55	21 18 52			
12	2	14.6	-1	41.2	310	07.7 ¹⁰⁸	-24	39.0 ⁸¹	0	17 54	18 15	18 39	9 14	52	21 39 53			
13	17	14.8		42.2	324	37.4 ¹⁰⁷		47.0 ⁸⁰	10 S	56	17	41	8 56	49	21 59 56			
14	32	15.0		43.2	339	07.0 ¹⁰⁶	-24	54.9 ⁷⁹	20	57	19	45	36	46	22 21 58			
15	47	15.2		44.2	353	36.5 ¹⁰⁵	-25	02.7 ⁷⁸	30	17 59	23	51	8 12	43	22 46 61			
16	62	15.5		45.1	8	06.0 ¹⁰⁵		10.4 ⁷⁷	35	18 00	25	18 55	7 59	40	23 01 62			
17	77	15.7	-1	46.1	22	35.3 ¹⁰³	-25	18.0 ⁷⁶	40	18 01	18 28	19 00	7 44	37	23 19 64			
18	92	15.9	-1	47.1	37	04.6 ¹⁰³	-25	25.4 ⁷⁴	45	18 03	18 32	19 07	7 25	35	23 40 66			
19	107	16.1		48.1	51	33.7 ¹⁰¹		32.7 ⁷³	50	05	37	16	7 02	30	** * *			
20	122	16.3		49.0	66	02.8 ¹⁰¹		40.0 ⁷³	52	06	39	20	6 52	27	** * *			
21	137	16.5		50.0	80	31.8 ¹⁰⁰		47.0 ⁷⁰	54	06	42	25	39	24	** * *			
22	152	16.7		51.0	95	00.7 ⁹⁹	-25	54.0 ⁷⁰	56	08	45	30	25	20	** * *			
23	167	16.9		52.0	109	29.4 ⁹⁷	-26	00.8 ⁶⁸	58	09	48	36	6 09	14	** * *			
24	182	17.1	-1	52.9	123	58.1 ⁹⁷	-26	07.5 ⁶⁷	60 S	18 10	18 52	19 43	5 49	6	0 03 98			
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 23 ^h 33 ^m 5		Mag: -3.9 PMG: 11 ^h 24 ^m			Mag: +1.7 PMG: 12 ^h 23 ^m			Mag: -1.8 PMG: 14 ^h 38 ^m			Mag: +0.5 PMG: 9 ^h 11 ^m						
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec						
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	5	38.8	188	59.1	+3	00.7	174	08.6	-4	16.6	140	07.5	-16	19.9	222	00.3	+15	22.1
1	20	41.2	203	58.7	+2	59.5	189	09.5		17.3	155	09.5		20.0	237	02.5		22.0
2	35	43.7	218	58.3		58.2	204	10.5		17.9	170	11.5		20.2	252	04.7		21.9
3	50	46.2	233	57.9		57.0	219	11.4		18.6	185	13.5		20.3	267	06.9		21.8
4	65	48.6	248	57.5		55.8	234	12.4		19.2	200	15.5		20.5	282	09.1		21.7
5	80	51.1	263	57.1	+2	54.5	249	13.3	-4	19.9	215	17.5	-16	20.6	297	11.4	+15	21.7
6	95	53.6	278	56.7	+2	53.3	264	14.3	-4	20.6	230	19.5	-16	20.7	312	13.6	+15	21.6
7	110	56.0	293	56.3		52.0	279	15.3		21.2	245	21.5		20.9	327	15.8		21.5
8	125	58.5	308	55.9		50.8	294	16.2		21.9	260	23.5		21.0	342	18.0		21.4
9	141	00.9	323	55.5		49.6	309	17.2		22.5	275	25.5		21.1	357	20.2		21.4
10	156	03.4	338	55.1		48.3	324	18.1		23.2	290	27.5		21.3	12	22.4		21.3
11	171	05.9	353	54.7	+2	47.1	339	19.1	-4	23.9	305	29.5	-16	21.4	27	24.6	+15	21.2
12	186	08.3	8	54.3	+2	45.9	354	20.0	-4	24.5	320	31.5	-16	21.5	42	26.8	+15	21.1
13	201	10.8	23	53.9		44.6	9	21.0		25.2	335	33.5		21.7	57	29.0		21.0
14	216	13.3	38	53.5		43.4	24	21.9		25.8	350	35.5		21.8	72	31.2		21.0
15	231	15.7	53	53.1		42.1	39	22.9		26.5	5	37.5		21.9	87	33.4		20.9
16	246	18.2	68	52.7		40.9	54	23.9		27.1	20	39.5		22.1	102	35.6		20.8
17	261	20.7	83	52.3	+2	39.7	69	24.8	-4	27.8	35	41.5	-16	22.2	117	37.8	+15	20.7
18	276	23.1	98	51.9	+2	38.4	84	25.8	-4	28.5	50	43.5	-16	22.4	132	40.0	+15	20.6
19	291	25.6	113	51.5		37.2	99	26.7		29.1	65	45.5		22.5	147	42.2		20.6
20	306	28.1	128	51.1		36.0	114	27.7		29.8	80	47.5		22.6	162	44.4		20.5
21	321	30.5	143	50.7		34.7	129	28.6		30.4	95	49.5		22.8	177	46.6		20.4
22	336	33.0	158	50.3		33.5	144	29.6		31.1	110	51.4		22.9	192	48.8		20.3
23	351	35.4	173	50.0		32.2	159	30.5		31.8	125	53.4		23.0	207	51.0		20.3
24	6	37.9	188	49.6	+2	31.0	174	31.5	-4	32.4	140	55.4	-16	23.2	222	53.2	+15	20.2
Dif	—		-4		-12		+10		-7		+20		-1		+22		-1	

UT	SOL			 LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16 ^h 0 PMG: 11 ^h 50 ^m 7			Edad: 5 ^d 5 SD: 15 ^h 1 PMG: 16 ^h 19 ^m	PHE { 4 ^h : 55 ^m 6 12 ^h : 55 ^m 8 20 ^h : 56 ^m 0 Rº: 56 ^m											
	hG ☉	Dec				hG ☾		Dif	Dec		Dif	Náutico	Civil	Hora	Rº	Hora
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m
0	182	17.1	-1	52.9	123	58.1	-26	07.5	66	60 N	4	27	5	58	14	35
1	197	17.4		53.9	138	26.7	96	14.1	66	58	32	18	57	14	01	
2	212	17.6		54.9	152	55.3	96	20.6	65	56	36	19	57	13	36	
3	227	17.8		55.8	167	23.7	94	26.9	63	54	39	21	56	13	16	
4	242	18.0		56.8	181	52.0	93	33.1	62	52	42	22	55	12	59	
5	257	18.2	-1	57.8	196	20.3	93	-26	39.2	61	50	4	45	5	23	
6	272	18.4	-1	58.8	210	48.4	91	-26	45.1	59	45	4	51	5	25	
7	287	18.6	-1	59.7	225	16.5	91	50.9	58	40	55	26	53	11	53	
8	302	18.8	-2	00.7	239	44.5	90	-26	56.6	57	35	4	58	27	52	
9	317	19.0		01.7	254	12.4	89	-27	02.1	55	30	5	00	28	51	
10	332	19.2		02.7	268	40.2	88	07.5	54	20	03	28	50	10	51	
11	347	19.5	-2	03.6	283	07.9	87	-27	12.8	53	10 N	5	03	5	28	
12	2	19.7	-2	04.6	297	35.5	86	-27	17.9	51	0	5	03	5	27	
13	17	19.9		05.6	312	03.1	86	22.9	50	10 S	5	01	25	46	9	45
14	32	20.1		06.5	326	30.5	84	27.7	48	20	4	57	22	44	9	22
15	47	20.3		07.5	340	57.9	84	32.4	47	30	51	18	42	8	55	
16	62	20.5		08.5	355	25.2	83	37.0	46	35	46	16	41	39	49	
17	77	20.7	-2	09.5	9	52.5	83	-27	41.4	44	40	4	41	5	13	
18	92	20.9	-2	10.4	24	19.6	81	-27	45.6	42	45	4	34	5	09	
19	107	21.1		11.4	38	46.7	81	49.8	42	50	25	04	36	7	32	
20	122	21.3		12.4	53	13.6	79	53.7	39	52	21	5	01	35	19	
21	137	21.5		13.4	67	40.6	80	-27	57.6	39	54	16	4	59		
22	152	21.8		14.3	82	07.4	78	-28	01.2	36	56	11	56	33	6	45
23	167	22.0		15.3	96	34.1	77	04.8	36	58	4	05	52	32	6	23
24	182	22.2	-2	16.3	111	00.8	77	-28	08.1	33	60 S	3	57	4	48	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 23 ^h 29 ^m 6		Mag: -3.9 PMG: 11 ^h 25 ^m		Mag: +1.7 PMG: 12 ^h 21 ^m		Mag: -1.8 PMG: 14 ^h 34 ^m		Mag: +0.5 PMG: 9 ^h 07 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	6	37.9	188	49.6	+2	31.0	174	31.5	-4	32.4
1	21	40.4	203	49.2		29.8	189	32.4		33.1
2	36	42.8	218	48.8		28.5	204	33.4		33.7
3	51	45.3	233	48.4		27.3	219	34.4		34.4
4	66	47.8	248	48.0		26.0	234	35.3		35.0
5	81	50.2	263	47.6	+2	24.8	249	36.3	-4	35.7
6	96	52.7	278	47.2	+2	23.6	264	37.2	-4	36.4
7	111	55.2	293	46.8		22.3	279	38.2		37.0
8	126	57.6	308	46.4		21.1	294	39.1		37.7
9	142	00.1	323	46.0		19.8	309	40.1		38.3
10	157	02.6	338	45.6		18.6	324	41.0		39.0
11	172	05.0	353	45.2	+2	17.4	339	42.0	-4	39.6
12	187	07.5	8	44.8	+2	16.1	354	42.9	-4	40.3
13	202	09.9	23	44.4		14.9	9	43.9		41.0
14	217	12.4	38	44.0		13.6	24	44.8		41.6
15	232	14.9	53	43.6		12.4	39	45.8		42.3
16	247	17.3	68	43.2		11.1	54	46.7		42.9
17	262	19.8	83	42.8	+2	09.9	69	47.7	-4	43.6
18	277	22.3	98	42.5	+2	08.7	84	48.6	-4	44.2
19	292	24.7	113	42.1		07.4	99	49.6		44.9
20	307	27.2	128	41.7		06.2	114	50.5		45.6
21	322	29.7	143	41.3		04.9	129	51.5		46.2
22	337	32.1	158	40.9		03.7	144	52.5		46.9
23	352	34.6	173	40.5		02.4	159	53.4		47.5
24	7	37.1	188	40.1	+2	01.2	174	54.4	-4	48.2
Dif	—		-4	-12			+10	-7		

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16 ^h 0			Edad: 6 ^d 5	PHE	4 ^h : 56 ^s 3 12 ^h : 56 ^s 5 20 ^h : 56 ^s 8			Final del crepúsculo		Salida de Luna		Puesta de Luna	
	PMG: 11 ^h 50 ^m 4								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	182	22.2	-2 16.3	111	00.8	-28 08.1	76	60 N	17 39	18 21	19 09	16 01 43	18 28 79	
1	197	22.4		125	27.4		33	58	40	19	05	15 17 49	19 12 72	
2	212	22.6	18.2	139	54.0	14.4	30	56	41	18	19 01	14 48 51	19 42 69	
3	227	22.8	19.2	154	20.5	17.4	30	54	42	17	18 58	25 53	20 04 68	
4	242	23.0	20.2	168	46.9	20.1	27	52	43	16	55	14 06 54	23 66	
5	257	23.2	-2 21.1	183	13.2	-28 22.7	26	50	17 43	18 15	18 53	13 51 54	20 39 65	
6	272	23.4	-2 22.1	197	39.5	-28 25.2	25	45	17 45	18 14	18 48	13 19 56	21 10 64	
7	287	23.6	23.1	212	05.7	27.5	23	40	46	13	44	12 55 56	35 63	
8	302	23.8	24.1	226	31.8	29.6	21	35	47	12	42	35 56	21 55 62	
9	317	24.0	25.0	240	57.9	31.6	20	30	48	12	40	12 18 56	22 12 61	
10	332	24.3	26.0	255	23.9	33.4	18	20	50	12	38	11 49 57	22 41 60	
11	347	24.5	-2 27.0	269	49.9	-28 35.1	17	10 N	17 52	18 13	18 37	11 24 58	23 06 59	
12	2	24.7	-2 27.9	284	15.8	-28 36.6	15	0	17 54	18 14	18 38	11 01 58	23 29 58	
13	17	24.9	28.9	298	41.6	37.9	13	10 S	55	16	41	10 38 58	23 52 57	
14	32	25.1	29.9	313	07.4	39.1	12	20	17 58	20	45	10 14 58	*** ** *	
15	47	25.3	30.9	327	33.2	40.1	10	30	18 00	24	52	9 45 58	*** ** *	
16	62	25.5	31.8	341	58.8	40.9	8	35	02	27	18 57	28 58	0 03 59	
17	77	25.7	-2 32.8	356	24.5	-28 41.6	7	40	18 03	18 30	19 02	9 09 58	0 23 59	
18	92	25.9	-2 33.8	10	50.1	-28 42.1	5	45	18 05	18 35	19 10	8 45 58	0 46 60	
19	107	26.1	34.7	25	15.6	42.4	3	50	08	40	19	8 14 58	1 17 60	
20	122	26.3	35.7	39	41.1	42.6	2	52	09	43	24	7 59 58	32 61	
21	137	26.5	36.7	54	06.6	42.6	0	54	10	46	29	41 58	1 49 62	
22	152	26.7	37.7	68	32.0	42.5	1	56	11	49	34	7 20 57	2 10 63	
23	167	26.9	38.6	82	57.4	42.1	4	58	13	53	41	6 53 56	2 37 63	
24	182	27.1	-2 39.6	97	22.7	-28 41.6	5	60 S	18 15	18 57	19 49	6 14 55	3 16 65	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 23 ^h 25 ^m 7		Mag: -3.9 PMG: 11 ^h 26 ^m		Mag: +1.7 PMG: 12 ^h 20 ^m		Mag: -1.8 PMG: 14 ^h 31 ^m		Mag: +0.5 PMG: 9 ^h 04 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	7	37.1	188	40.1	174	54.4	141	43.3	223	46.2
1	22	39.5	203	39.7	189	55.3	156	45.3	238	48.4
2	37	42.0	218	39.3	204	56.3	171	47.3	253	50.6
3	52	44.4	233	38.9	219	57.2	186	49.3	268	52.8
4	67	46.9	248	38.5	234	58.2	201	51.3	283	55.0
5	82	49.4	263	38.1	249	59.1	216	53.3	298	57.2
6	97	51.8	278	37.7	265	00.1	231	55.3	313	59.4
7	112	54.3	293	37.3	280	01.0	246	57.3	329	01.6
8	127	56.8	308	36.9	295	02.0	261	59.3	344	03.9
9	142	59.2	323	36.5	310	02.9	277	01.2	359	06.1
10	158	01.7	338	36.2	325	03.9	292	03.2	14	08.3
11	173	04.2	353	35.8	340	04.8	307	05.2	29	10.5
12	188	06.6	8	35.4	355	05.8	322	07.2	44	12.7
13	203	09.1	23	35.0	10	06.7	337	09.2	59	14.9
14	218	11.5	38	34.6	25	07.7	352	11.2	74	17.1
15	233	14.0	53	34.2	40	08.6	7	13.2	89	19.3
16	248	16.5	68	33.8	55	09.6	22	15.2	104	21.5
17	263	18.9	83	33.4	70	10.5	37	17.2	119	23.7
18	278	21.4	98	33.0	85	11.5	52	19.2	134	25.9
19	293	23.9	113	32.6	100	12.4	67	21.2	149	28.2
20	308	26.3	128	32.2	115	13.4	82	23.1	164	30.4
21	323	28.8	143	31.8	130	14.3	97	25.1	179	32.6
22	338	31.3	158	31.4	145	15.3	112	27.1	194	34.8
23	353	33.7	173	31.0	160	16.2	127	29.1	209	37.0
24	8	36.2	188	30.7	175	17.2	142	31.1	224	39.2
Dif	—		-4	-12	+10	-7	+20	-1	+22	-1

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16 ^h 0 PMG: 11 ^h 50 ^m 0			Edad: 7 ^d 5 PHE { 4 ^h : 57/1 12 ^h : 57/3 20 ^h : 57/6 PMG: 18 ^h 13 ^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	182	27.1	-2	97	22.7	-28	41.6	60 N	4 32	5 21	6 03	16 44	13	19 47	108	
1	197	27.4		111	48.0		41.0	58	36	22	01	16 06	25	20 24	96	
2	212	27.6		126	13.3		40.1	56	40	23	01	15 39	32	20 51	89	
3	227	27.8		140	38.5		39.1	54	43	24	6 00	18 36		21 12	83	
4	242	28.0		155	03.7		38.0	52	46	25	5 59	15 00	39	29	82	
5	257	28.2	-2	169	28.9	-28	36.6	50	4 48	5 26	5 58	14 45	41	21 44	79	
6	272	28.4	-2	183	54.0	-28	35.1	45	4 53	5 27	5 56	14 15	45	22 14	75	
7	287	28.6		198	19.2		33.4	40	57	28	55	13 51	48	38	71	
8	302	28.8		212	44.3		31.5	35	4 59	29	54	31 50		22 57	69	
9	317	29.0		227	09.3		29.5	30	5 01	29	53	13 14	52	23 13	67	
10	332	29.2		241	34.4		27.3	20	03	29	51	12 46	54	23 41	63	
11	347	29.4	-2	255	59.4	-28	24.9	10 N	5 03	5 28	5 49	12 22	56	** ** *	**	
12	2	29.6	-2	270	24.4	-28	22.3	0	5 02	5 26	5 47	11 59	58	** ** *	**	
13	17	29.8		284	49.5		19.6	10 S	4 59	24	45	36 60		** ** *	**	
14	32	30.0		299	14.4		16.7	20	55	21	43	11 12	62	0 16	56	
15	47	30.2		313	39.4		13.6	30	48	16	40	10 43	65	0 45	54	
16	62	30.4		328	04.4		10.3	35	43	13	38	26 66		1 02	54	
17	77	30.6	-2	342	29.4	-28	06.9	40	4 37	5 09	5 37	10 07	67	1 22	52	
18	92	30.8	-2	356	54.3	-28	03.3	45	4 30	5 05	5 34	9 43	70	1 46	50	
19	107	31.0		11	19.3	-27	59.5	50	21	4 59	32	9 12	73	2 17	48	
20	122	31.2	-2	25	44.2		55.6	52	16	57	31	8 57	74	33	46	
21	137	31.4	-3	40	09.2		51.5	54	11	54	29	39 77		2 51	44	
22	152	31.7	-3	54	34.1		47.2	56	4 05	50	28	8 17	80	3 13	41	
23	167	31.9		68	59.1		42.7	58	3 58	47	26	7 49	85	3 40	37	
24	182	32.1	-3	83	24.0	-27	38.0	60 S	3 50	4 42	5 24	7 09	96	4 21	26	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 23 ^h 21 ^m 7		Mag: -3.9 PMG: 11 ^h 26 ^m		Mag: +1.7 PMG: 12 ^h 18 ^m		Mag: -1.8 PMG: 14 ^h 28 ^m		Mag: +0.5 PMG: 9 ^h 00 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	8	36.2	188	30.7	+1	31.3	175	17.2	-5	04.0	142	31.1	-16	29.7	224	39.2	+15	16.5
1	23	38.7	203	30.3		30.1	190	18.1		04.6	157	33.1		29.9	239	41.4		16.4
2	38	41.1	218	29.9		28.8	205	19.1		05.3	172	35.1		30.0	254	43.6		16.3
3	53	43.6	233	29.5		27.6	220	20.0		05.9	187	37.1		30.1	269	45.8		16.2
4	68	46.0	248	29.1		26.4	235	20.9		06.6	202	39.1		30.3	284	48.0		16.1
5	83	48.5	263	28.7	+1	25.1	250	21.9	-5	07.2	217	41.1	-16	30.4	299	50.3	+15	16.1
6	98	51.0	278	28.3	+1	23.9	265	22.8	-5	07.9	232	43.0	-16	30.6	314	52.5	+15	16.0
7	113	53.4	293	27.9		22.6	280	23.8		08.5	247	45.0		30.7	329	54.7		15.9
8	128	55.9	308	27.5		21.4	295	24.7		09.2	262	47.0		30.8	344	56.9		15.8
9	143	58.4	323	27.1		20.1	310	25.7		09.9	277	49.0		31.0	359	59.1		15.8
10	159	00.8	338	26.7		18.9	325	26.6		10.5	292	51.0		31.1	15	01.3		15.7
11	174	03.3	353	26.3	+1	17.6	340	27.6	-5	11.2	307	53.0	-16	31.2	30	03.5	+15	15.6
12	189	05.8	8	25.9	+1	16.4	355	28.5	-5	11.8	322	55.0	-16	31.4	45	05.7	+15	15.5
13	204	08.2	23	25.6		15.1	10	29.5		12.5	337	57.0		31.5	60	07.9		15.5
14	219	10.7	38	25.2		13.9	25	30.4		13.1	352	59.0		31.7	75	10.2		15.4
15	234	13.2	53	24.8		12.6	40	31.4		13.8	8	00.9		31.8	90	12.4		15.3
16	249	15.6	68	24.4		11.4	55	32.3		14.4	23	02.9		31.9	105	14.6		15.2
17	264	18.1	83	24.0	+1	10.1	70	33.3	-5	15.1	38	04.9	-16	32.1	120	16.8	+15	15.2
18	279	20.5	98	23.6	+1	08.9	85	34.2	-5	15.8	53	06.9	-16	32.2	135	19.0	+15	15.1
19	294	23.0	113	23.2		07.6	100	35.2		16.4	68	08.9		32.3	150	21.2		15.0
20	309	25.5	128	22.8		06.4	115	36.1		17.1	83	10.9		32.5	165	23.4		14.9
21	324	27.9	143	22.4		05.1	130	37.1		17.7	98	12.9		32.6	180	25.6		14.8
22	339	30.4	158	22.0		03.9	145	38.0		18.4	113	14.8		32.8	195	27.9		14.8
23	354	32.9	173	21.6		02.6	160	38.9		19.0	128	16.8		32.9	210	30.1		14.7
24	9	35.3	188	21.2	+1	01.4	175	39.9	-5	19.7	143	18.8	-16	33.0	225	32.3	+15	14.6
Dif	—		-4	-12			+9	-7			+20	-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 7			Edad: 8 ^d 5 PHE { 4 ^h : 57/9 12 ^h : 58/2 20 ^h : 58/5 R°: 57 ^m						Civil			Náutico	Hora	R°	Hora	R°
	hG ☉	Dec		hG ☾	Dif	Dec	Dif				h m	h m	h m	h m	m	h m	m
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m	m	h m	m	
0	182	32.1	-3	02.9	83	24.0	-27	38.0	60 N	17 33	18 14	19 03	16 57	4	21 35	115	
1	197	32.3		03.9	97	49.0	60	33.2	58	35	14	18 59	31	13	22 00	106	
2	212	32.5		04.8	112	14.0	60	28.2	56	36	13	56	16 11	18	20	99	
3	227	32.7		05.8	126	38.9	59	23.0	54	37	12	53	15 54	23	37	94	
4	242	32.9		06.8	141	03.9	60	17.7	52	38	11	51	39	27	22 51	90	
5	257	33.1	-3	07.8	155	28.9	60	-27	50	17 39	18 11	18 49	15 26	30	23 03	87	
6	272	33.3	-3	08.7	169	54.0	61	-27	45	17 41	18 10	18 44	15 00	35	23 29	81	
7	287	33.5		09.7	184	19.0	60	-27	40	43	10	41	14 39	40	23 49	76	
8	302	33.7		10.7	198	44.0	60	-26	35	44	10	39	21	43	** ** *	**	
9	317	33.9		11.6	213	09.1	61	48.3	30	46	10	37	14 06	46	** ** *	**	
10	332	34.1		12.6	227	34.2	61	42.0	20	48	10	36	13 40	51	** ** *	**	
11	347	34.3	-3	13.6	241	59.3	61	-26	10 N	17 51	18 12	18 36	13 18	54	0 05	60	
12	2	34.5	-3	14.5	256	24.4	61	-26	0	17 53	18 14	18 38	12 57	57	0 27	58	
13	17	34.7		15.5	270	49.6	62	21.8	10 S	55	16	41	36	61	0 49	55	
14	32	34.9		16.5	285	14.8	62	14.7	20	17 58	20	46	12 14	64	1 12	53	
15	47	35.1		17.4	299	40.0	62	07.5	30	18 01	25	53	11 48	68	39	49	
16	62	35.3		18.4	314	05.2	62	-26	35	03	28	18 58	32	71	1 56	46	
17	77	35.5	-3	19.4	328	30.5	63	-25	40	18 05	18 32	19 05	11 14	75	2 14	44	
18	92	35.7	-3	20.4	342	55.8	63	-25	45	18 08	18 37	19 12	10 53	78	2 36	41	
19	107	35.9		21.3	357	21.1	63	36.9	50	11	43	22	25	84	3 05	35	
20	122	36.1		22.3	11	46.5	64	28.8	52	12	46	27	10 11	87	19	32	
21	137	36.3		23.3	26	11.9	64	20.5	54	14	50	33	9 56	90	35	29	
22	152	36.5		24.2	40	37.4	65	12.1	56	15	53	39	37	95	3 54	24	
23	167	36.7		25.2	55	02.8	64	-25	58	17	18 57	46	9 14	102	4 17	18	
24	182	36.9	-3	26.2	69	28.3	65	-24	60 S	18 20	19 02	19 55	8 45	112	4 47	8	
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO				
	PMG: 23 ^h 17 ^m 8			Mag: -3.9 PMG: 11 ^h 27 ^m			Mag: +1.7 PMG: 12 ^h 17 ^m			Mag: -1.8 PMG: 14 ^h 25 ^m			Mag: +0.5 PMG: 8 ^h 57 ^m				
	hG ♈		Dec	hG ♀		Dec	hG ♂		Dec	hG ♃		Dec	hG ♄		Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	9	35.3	188	21.2	+1	01.4	175	39.9	-5	19.7	143	18.8	-16	33.0	225	32.3	
1	24	37.8	203	20.9	+1	00.2	190	40.8		20.3	158	20.8		33.2	240	34.5	
2	39	40.3	218	20.5	+0	58.9	205	41.8		21.0	173	22.8		33.3	255	36.7	
3	54	42.7	233	20.1			220	42.7		21.7	188	24.8		33.4	270	38.9	
4	69	45.2	248	19.7		56.4	235	43.7		22.3	203	26.8		33.6	285	41.1	
5	84	47.7	263	19.3	+0	55.2	250	44.6	-5	23.0	218	28.8	-16	33.7	300	43.3	
6	99	50.1	278	18.9	+0	53.9	265	45.6	-5	23.6	233	30.7	-16	33.9	315	45.6	
7	114	52.6	293	18.5		52.7	280	46.5		24.3	248	32.7		34.0	330	47.8	
8	129	55.0	308	18.1		51.4	295	47.5		24.9	263	34.7		34.1	345	50.0	
9	144	57.5	323	17.7		50.2	310	48.4		25.6	278	36.7		34.3	0	52.2	
10	160	00.0	338	17.3		48.9	325	49.3		26.2	293	38.7		34.4	15	54.4	
11	175	02.4	353	16.9	+0	47.7	340	50.3	-5	26.9	308	40.7	-16	34.5	30	56.6	
12	190	04.9	8	16.5	+0	46.4	355	51.2	-5	27.5	323	42.7	-16	34.7	45	58.8	
13	205	07.4	23	16.2		45.2	10	52.2		28.2	338	44.6		34.8	61	01.1	
14	220	09.8	38	15.8		43.9	25	53.1		28.9	353	46.6		35.0	76	03.3	
15	235	12.3	53	15.4		42.7	40	54.1		29.5	8	48.6		35.1	91	05.5	
16	250	14.8	68	15.0		41.4	55	55.0		30.2	23	50.6		35.2	106	07.7	
17	265	17.2	83	14.6	+0	40.2	70	56.0	-5	30.8	38	52.6	-16	35.4	121	09.9	
18	280	19.7	98	14.2	+0	38.9	85	56.9	-5	31.5	53	54.6	-16	35.5	136	12.1	
19	295	22.1	113	13.8		37.7	100	57.8		32.1	68	56.5		35.6	151	14.3	
20	310	24.6	128	13.4		36.4	115	58.8		32.8	83	58.5		35.8	166	16.6	
21	325	27.1	143	13.0		35.2	130	59.7		33.4	99	00.5		35.9	181	18.8	
22	340	29.5	158	12.6		33.9	146	00.7		34.1	114	02.5		36.1	196	21.0	
23	355	32.0	173	12.2		32.7	161	01.6		34.7	129	04.5		36.2	211	23.2	
24	10	34.5	188	11.8	+0	31.4	176	02.6	-5	35.4	144	06.5	-16	36.3	226	25.4	
Dif	—			-4	-12		+9	-7		+20	-1				+22	-1	

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna				
	SD: 16'0			Edad: 9 ^d 5	PHE	4 ^h : 58'8		R ^o : 54 ^m		Náutico	Civil		Hora	R ^o	Hora	R ^o			
	PMG: 11 ^h 49 ^m 4					SD: 16'0											SD: 20 ^h 08 ^m		
	hG ☉	Dec		hG ☾	Dif	Dec	Dif												
h	°	'	°	°	'	°	'	°		h	m	h	m	h	m	h	m		
0	182	36.9	-3	69	28.3	-24	54.8	60 N	4	37	5	26	6	07	17	01	0		
1	197	37.1		83	53.9		45.9	58	41	27	06			16	44	7			
2	212	37.3		98	19.5		36.9	56	44	27	04			29	12		23 59 101		
3	227	37.5		112	45.1		27.6	54	47	28	03			17	16		*** ** *		
4	242	37.7		127	10.8		18.3	52	49	29	02			16	06	19	*** ** *		
5	257	37.9	-3	141	36.5	-24	08.7	50	4	51	5	29	6	01	15	56	23	*** ** *	
6	272	38.1	-3	156	02.3	-23	59.0	45	4	56	5	30	5	59	15	35	29	*** ** *	
7	287	38.3		170	28.1		49.1	40	4	59	30	57			19	33		*** ** *	
8	302	38.5		184	53.9		39.1	35	5	01	30	55			15	04	37	0	
9	317	38.7		199	19.8		28.9	30	02	30	54			14	52	40		20 72	
10	332	38.9		213	45.8		18.6	20	03	29	51			31	46			0 44 65	
11	347	39.1	-3	228	11.8	-23	08.1	10 N	5	03	5	28	5	49	14	12	51	1	05 60
12	2	39.3	-3	242	37.8	-22	57.5	0	5	01	5	25	5	46	13	54	56	1	25 56
13	17	39.5		257	03.9		46.7	10 S	4	58	23	44			37	60		1	44 52
14	32	39.7		271	30.0		35.8	20	53	19	41			13	18	64		2	05 48
15	47	39.9		285	56.2		24.7	30	45	13	37			12	56	70		28	43
16	62	40.1		300	22.4		13.4	35	40	10	35			43	74			42	40
17	77	40.3	-3	314	48.7	-22	02.0	40	4	34	5	06	5	33	12	29	77	2	58 36
18	92	40.5	-3	329	15.1	-21	50.5	45	4	26	5	01	5	31	12	11	82	3	17 31
19	107	40.7		343	41.4		38.8	50	16	4	55	27			11	49	88	40	26
20	122	40.9		358	07.9		27.0	52	11	52	26			38	92		3	51 23	
21	137	41.1		12	34.4		15.0	54	4	05	49	24			26	96		4	04 19
22	152	41.3		27	00.9	-21	02.9	56	3	59	45	23			11	12	101		18 15
23	167	41.5		41	27.5	-20	50.6	58	52	41	21			10	56	106		35	10
24	182	41.7	-3	55	54.2	-20	38.3	60 S	3	44	4	36	5	18	10	37	113	4	55 3

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 23 ^h 13 ^m 9		Mag: -3.9 PMG: 11 ^h 28 ^m		Mag: +1.7 PMG: 12 ^h 15 ^m		Mag: -1.8 PMG: 14 ^h 22 ^m		Mag: +0.5 PMG: 8 ^h 53 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	10	34.5	188	11.8	+0	31.4	176	02.6	-5	35.4	144	06.5	-16	36.3	226	25.4	+15	12.8
1	25	36.9	203	11.5		30.2	191	03.5		36.1	159	08.4		36.5	241	27.6		12.7
2	40	39.4	218	11.1		28.9	206	04.5		36.7	174	10.4		36.6	256	29.8		12.7
3	55	41.9	233	10.7		27.7	221	05.4		37.4	189	12.4		36.7	271	32.1		12.6
4	70	44.3	248	10.3		26.4	236	06.3		38.0	204	14.4		36.9	286	34.3		12.5
5	85	46.8	263	09.9	+0	25.2	251	07.3	-5	38.7	219	16.4	-16	37.0	301	36.5	+15	12.4
6	100	49.3	278	09.5	+0	23.9	266	08.2	-5	39.3	234	18.4	-16	37.2	316	38.7	+15	12.4
7	115	51.7	293	09.1		22.7	281	09.2		40.0	249	20.3		37.3	331	40.9		12.3
8	130	54.2	308	08.7		21.4	296	10.1		40.6	264	22.3		37.4	346	43.1		12.2
9	145	56.6	323	08.3		20.2	311	11.0		41.3	279	24.3		37.6	1	45.4		12.1
10	160	59.1	338	07.9		18.9	326	12.0		41.9	294	26.3		37.7	16	47.6		12.1
11	176	01.6	353	07.5	+0	17.6	341	12.9	-5	42.6	309	28.3	-16	37.8	31	49.8	+15	12.0
12	191	04.0	8	07.2	+0	16.4	356	13.9	-5	43.2	324	30.2	-16	38.0	46	52.0	+15	11.9
13	206	06.5	23	06.8		15.1	11	14.8		43.9	339	32.2		38.1	61	54.2		11.8
14	221	09.0	38	06.4		13.9	26	15.8		44.6	354	34.2		38.3	76	56.4		11.8
15	236	11.4	53	06.0		12.6	41	16.7		45.2	9	36.2		38.4	91	58.7		11.7
16	251	13.9	68	05.6		11.4	56	17.6		45.9	24	38.2		38.5	107	00.9		11.6
17	266	16.4	83	05.2	+0	10.1	71	18.6	-5	46.5	39	40.2	-16	38.7	122	03.1	+15	11.5
18	281	18.8	98	04.8	+0	08.9	86	19.5	-5	47.2	54	42.1	-16	38.8	137	05.3	+15	11.5
19	296	21.3	113	04.4		07.6	101	20.5		47.8	69	44.1		38.9	152	07.5		11.4
20	311	23.8	128	04.0		06.4	116	21.4		48.5	84	46.1		39.1	167	09.7		11.3
21	326	26.2	143	03.6		05.1	131	22.3		49.1	99	48.1		39.2	182	12.0		11.2
22	341	28.7	158	03.2		03.9	146	23.3		49.8	114	50.1		39.4	197	14.2		11.2
23	356	31.1	173	02.8		02.6	161	24.2		50.4	129	52.0		39.5	212	16.4		11.1
24	11	33.6	188	02.5	+0	01.4	176	25.2	-5	51.1	144	54.0	-16	39.6	227	18.6	+15	11.0
Dif	—		-4		-13		+9		-7		+20		-1		+22		-	

UT	SOL			LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16'0 PMG: 11 ^h 49 ^m 1			Edad: 10 ^d 5 PHE { 4 ^h : 59'7 12 ^h : 60'0 20 ^h : 60'2 PMG: 21 ^h 02 ^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	182	41.7	-3 49.4	55	54.2	-20 38.3	77	60 N	17 27	18 08	18 57	17 01 0	** ** *	** ** *	
1	197	41.9	50.4	70	20.9	25.7	126	58	29	08	54	16 51 4	** ** *	** ** *	
2	212	42.1	51.3	84	47.6	13.1	126	56	31	08	51	41 8	** ** *	** ** *	
3	227	42.3	52.3	99	14.4	-20 00.2	129	54	32	07	48	33 12	0 11 96		
4	242	42.5	53.3	113	41.3	-19 47.3	129	52	33	07	46	25 15	21 93		
5	257	42.7	-3 54.2	128	08.2	-19 34.2	131	50	17 35	18 07	18 44	16 19 17	0 30 90		
6	272	42.9	-3 55.2	142	35.1	-19 21.0	132	45	17 37	18 06	18 40	16 04 24	0 50 83		
7	287	43.1	56.2	157	02.2	-19 07.7	133	40	40	07	38	15 52 29	1 05 78		
8	302	43.3	57.1	171	29.2	-18 54.2	135	35	42	07	36	41 33	18 74		
9	317	43.4	58.1	185	56.4	40.6	136	30	43	07	35	32 37	30 70		
10	332	43.6	-3 59.1	200	23.5	26.9	137	20	47	09	34	17 42	1 49 64		
11	347	43.8	-4 00.0	214	50.8	-18 13.1	138	10 N	17 49	18 10	18 35	15 03 48	2 05 59		
12	2	44.0	-4 01.0	229	18.0	-17 59.1	140	0	17 52	18 13	18 37	14 50 53	2 21 54		
13	17	44.2	01.9	243	45.4	45.0	141	10 S	55	16	41	37 58	36 50		
14	32	44.4	02.9	258	12.7	30.8	142	20	17 59	21	46	22 64	2 53 44		
15	47	44.6	03.9	272	40.2	16.5	143	30	18 02	26	18 55	14 06 70	3 11 38		
16	62	44.8	04.8	287	07.7	-17 02.0	145	35	05	30	19 00	13 57 74	22 35		
17	77	45.0	-4 05.8	301	35.2	-16 47.4	146	40	18 07	18 34	19 07	13 46 78	3 34 31		
18	92	45.2	-4 06.8	316	02.8	-16 32.8	146	45	18 10	18 40	19 15	13 33 83	3 48 26		
19	107	45.4	07.7	330	30.4	18.0	148	50	14	47	26	17 90	4 06 20		
20	122	45.6	08.7	344	58.1	-16 03.1	149	52	16	50	31	10 93	14 17		
21	137	45.8	09.7	359	25.8	-15 48.1	150	54	17	53	37	13 02 96	23 14		
22	152	46.0	10.6	13	53.6	32.9	152	56	20	18 57	44	12 53 100	33 10		
23	167	46.2	11.6	28	21.4	17.7	152	58	22	19 02	19 51	42 105	45 5		
24	182	46.4	-4 12.6	42	49.3	-15 02.4	153	60 S	18 24	19 07	20 00	12 30 110	4 58 0		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 23 ^h 10 ^m 0		Mag: -3.9 PMG: 11 ^h 28 ^m			Mag: +1.7 PMG: 12 ^h 14 ^m			Mag: -1.8 PMG: 14 ^h 19 ^m			Mag: +0.5 PMG: 8 ^h 49 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	
0	11	33.6	188 02.5	+0 01.4	176 25.2	-5 51.1	144 54.0	-16 39.6	227 18.6	+15 11.0					
1	26	36.1	203 02.1	+0 00.1	191 26.1	51.7	159 56.0	39.8	242 20.8	10.9					
2	41	38.5	218 01.7	-0 01.1	206 27.0	52.4	174 58.0	39.9	257 23.0	10.9					
3	56	41.0	233 01.3	02.4	221 28.0	53.0	190 00.0	40.0	272 25.3	10.8					
4	71	43.5	248 00.9	03.6	236 28.9	53.7	205 01.9	40.2	287 27.5	10.7					
5	86	45.9	263 00.5	-0 04.9	251 29.9	-5 54.4	220 03.9	-16 40.3	302 29.7	+15 10.6					
6	101	48.4	278 00.1	-0 06.1	266 30.8	-5 55.0	235 05.9	-16 40.5	317 31.9	+15 10.6					
7	116	50.9	292 59.7	07.4	281 31.7	55.7	250 07.9	40.6	332 34.1	10.5					
8	131	53.3	307 59.3	08.6	296 32.7	56.3	265 09.9	40.7	347 36.4	10.4					
9	146	55.8	322 58.9	09.9	311 33.6	57.0	280 11.8	40.9	2 38.6	10.3					
10	161	58.3	337 58.5	11.1	326 34.6	57.6	295 13.8	41.0	17 40.8	10.3					
11	177	00.7	352 58.2	-0 12.4	341 35.5	-5 58.3	310 15.8	-16 41.2	32 43.0	+15 10.2					
12	192	03.2	7 57.8	-0 13.6	356 36.4	-5 58.9	325 17.8	-16 41.3	47 45.2	+15 10.1					
13	207	05.6	22 57.4	14.9	11 37.4	-5 59.6	340 19.8	41.4	62 47.4	10.0					
14	222	08.1	37 57.0	16.2	26 38.3	-6 00.2	355 21.7	41.6	77 49.7	10.0					
15	237	10.6	52 56.6	17.4	41 39.3	00.9	10 23.7	41.7	92 51.9	09.9					
16	252	13.0	67 56.2	18.7	56 40.2	01.5	25 25.7	41.8	107 54.1	09.8					
17	267	15.5	82 55.8	-0 19.9	71 41.1	-6 02.2	40 27.7	-16 42.0	122 56.3	+15 09.7					
18	282	18.0	97 55.4	-0 21.2	86 42.1	-6 02.8	55 29.6	-16 42.1	137 58.5	+15 09.7					
19	297	20.4	112 55.0	22.4	101 43.0	03.5	70 31.6	42.3	153 00.8	09.6					
20	312	22.9	127 54.6	23.7	116 44.0	04.1	85 33.6	42.4	168 03.0	09.5					
21	327	25.4	142 54.2	24.9	131 44.9	04.8	100 35.6	42.5	183 05.2	09.5					
22	342	27.8	157 53.8	26.2	146 45.8	05.4	115 37.6	42.7	198 07.4	09.4					
23	357	30.3	172 53.5	27.4	161 46.8	06.1	130 39.5	42.8	213 09.6	09.3					
24	12	32.7	187 53.1	-0 28.7	176 47.7	-6 06.7	145 41.5	-16 42.9	228 11.9	+15 09.2					
Dif	—		-4		-13		+9		-7		+20		-1		

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 16:0			Edad: 11 ^d 5 PHE { 4 ^h : 60'4 12 ^h : 60'7 20 ^h : 60'9 R°: 51 ^m																
	PMG: 11 ^h 48 ^m 8			SD: 16:4 PMG: 21 ^h 55 ^m																
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°					
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m				
0	182	46.4	-4	12.6	42	49.3	-15	02.4	60 N	4	42	5	31	6	12	17 01 **				
1	197	46.6		13.5	57	17.2	89	-14	46.9 ¹⁵⁵	58	45	31	10	16	55	3				
2	212	46.8		14.5	71	45.2	90		31.4 ¹⁵⁵	56	48	31	08	49	7	40 100				
3	227	47.0		15.5	86	13.2	90	-14	15.8 ¹⁵⁶	54	51	32	07	45	10	47 97				
4	242	47.1		16.4	100	41.3	91	-14	00.0 ¹⁵⁸	52	53	32	06	40	13	1 54 93				
5	257	47.3	-4	17.4	115	09.4	91	-13	44.2 ¹⁵⁸	50	4	54	5	32	6	04	16 36 16			
6	272	47.5	-4	18.4	129	37.5	91	-13	28.3 ¹⁵⁹	45	4	58	5	32	6	01	16 28 21			
7	287	47.7		19.3	144	05.7	92	-13	12.3 ¹⁶⁰	40	5	01	32	5	59	21	26	23 78		
8	302	47.9		20.3	158	33.9	92	-12	56.1 ¹⁶²	35	02	32	57	14	31		32	73		
9	317	48.1		21.2	173	02.2	93		39.9 ¹⁶²	30	03	31	55	16	09	34		40 69		
10	332	48.3		22.2	187	30.5	93		23.6 ¹⁶³	20	04	30	52	15	59	41		2 53 63		
11	347	48.5	-4	23.2	201	58.8	93	-12	07.3 ¹⁶³	10 N	5	03	5	27	5	48	15	51	46	
12	2	48.7	-4	24.1	216	27.2	94	-11	50.8 ¹⁶⁵	0	5	01	5	25	5	45	15	43	51	
13	17	48.9		25.1	230	55.6	94		34.3 ¹⁶⁵	10 S	4	57	21	42		35	57		26 46	
14	32	49.1		26.1	245	24.1	95		17.6 ¹⁶⁷	20	51	17	39		26	63		37	41	
15	47	49.3		27.0	259	52.6	95	-11	00.9 ¹⁶⁷	30	43	11	35		16	70		49	35	
16	62	49.5		28.0	274	21.1	95	-10	44.2 ¹⁶⁷	35	37	07	33		11	73		3	57 31	
17	77	49.7	-4	29.0	288	49.7	96	-10	27.3 ¹⁶⁹	40	4	31	5	03	5	30	15	04	78	
18	92	49.8	-4	29.9	303	18.3	96	-10	10.4 ¹⁶⁹	45	4	22	4	57	5	27	14	56	84	
19	107	50.0		30.9	317	46.9	96	-9	53.4 ¹⁷⁰	50	11	50	23		47	90		26	16	
20	122	50.2		31.8	332	15.5	96		36.3 ¹⁷¹	52	06	47	21		43	92		31	14	
21	137	50.4		32.8	346	44.2	97		19.1 ¹⁷²	54	4	00	43	19		38	96		37 10	
22	152	50.6		33.8	1	12.9	97	-9	01.9 ¹⁷²	56	3	53	39	17		33	99		43 7	
23	167	50.8		34.7	15	41.7	98	-8	44.7 ¹⁷²	58	45	35	15		27	104		50	4	
24	182	51.0	-4	35.7	30	10.5	98	-8	27.3 ¹⁷⁴	60 S	3	36	4	30	5	12	14	20	109	4 58 **

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 23 ^h 06 ^m 0		Mag: -3.9 PMG: 11 ^h 29 ^m		Mag: +1.7 PMG: 12 ^h 12 ^m		Mag: -1.8 PMG: 14 ^h 15 ^m		Mag: +0.5 PMG: 8 ^h 46 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	12	32.7	187	53.1	-0	28.7	176	47.7	-6	06.7	145	41.5	-16	42.9	228	11.9	+15	09.2
1	27	35.2	202	52.7		29.9	191	48.6		07.4	160	43.5		43.1	243	14.1		09.2
2	42	37.7	217	52.3		31.2	206	49.6		08.0	175	45.5		43.2	258	16.3		09.1
3	57	40.1	232	51.9		32.4	221	50.5		08.7	190	47.4		43.4	273	18.5		09.0
4	72	42.6	247	51.5		33.7	236	51.5		09.4	205	49.4		43.5	288	20.7		08.9
5	87	45.1	262	51.1	-0	34.9	251	52.4	-6	10.0	220	51.4	-16	43.6	303	23.0	+15	08.9
6	102	47.5	277	50.7	-0	36.2	266	53.3	-6	10.7	235	53.4	-16	43.8	318	25.2	+15	08.8
7	117	50.0	292	50.3		37.5	281	54.3		11.3	250	55.3		43.9	333	27.4		08.7
8	132	52.5	307	49.9		38.7	296	55.2		12.0	265	57.3		44.1	348	29.6		08.6
9	147	54.9	322	49.5		40.0	311	56.1		12.6	280	59.3		44.2	3	31.9		08.6
10	162	57.4	337	49.1		41.2	326	57.1		13.3	296	01.3		44.3	18	34.1		08.5
11	177	59.9	352	48.7	-0	42.5	341	58.0	-6	13.9	311	03.2	-16	44.5	33	36.3	+15	08.4
12	193	02.3	7	48.4	-0	43.7	356	58.9	-6	14.6	326	05.2	-16	44.6	48	38.5	+15	08.4
13	208	04.8	22	48.0		45.0	11	59.9		15.2	341	07.2		44.7	63	40.7		08.3
14	223	07.2	37	47.6		46.2	27	00.8		15.9	356	09.2		44.9	78	43.0		08.2
15	238	09.7	52	47.2		47.5	42	01.8		16.5	11	11.1		45.0	93	45.2		08.1
16	253	12.2	67	46.8		48.7	57	02.7		17.2	26	13.1		45.2	108	47.4		08.1
17	268	14.6	82	46.4	-0	50.0	72	03.6	-6	17.8	41	15.1	-16	45.3	123	49.6	+15	08.0
18	283	17.1	97	46.0	-0	51.2	87	04.6	-6	18.5	56	17.1	-16	45.4	138	51.8	+15	07.9
19	298	19.6	112	45.6		52.5	102	05.5		19.1	71	19.0		45.6	153	54.1		07.8
20	313	22.0	127	45.2		53.7	117	06.4		19.8	86	21.0		45.7	168	56.3		07.8
21	328	24.5	142	44.8		55.0	132	07.4		20.4	101	23.0		45.8	183	58.5		07.7
22	343	27.0	157	44.4		56.3	147	08.3		21.1	116	25.0		46.0	199	00.7		07.6
23	358	29.4	172	44.0		57.5	162	09.2		21.7	131	26.9		46.1	214	03.0		07.5
24	13	31.9	187	43.6	-0	58.8	177	10.2	-6	22.4	146	28.9	-16	46.3	229	05.2	+15	07.5
Dif	—		-4		-13		+9		-7		+20		-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 48 ^m 5			Edad: 12 ^d 5 PHE { 4 ^h : 61'0 12 ^h : 61'2 20 ^h : 61'3 R°: 52 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	
0	182	51.0	-4	35.7	30	10.5	-8 27.3	60 N	17 21	18 03	18 51	17 00 **	3 12 107	
1	197	51.2		36.7	44	39.3 98	-8 09.9 ¹⁷⁴	58	23	02	48	16 58 2	16 103	
2	212	51.4		37.6	59	08.1 98	-7 52.5 ¹⁷⁴	56	25	02	45	56 6	20 99	
3	227	51.6		38.6	73	36.9 98	35.0 ¹⁷⁵	54	27	02	43	55 9	24 95	
4	242	51.8		39.5	88	05.8 99	-7 17.4 ¹⁷⁶	52	29	02	41	53 12	27 92	
5	257	51.9	-4	40.5	102	34.7 99	-6 59.8 ¹⁷⁶	50	17 30	18 02	18 40	16 52 15	3 30 89	
6	272	52.1	-4	41.5	117	03.6 99	-6 42.1 ¹⁷⁷	45	17 34	18 03	18 37	16 49 21	3 36 83	
7	287	52.3		42.4	131	32.5 99	24.4 ¹⁷⁷	40	36	03	35	47 25	41 78	
8	302	52.5		43.4	146	01.5 100	-6 06.6 ¹⁷⁸	35	39	04	33	45 29	45 74	
9	317	52.7		44.3	160	30.4 99	-5 48.8 ¹⁷⁸	30	41	05	33	43 33	49 70	
10	332	52.9		45.3	174	59.4 100	31.0 ¹⁷⁸	20	45	07	32	40 40	3 56 63	
11	347	53.1	-4	46.3	189	28.4 100	-5 13.1 ¹⁷⁹	10 N	17 48	18 09	18 34	16 37 46	4 02 57	
12	2	53.3	-4	47.2	203	57.4 100	-4 55.1 ¹⁸⁰	0	17 52	18 12	18 37	16 34 52	4 07 51	
13	17	53.5		48.2	218	26.4 100	37.2 ¹⁷⁹	10 S	55	16	41	32 57	12 46	
14	32	53.6		49.2	232	55.5 101	19.1 ¹⁸¹	20	17 59	21	47	29 63	18 40	
15	47	53.8		50.1	247	24.5 100	-4 01.1 ¹⁸⁰	30	18 04	28	18 56	26 70	24 34	
16	62	54.0		51.1	261	53.5 100	-3 43.0 ¹⁸¹	35	06	32	19 02	24 74	28 30	
17	77	54.2	-4	52.0	276	22.6 101	-3 24.9 ¹⁸¹	40	18 09	18 37	19 09	16 22 78	4 32 25	
18	92	54.4	-4	53.0	290	51.7 101	-3 06.8 ¹⁸¹	45	18 13	18 42	19 18	16 20 83	4 37 20	
19	107	54.6		54.0	305	20.7 100	-2 48.7 ¹⁸¹	50	17	50	29	17 89	42 15	
20	122	54.8		54.9	319	49.8 101	30.5 ¹⁸²	52	19	53	35	15 93	45 12	
21	137	55.0		55.9	334	18.9 101	-2 12.3 ¹⁸²	54	21	18 57	41	14 96	47 10	
22	152	55.1		56.8	348	48.0 101	-1 54.1 ¹⁸²	56	24	19 02	49	12 100	50 7	
23	167	55.3		57.8	3	17.0 100	35.8 ¹⁸³	58	26	07	19 57	11 103	54 2	
24	182	55.5	-4	58.8	17	46.1 101	-1 17.6 ¹⁸²	60 S	18 29	19 12	20 06	16 09 107	4 57 **	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 23 ^h 02 ^m 1		Mag: -3.9 PMG: 11 ^h 29 ^m			Mag: +1.7 PMG: 12 ^h 11 ^m			Mag: -1.8 PMG: 14 ^h 12 ^m			Mag: +0.6 PMG: 8 ^h 42 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	13	31.9	187	43.6	-0	58.8	177	10.2	-6	22.4	146	28.9	-16	46.3
1	28	34.3	202	43.3	-1	00.0	192	11.1		23.0	161	30.9		46.4
2	43	36.8	217	42.9	-1	01.3	207	12.0		23.7	176	32.9		46.5
3	58	39.3	232	42.5		02.5	222	13.0		24.3	191	34.8		46.7
4	73	41.7	247	42.1		03.8	237	13.9		25.0	206	36.8		46.8
5	88	44.2	262	41.7	-1	05.0	252	14.8	-6	25.6	221	38.8	-16	47.0
6	103	46.7	277	41.3	-1	06.3	267	15.8	-6	26.3	236	40.8	-16	47.1
7	118	49.1	292	40.9		07.5	282	16.7		26.9	251	42.7		47.2
8	133	51.6	307	40.5		08.8	297	17.6		27.6	266	44.7		47.4
9	148	54.1	322	40.1		10.0	312	18.6		28.2	281	46.7		47.5
10	163	56.5	337	39.7		11.3	327	19.5		28.9	296	48.7		47.6
11	178	59.0	352	39.3	-1	12.5	342	20.4	-6	29.5	311	50.6	-16	47.8
12	194	01.5		7 38.9	-1	13.8	357	21.4	-6	30.2	326	52.6	-16	47.9
13	209	03.9	22	38.5		15.1	12	22.3		30.8	341	54.6		48.1
14	224	06.4	37	38.1		16.3	27	23.2		31.5	356	56.5		48.2
15	239	08.8	52	37.7		17.6	42	24.2		32.1	11	58.5		48.3
16	254	11.3	67	37.4		18.8	57	25.1		32.8	27	00.5		48.5
17	269	13.8	82	37.0	-1	20.1	72	26.0	-6	33.4	42	02.5	-16	48.6
18	284	16.2	97	36.6	-1	21.3	87	27.0	-6	34.1	57	04.4	-16	48.7
19	299	18.7	112	36.2		22.6	102	27.9		34.7	72	06.4		48.9
20	314	21.2	127	35.8		23.8	117	28.8		35.4	87	08.4		49.0
21	329	23.6	142	35.4		25.1	132	29.8		36.0	102	10.3		49.2
22	344	26.1	157	35.0		26.3	147	30.7		36.7	117	12.3		49.3
23	359	28.6	172	34.6		27.6	162	31.6		37.3	132	14.3		49.4
24	14	31.0	187	34.2	-1	28.8	177	32.6	-6	38.0	147	16.3	-16	49.6
Dif	—		-4		-13		+9		-6		+20		-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: 13 ^d 5 PHE { SD: 16'7 PMG: 23 ^h 38 ^m 4 ^h : 61'3 12 ^h : 61'3 20 ^h : 61'3 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	182	55.5	-4	58.8	17	46.1	-1	17.6	183	60 N	4 47	5 35	6 17	16 59	**	4 59	109	
1	197	55.7	-4	59.7	32	15.2	101	-0	59.3	183	58	50	35	15	17 00	4	59	104
2	212	55.9	-5	00.7	46	44.2	100		41.0	183	56	52	35	12	02	7	59	100
3	227	56.1		01.6	61	13.3	101		22.8	182	54	54	35	11	04	10	59	97
4	242	56.3		02.6	75	42.4	101	-0	04.5	183	52	56	35	09	05	13	59	93
5	257	56.5	-5	03.6	90	11.4	100	+0	13.8	183	50	4 58	5 35	6 07	17 07	16	4 59	90
6	272	56.6	-5	04.5	104	40.5	101	+0	32.1	183	45	5 01	5 35	6 04	17 10	21	4 59	84
7	287	56.8		05.5	119	09.5	100	+0	50.4	183	40	03	34	6 01	12	27	59	78
8	302	57.0		06.4	133	38.5	100	+1	08.7	183	35	04	33	5 58	14	31	59	74
9	317	57.2		07.4	148	07.5	100		27.0	183	30	04	32	56	16	35	59	70
10	332	57.4		08.3	162	36.5	100	+1	45.3	183	20	04	30	52	20	41	59	63
11	347	57.6	-5	09.3	177	05.5	100	+2	03.5	182	10 N	5 03	5 27	5 48	17 23	47	4 59	57
12	2	57.7	-5	10.3	191	34.5	100	+2	21.8	183	0	5 00	5 24	5 45	17 26	52	4 58	52
13	17	57.9		11.2	206	03.4	99		40.0	182	10 S	4 56	20	41	29	57	58	46
14	32	58.1		12.2	220	32.4	100	+2	58.3	183	20	49	15	37	32	64	58	40
15	47	58.3		13.1	235	01.3	99	+3	16.5	182	30	40	09	33	36	70	58	34
16	62	58.5		14.1	249	30.2	99		34.7	182	35	34	5 04	30	38	74	58	30
17	77	58.7	-5	15.1	263	59.0	98	+3	52.9	182	40	4 27	4 59	5 27	17 40	79	4 57	26
18	92	58.9	-5	16.0	278	27.9	99	+4	11.0	181	45	4 18	4 53	5 23	17 43	84	4 57	21
19	107	59.0		17.0	292	56.7	98		29.2	182	50	06	46	19	46	91	57	15
20	122	59.2		17.9	307	25.5	98	+4	47.3	181	52	4 01	42	17	48	94	57	12
21	137	59.4		18.9	321	54.3	98	+5	05.3	180	54	3 54	38	14	50	97	57	9
22	152	59.6		19.8	336	23.0	97		23.4	181	56	47	34	12	52	101	57	6
23	167	59.8		20.8	350	51.8	98		41.4	180	58	39	29	09	54	105	56	3
24	183	00.0	-5	21.8	5	20.4	96	+5	59.4	180	60 S	3 29	4 23	5 06	17 56	110	4 56	**
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 22 ^h 58 ^m 2		Mag: -3.9 PMG: 11 ^h 30 ^m			Mag: +1.7 PMG: 12 ^h 09 ^m			Mag: -1.8 PMG: 14 ^h 09 ^m			Mag: +0.6 PMG: 8 ^h 39 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	14	31.0	187	34.2	-1	28.8	177	32.6	-6	38.0	147	16.3	-16	49.6	229	58.6	+15	05.7
1	29	33.5	202	33.8		30.1	192	33.5		38.6	162	18.2		49.7	245	00.8		05.7
2	44	36.0	217	33.4		31.4	207	34.4		39.3	177	20.2		49.9	260	03.0		05.6
3	59	38.4	232	33.0		32.6	222	35.4		39.9	192	22.2		50.0	275	05.2		05.5
4	74	40.9	247	32.6		33.9	237	36.3		40.6	207	24.1		50.1	290	07.5		05.5
5	89	43.3	262	32.2	-1	35.1	252	37.2	-6	41.2	222	26.1	-16	50.3	305	09.7	+15	05.4
6	104	45.8	277	31.8	-1	36.4	267	38.1	-6	41.9	237	28.1	-16	50.4	320	11.9	+15	05.3
7	119	48.3	292	31.4		37.6	282	39.1		42.5	252	30.1		50.5	335	14.2		05.2
8	134	50.7	307	31.0		38.9	297	40.0		43.2	267	32.0		50.7	350	16.4		05.2
9	149	53.2	322	30.7		40.1	312	40.9		43.8	282	34.0		50.8	5	18.6		05.1
10	164	55.7	337	30.3		41.4	327	41.9		44.5	297	36.0		51.0	20	20.8		05.0
11	179	58.1	352	29.9	-1	42.6	342	42.8	-6	45.1	312	37.9	-16	51.1	35	23.1	+15	04.9
12	195	00.6	7	29.5	-1	43.9	357	43.7	-6	45.8	327	39.9	-16	51.2	50	25.3	+15	04.9
13	210	03.1	22	29.1		45.1	12	44.7		46.4	342	41.9		51.4	65	27.5		04.8
14	225	05.5	37	28.7		46.4	27	45.6		47.0	357	43.8		51.5	80	29.7		04.7
15	240	08.0	52	28.3		47.6	42	46.5		47.7	12	45.8		51.7	95	32.0		04.7
16	255	10.4	67	27.9		48.9	57	47.4		48.3	27	47.8		51.8	110	34.2		04.6
17	270	12.9	82	27.5	-1	50.2	72	48.4	-6	49.0	42	49.8	-16	51.9	125	36.4	+15	04.5
18	285	15.4	97	27.1	-1	51.4	87	49.3	-6	49.6	57	51.7	-16	52.1	140	38.6	+15	04.4
19	300	17.8	112	26.7		52.7	102	50.2		50.3	72	53.7		52.2	155	40.9		04.4
20	315	20.3	127	26.3		53.9	117	51.2		50.9	87	55.7		52.3	170	43.1		04.3
21	330	22.8	142	25.9		55.2	132	52.1		51.6	102	57.6		52.5	185	45.3		04.2
22	345	25.2	157	25.5		56.4	147	53.0		52.2	117	59.6		52.6	200	47.6		04.2
23	0	27.7	172	25.1		57.7	162	53.9		52.9	133	01.6		52.8	215	49.8		04.1
24	15	30.2	187	24.7	-1	58.9	177	54.9	-6	53.5	148	03.5	-16	52.9	230	52.0	+15	04.0
Dif	—		-4		-13		+9		-6		+20		-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 47 ^m 9			Edad: 14 ^d 5 PHE { SD: 16:7 PMG: **h **m													
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°		
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	m		
0	183	00.0	-5 21.8	5	20.4	+5 59.4	179	60 N	17 15	17 57	18 45	16 58	0	6 48	111		
1	198	00.1	22.7	19	49.1	+6 17.3	179	58	18	57	42	17 04	4	43	106		
2	213	00.3	23.7	34	17.7	35.2	179	56	20	57	40	09	9	39	102		
3	228	00.5	24.6	48	46.3	+6 53.1	179	54	22	58	38	14	13	36	97		
4	243	00.7	25.6	63	14.9	+7 10.9	178	52	24	58	37	18	16	32	95		
5	258	00.9	-5 26.5	77	43.4	+7 28.6	177	50	17 26	17 58	18 36	17 23	18	6	29	92	
6	273	01.0	-5 27.5	92	11.9	+7 46.3	177	45	17 30	17 59	18 33	17 31	25	6	23	85	
7	288	01.2	28.5	106	40.3	+8 04.0	177	40	33	18 00	32	39	29	17	80		
8	303	01.4	29.4	121	08.7	21.6	176	35	36	01	31	45	34	13	75		
9	318	01.6	30.4	135	37.1	39.2	176	30	39	03	30	17	51	37	09	71	
10	333	01.8	31.3	150	05.4	+8 56.7	175	20	43	05	31	18	01	44	6	02	64
11	348	02.0	-5 32.3	164	33.7	+9 14.1	174	10 N	17 47	18 08	18 33	18 10	49	5	56	58	
12	3	02.1	-5 33.2	179	02.0	+9 31.5	174	0	17 51	18 12	18 36	18 18	54	5	50	53	
13	18	02.3	34.2	193	30.2	+9 48.8	173	10 S	17 55	16	41	26	60	44	48		
14	33	02.5	35.1	207	58.3	+10 06.1	173	20	18 00	22	48	36	65	38	43		
15	48	02.7	36.1	222	26.4	23.2	171	30	05	29	18 57	46	72	32	35		
16	63	02.9	37.1	236	54.5	40.4	172	35	08	33	19 04	52	75	28	32		
17	78	03.0	-5 38.0	251	22.5	+10 57.4	170	40	18 11	18 39	19 11	18 59	80	5	23	28	
18	93	03.2	-5 39.0	265	50.5	+11 14.4	170	45	18 15	18 45	19 21	19 07	85	5	18	23	
19	108	03.4	39.9	280	18.4	31.3	169	50	20	53	33	17	92	12	17		
20	123	03.6	40.9	294	46.3	+11 48.1	168	52	22	18 57	39	22	95	09	14		
21	138	03.8	41.8	309	14.1	+12 04.8	167	54	25	19 01	46	27	99	06	11		
22	153	03.9	42.8	323	41.9	21.5	167	56	28	06	19 53	33	103	5	03	7	
23	168	04.1	43.7	338	09.6	38.0	165	58	31	11	20 02	39	108	4	59	4	
24	183	04.3	-5 44.7	352	37.2	+12 54.5	165	60 S	18 34	19 18	20 12	19 46	114	4	55	**	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO					
	PMG: 22 ^h 54 ^m 2		Mag: -3.9 PMG: 11 ^h 31 ^m			Mag: +1.7 PMG: 12 ^h 08 ^m			Mag: -1.8 PMG: 14 ^h 06 ^m			Mag: +0.6 PMG: 8 ^h 35 ^m					
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec				
h	°	'	°	'	°	°	'	°	°	'	°	°	'	°			
0	15	30.2	187	24.7	-1 58.9	177	54.9	-6 53.5	148	03.5	-16 52.9	230	52.0	+15 04.0			
1	30	32.6	202	24.3	-2 00.2	192	55.8	54.2	163	05.5	53.0	245	54.2	04.0			
2	45	35.1	217	23.9	01.4	207	56.7	54.8	178	07.5	53.2	260	56.5	03.9			
3	60	37.6	232	23.5	02.7	222	57.7	55.5	193	09.4	53.3	275	58.7	03.8			
4	75	40.0	247	23.1	03.9	237	58.6	56.1	208	11.4	53.5	291	00.9	03.7			
5	90	42.5	262	22.7	-2 05.2	252	59.5	-6 56.8	223	13.4	-16 53.6	306	03.2	+15 03.7			
6	105	44.9	277	22.3	-2 06.4	268	00.4	-6 57.4	238	15.3	-16 53.7	321	05.4	+15 03.6			
7	120	47.4	292	22.0	07.7	283	01.4	58.1	253	17.3	53.9	336	07.6	03.5			
8	135	49.9	307	21.6	08.9	298	02.3	58.7	268	19.3	54.0	351	09.8	03.5			
9	150	52.3	322	21.2	10.2	313	03.2	-6 59.4	283	21.2	54.1	6	12.1	03.4			
10	165	54.8	337	20.8	11.4	328	04.1	-7 00.0	298	23.2	54.3	21	14.3	03.3			
11	180	57.3	352	20.4	-2 12.7	343	05.1	-7 00.7	313	25.2	-16 54.4	36	16.5	+15 03.2			
12	195	59.7	7	20.0	-2 14.0	358	06.0	-7 01.3	328	27.1	-16 54.6	51	18.8	+15 03.2			
13	211	02.2	22	19.6	15.2	13	06.9	01.9	343	29.1	54.7	66	21.0	03.1			
14	226	04.7	37	19.2	16.5	28	07.9	02.6	358	31.1	54.8	81	23.2	03.0			
15	241	07.1	52	18.8	17.7	43	08.8	03.2	13	33.0	55.0	96	25.5	03.0			
16	256	09.6	67	18.4	19.0	58	09.7	03.9	28	35.0	55.1	111	27.7	02.9			
17	271	12.0	82	18.0	-2 20.2	73	10.6	-7 04.5	43	37.0	-16 55.3	126	29.9	+15 02.8			
18	286	14.5	97	17.6	-2 21.5	88	11.6	-7 05.2	58	38.9	-16 55.4	141	32.1	+15 02.7			
19	301	17.0	112	17.2	22.7	103	12.5	05.8	73	40.9	55.5	156	34.4	02.7			
20	316	19.4	127	16.8	24.0	118	13.4	06.5	88	42.9	55.7	171	36.6	02.6			
21	331	21.9	142	16.4	25.2	133	14.3	07.1	103	44.8	55.8	186	38.8	02.5			
22	346	24.4	157	16.0	26.5	148	15.3	07.8	118	46.8	55.9	201	41.1	02.5			
23	1	26.8	172	15.6	27.7	163	16.2	08.4	133	48.8	56.1	216	43.3	02.4			
24	16	29.3	187	15.2	-2 29.0	178	17.1	-7 09.1	148	50.7	-16 56.2	231	45.5	+15 02.3			
Dif	—		-4	-13		+9	-6		+20	-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: 15 ^d 5 PHE { 4 ^h : 60'9 12 ^h : 60'8 20 ^h : 60'5 SD: 16'6 PMG: 0 ^h 31 ^m R°: 55 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico		Civil	Hora		R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	183	04.3	-5	44.7	352	37.2	+12	54.5	60 N	4	52	5	40	6	22	16	58
1	198	04.5		45.7	7	04.8	+13	10.9	58	54	40	19	17	08	8	29	109
2	213	04.6		46.6	21	32.4		27.2	56	56	39	17	18	13		21	103
3	228	04.8		47.6	35	59.9		43.5	54	58	39	14	27	17		13	99
4	243	05.0		48.5	50	27.3	+13	59.6	52	4	59	39	12	34	21		07
5	258	05.2	-5	49.5	64	54.7	+14	15.6	50	5	01	5	38	6	10	17	41
6	273	05.4	-5	50.4	79	22.1	+14	31.5	45	5	03	5	37	6	06	17	56
7	288	05.5		51.4	93	49.3	+14	47.4	40	04	36	03	18	08	35		37
8	303	05.7		52.3	108	16.6	+15	03.1	35	05	35	6	00	19	39		28
9	318	05.9		53.3	122	43.7		18.7	30	06	33	5	57	28	43		20
10	333	06.1		54.2	137	10.8		34.2	20	05	31	53	45	47		7	06
11	348	06.2	-5	55.2	151	37.8	+15	49.7	10 N	5	03	5	27	5	48	18	59
12	3	06.4	-5	56.1	166	04.8	+16	05.0	0	4	59	5	24	5	44	19	12
13	18	06.6		57.1	180	31.7		20.2	10 S	54	19	40	26	61		32	51
14	33	06.8		58.0	194	58.6		35.2	20	47	13	36	41	66		21	45
15	48	06.9		59.0	209	25.4	+16	50.2	30	38	06	30	19	58	71		07
16	63	07.1	-5	59.9	223	52.1	+17	05.0	35	31	5	02	20	07	76		6
17	78	07.3	-6	00.9	238	18.8	+17	19.8	40	4	24	4	56	5	24	20	19
18	93	07.5	-6	01.9	252	45.4	+17	34.4	45	4	14	4	50	5	19	20	32
19	108	07.6		02.8	267	12.0	+17	48.9	50	4	02	41	14	49	91		29
20	123	07.8		03.8	281	38.5	+18	03.2	52	3	56	38	12	20	57	94	
21	138	08.0		04.7	296	04.9		17.5	54	49	33	10	21	06	98		17
22	153	08.2		05.7	310	31.2		31.6	56	41	28	07	16	103		10	11
23	168	08.3		06.6	324	57.5		45.6	58	32	23	04	27	109		5	03
24	183	08.5	-6	07.6	339	23.8	+18	59.4	60 S	3	22	4	17	5	00	21	40
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO					
	PMG: 22 ^h 50 ^m 3		Mag: -3.9 PMG: 11 ^h 31 ^m			Mag: +1.6 PMG: 12 ^h 06 ^m			Mag: -1.8 PMG: 14 ^h 03 ^m			Mag: +0.6 PMG: 8 ^h 32 ^m					
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	16	29.3	187	15.2	-2	29.0	178	17.1	-7	09.1	148	50.7	-16	56.2	231	45.5	
1	31	31.8	202	14.8		30.2	193	18.0		09.7	163	52.7		56.4	246	47.8	
2	46	34.2	217	14.4		31.5	208	19.0		10.3	178	54.7		56.5	261	50.0	
3	61	36.7	232	14.0		32.7	223	19.9		11.0	193	56.6		56.6	276	52.2	
4	76	39.2	247	13.6		34.0	238	20.8		11.6	208	58.6		56.8	291	54.5	
5	91	41.6	262	13.2	-2	35.2	253	21.7	-7	12.3	224	00.6	-16	56.9	306	56.7	
6	106	44.1	277	12.8	-2	36.5	268	22.7	-7	12.9	239	02.5	-16	57.1	321	58.9	
7	121	46.5	292	12.4		37.7	283	23.6		13.6	254	04.5		57.2	337	01.2	
8	136	49.0	307	12.0		39.0	298	24.5		14.2	269	06.4		57.3	352	03.4	
9	151	51.5	322	11.6		40.2	313	25.4		14.9	284	08.4		57.5	7	05.6	
10	166	53.9	337	11.2		41.5	328	26.4		15.5	299	10.4		57.6	22	07.8	
11	181	56.4	352	10.8	-2	42.7	343	27.3	-7	16.2	314	12.3	-16	57.8	37	10.1	
12	196	58.9	7	10.4	-2	44.0	358	28.2	-7	16.8	329	14.3	-16	57.9	52	12.3	
13	212	01.3	22	10.0		45.2	13	29.1		17.5	344	16.3		58.0	67	14.5	
14	227	03.8	37	09.6		46.5	28	30.0		18.1	359	18.2		58.2	82	16.8	
15	242	06.3	52	09.2		47.8	43	31.0		18.7	14	20.2		58.3	97	19.0	
16	257	08.7	67	08.8		49.0	58	31.9		19.4	29	22.2		58.4	112	21.2	
17	272	11.2	82	08.4	-2	50.3	73	32.8	-7	20.0	44	24.1	-16	58.6	127	23.5	
18	287	13.6	97	08.0	-2	51.5	88	33.7	-7	20.7	59	26.1	-16	58.7	142	25.7	
19	302	16.1	112	07.6		52.8	103	34.7		21.3	74	28.0		58.9	157	27.9	
20	317	18.6	127	07.2		54.0	118	35.6		22.0	89	30.0		59.0	172	30.2	
21	332	21.0	142	06.8		55.3	133	36.5		22.6	104	32.0		59.1	187	32.4	
22	347	23.5	157	06.4		56.5	148	37.4		23.3	119	33.9		59.3	202	34.6	
23	2	26.0	172	06.0		57.8	163	38.3		23.9	134	35.9		59.4	217	36.9	
24	17	28.4	187	05.6	-2	59.0	178	39.3	-7	24.5	149	37.9	-16	59.6	232	39.1	
Dif	—		-4	-13	+9		-6	+20		-1	+22		-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 47 ^m 3			Edad: 16 ^d 5 PHE SD: 16:5 PMG: 1 ^h 26 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m			
0	183	08.5	-6	07.6	339	23.8	+18 59.4	60 N	17 09	17 51	18 39	16 59	6	10 34	117			
1	198	08.7		08.5	353	50.0	+19 13.2 ¹³⁸	58	12	52	37	17 16	15	18	107			
2	213	08.9		09.5	8	16.1	71 26.7 ¹³⁵	56	15	52	35	31	21	10 04	10			
3	228	09.0		10.4	22	42.1	70 40.2 ¹³⁵	54	17	53	34	44	26	9 52	96			
4	243	09.2		11.4	37	08.1	70 +19 53.5 ¹³³	52	20	53	32	17 55	29	42	92			
5	258	09.4	-6	12.3	51	34.1	70 +20 06.7 ¹³²	50	17 22	17 54	18 31	18 05	32	9 32	89			
6	273	09.6	-6	13.3	65	59.9	68 +20 19.7 ¹³⁰	45	17 26	17 56	18 29	18 26	38	9 13	82			
7	288	09.7		14.2	80	25.7	68 32.6 ¹²⁹	40	30	57	28	43	42	8 57	78			
8	303	09.9		15.2	94	51.5	68 45.4 ¹²⁸	35	33	17 59	28	18 58	45	43	75			
9	318	10.1		16.1	109	17.2	67 +20 58.0 ¹²⁶	30	36	18 00	28	19 11	47	32	71			
10	333	10.2		17.1	123	42.8	66 +21 10.4 ¹²⁴	20	41	04	29	32	53	8 12	66			
11	348	10.4	-6	18.0	138	08.3	65 +21 22.7 ¹²³	10 N	17 46	18 07	18 32	19 51	56	7 55	62			
12	3	10.6	-6	19.0	152	33.9	66 +21 34.9 ¹²²	0	17 51	18 11	18 36	20 09	59	7 39	58			
13	18	10.8		19.9	166	59.3	64 46.9 ¹²⁰	10 S	17 55	16	41	27	63	23	55			
14	33	10.9		20.9	181	24.7	64 +21 58.8 ¹¹⁹	20	18 00	22	48	20 47	66	7 06	50			
15	48	11.1		21.8	195	50.0	63 +22 10.5 ¹¹⁷	30	06	30	18 59	21 09	71	6 47	45			
16	63	11.3		22.8	210	15.3	63 22.0 ¹¹⁵	35	09	35	19 05	23	72	36	42			
17	78	11.4	-6	23.7	224	40.5	62 +22 33.4 ¹¹⁴	40	18 13	18 41	19 14	21 38	76	6 23	38			
18	93	11.6	-6	24.7	239	05.7	62 +22 44.7 ¹¹³	45	18 18	18 48	19 24	21 57	79	6 08	34			
19	108	11.8		25.6	253	30.8	61 +22 55.7 ¹¹⁰	50	23	18 57	37	22 20	85	5 50	27			
20	123	12.0		26.6	267	55.9	61 +23 06.7 ¹¹⁰	52	26	19 01	43	31	88	41	25			
21	138	12.1		27.5	282	20.9	60 17.4 ¹⁰⁷	54	29	05	50	44	92	32	20			
22	153	12.3		28.5	296	45.8	59 28.0 ¹⁰⁶	56	32	10	19 58	22 59	96	21	16			
23	168	12.5		29.4	311	10.7	59 38.4 ¹⁰⁴	58	35	16	20 08	23 16	104	5 09	10			
24	183	12.6	-6	30.3	325	35.6	59 +23 48.7 ¹⁰³	60 S	18 39	19 23	20 19	23 37	116	4 54	3			
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG 22 ^h 46 ^m 4		Mag: -3.9 PMG: 11 ^h 32 ^m			Mag: +1.6 PMG: 12 ^h 05 ^m			Mag: -1.8 PMG: 14 ^h 00 ^m			Mag: +0.6 PMG: 8 ^h 28 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	17	28.4	187	05.6	-2	59.0	178	39.3	-7	24.5	149	37.9	-16	59.6	232	39.1	+15	00.6
1	32	30.9	202	05.2	-3	00.3	193	40.2		25.2	164	39.8		59.7	247	41.3		00.6
2	47	33.4	217	04.8		01.5	208	41.1		25.8	179	41.8	-16	59.8	262	43.6		00.5
3	62	35.8	232	04.4		02.8	223	42.0		26.5	194	43.7	-17	00.0	277	45.8		00.4
4	77	38.3	247	04.0		04.0	238	43.0		27.1	209	45.7	-17	00.1	292	48.0		00.4
5	92	40.8	262	03.6	-3	05.3	253	43.9	-7	27.8	224	47.7	-17	00.2	307	50.3	+15	00.3
6	107	43.2	277	03.2	-3	06.5	268	44.8	-7	28.4	239	49.6	-17	00.4	322	52.5	+15	00.2
7	122	45.7	292	02.8		07.8	283	45.7		29.1	254	51.6		00.5	337	54.8		00.2
8	137	48.1	307	02.4		09.0	298	46.6		29.7	269	53.6		00.7	352	57.0	+15	00.1
9	152	50.6	322	02.0		10.3	313	47.6		30.3	284	55.5		00.8	7	59.2	+15	00.0
10	167	53.1	337	01.6		11.5	328	48.5		31.0	299	57.5		00.9	23	01.5	+15	00.0
11	182	55.5	352	01.2	-3	12.8	343	49.4	-7	31.6	314	59.4	-17	01.1	38	03.7	+14	59.9
12	197	58.0	7	00.8	-3	14.0	358	50.3	-7	32.3	330	01.4	-17	01.2	53	05.9	+14	59.8
13	213	00.5	22	00.4		15.3	13	51.2		32.9	345	03.4		01.4	68	08.2		59.7
14	228	02.9	37	00.0		16.5	28	52.2		33.6	0	05.3		01.5	83	10.4		59.7
15	243	05.4	51	59.6		17.8	43	53.1		34.2	15	07.3		01.6	98	12.6		59.6
16	258	07.9	66	59.2		19.0	58	54.0		34.9	30	09.2		01.8	113	14.9		59.5
17	273	10.3	81	58.8	-3	20.3	73	54.9	-7	35.5	45	11.2	-17	01.9	128	17.1	+14	59.5
18	288	12.8	96	58.4	-3	21.5	88	55.8	-7	36.1	60	13.2	-17	02.1	143	19.3	+14	59.4
19	303	15.3	111	58.0		22.8	103	56.8		36.8	75	15.1		02.2	158	21.6		59.3
20	318	17.7	126	57.6		24.0	118	57.7		37.4	90	17.1		02.3	173	23.8		59.3
21	333	20.2	141	57.2		25.2	133	58.6		38.1	105	19.0		02.5	188	26.1		59.2
22	348	22.6	156	56.8		26.5	148	59.5		38.7	120	21.0		02.6	203	28.3		59.1
23	3	25.1	171	56.4		27.7	164	00.4		39.4	135	23.0		02.7	218	30.5		59.1
24	18	27.6	186	55.9	-3	29.0	179	01.3	-7	40.0	150	24.9	-17	02.9	233	32.8	+14	59.0
Dif	—		-4		-12		+9		-6		+20		-1		+22		-1	

ALMANAQUE NÁUTICO PERSEUS

UT	SOL		☾ LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna					
	SD: 16'0		Edad: 18 ^d 5 PHE { 4 ^h : 58'5 12 ^h : 58'2 20 ^h : 57'9															
	PMG: 11 ^h 46 ^m 8		SD: 16'0 PMG: 3 ^h 23 ^m R°: 59 ^m															
	hG ☉	Dec	hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°				
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m				
0	183	16.6	-6 53.0	311	20.3	+27 03.3	50	60 N	17 03	17 45	18 33	17 24 53	14 18 71					
1	198	16.8	54.0	325	44.3	09.2	59	58	07	46	31	18 01 56	13 40 68					
2	213	17.0	54.9	340	08.4	14.9	57	56	10	47	30	28 57	13 14 66					
3	228	17.1	55.9	354	32.4	20.4	55	54	13	48	29	18 49 57	12 53 66					
4	243	17.3	56.8	8	56.4	25.7	53	52	15	49	28	19 07 57	36 64					
5	258	17.4	-6 57.8	23	20.4	+27 30.9	52	50	17 18	17 50	18 27	19 22 58	12 21 64					
6	273	17.6	-6 58.7	37	44.4	+27 35.8	49	45	17 23	17 52	18 26	19 52 59	11 51 63					
7	288	17.8	-6 59.7	52	08.4	40.6	48	40	27	54	25	20 16 59	27 63					
8	303	17.9	-7 00.6	66	32.4	45.2	46	35	31	56	25	36 58	11 08 62					
9	318	18.1	01.5	80	56.5	49.6	44	30	34	17 58	26	20 52 59	10 51 62					
10	333	18.3	02.5	95	20.5	53.8	42	20	40	18 02	28	21 21 59	10 23 61					
11	348	18.4	-7 03.4	109	44.5	+27 57.8	40	10 N	17 45	18 06	18 31	21 45 59	9 59 61					
12	3	18.6	-7 04.4	124	08.5	+28 01.7	39	0	17 50	18 11	18 35	22 08 59	9 37 60					
13	18	18.7	05.3	138	32.6	05.4	37	10 S	17 55	16	41	31 58	9 15 59					
14	33	18.9	06.2	152	56.6	08.9	35	20	18 01	23	18 49	22 56 58	8 51 58					
15	48	19.1	07.2	167	20.7	12.2	33	30	07	32	19 00	23 25 57	23 57					
16	63	19.2	08.1	181	44.8	15.3	31	35	11	37	07	23 42 57	8 07 56					
17	78	19.4	-7 09.1	196	08.9	+28 18.2	29	40	18 15	18 43	19 16	** ** *	7 48 55					
18	93	19.5	-7 10.0	210	33.0	+28 21.0	28	45	18 20	18 51	19 27	** ** *	7 25 53					
19	108	19.7	11.0	224	57.2	23.5	25	50	26	19 00	40	** ** *	6 55 52					
20	123	19.9	11.9	239	21.4	25.9	24	52	29	04	47	** ** *	41 50					
21	138	20.0	12.8	253	45.6	28.1	22	54	32	09	19 55	0 16 76	24 48					
22	153	20.2	13.8	268	09.8	30.2	21	56	36	15	20 03	0 35 79	6 04 46					
23	168	20.3	14.7	282	34.1	32.0	18	58	40	21	13	1 00 83	5 39 42					
24	183	20.5	-7 15.7	296	58.4	+28 33.7	17	60 S	18 44	19 28	20 25	1 33 94	5 06 31					
UT	ARIES		VENUS		MARTE		JÚPITER			SATURNO								
	PMG 22 ^h 38 ^m 5	Mag: -3.9 PMG: 11 ^h 33 ^m	Mag: +1.6 PMG: 12 ^h 02 ^m	Mag: -1.8 PMG: 13 ^h 53 ^m	Mag: +0.6 PMG: 8 ^h 21 ^m													
	hG ♈	hG ♀	hG ♂	hG ♃	hG ♄													
h	°	'	°	'	°	'												
0	19	26.7	186	46.2	-3	58.9	179	23.3	-7	55.4	151	11.9	-17	06.2	234	26.5	+14	57.4
1	34	29.2	201	45.8	-4	00.2	194	24.3		56.1	166	13.9		06.4	249	28.7		57.3
2	49	31.6	216	45.4		01.4	209	25.2		56.7	181	15.8		06.5	264	31.0		57.2
3	64	34.1	231	45.0		02.7	224	26.1		57.3	196	17.8		06.6	279	33.2		57.2
4	79	36.6	246	44.6		03.9	239	27.0		58.0	211	19.7		06.8	294	35.4		57.1
5	94	39.0	261	44.2	-4	05.2	254	27.9	-7	58.6	226	21.7	-17	06.9	309	37.7	+14	57.0
6	109	41.5	276	43.8	-4	06.4	269	28.8	-7	59.3	241	23.7	-17	07.0	324	39.9	+14	56.9
7	124	44.0	291	43.4		07.6	284	29.7	-7	59.9	256	25.6		07.2	339	42.2		56.9
8	139	46.4	306	42.9		08.9	299	30.6	-8	00.5	271	27.6		07.3	354	44.4		56.8
9	154	48.9	321	42.5		10.1	314	31.6		01.2	286	29.5		07.5	9	46.6		56.7
10	169	51.4	336	42.1		11.4	329	32.5		01.8	301	31.5		07.6	24	48.9		56.7
11	184	53.8	351	41.7	-4	12.6	344	33.4	-8	02.5	316	33.4	-17	07.7	39	51.1	+14	56.6
12	199	56.3	6	41.3	-4	13.9	359	34.3	-8	03.1	331	35.4	-17	07.9	54	53.4	+14	56.5
13	214	58.7	21	40.9		15.1	14	35.2		03.7	346	37.3		08.0	69	55.6		56.5
14	230	01.2	36	40.5		16.4	29	36.1		04.4	1	39.3		08.2	84	57.8		56.4
15	245	03.7	51	40.1		17.6	44	37.0		05.0	16	41.3		08.3	100	00.1		56.3
16	260	06.1	66	39.7		18.8	59	38.0		05.7	31	43.2		08.4	115	02.3		56.3
17	275	08.6	81	39.3	-4	20.1	74	38.9	-8	06.3	46	45.2	-17	08.6	130	04.6	+14	56.2
18	290	11.1	96	38.8	-4	21.3	89	39.8	-8	06.9	61	47.1	-17	08.7	145	06.8	+14	56.1
19	305	13.5	111	38.4		22.6	104	40.7		07.6	76	49.1		08.9	160	09.1		56.1
20	320	16.0	126	38.0		23.8	119	41.6		08.2	91	51.0		09.0	175	11.3		56.0
21	335	18.5	141	37.6		25.1	134	42.5		08.9	106	53.0		09.1	190	13.5		55.9
22	350	20.9	156	37.2		26.3	149	43.4		09.5	121	54.9		09.3	205	15.8		55.9
23	5	23.4	171	36.8		27.5	164	44.3		10.1	136	56.9		09.4	220	18.0		55.8
24	20	25.9	186	36.4	-4	28.8	179	45.2	-8	10.8	151	58.8	-17	09.5	235	20.3	+14	55.7
Dif	—		-4		-12		+9		-6		+20		-1		+22		-	

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'0 PMG: 11 ^h 46 ^m 5			Edad: 19 ^d 5 PHE { 4 ^h : 57/6 12 ^h : 57/2 20 ^h : 56/9 PMG: 4 ^h 22 ^m R°: 58 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	183	20.5	-7	15.7	296	58.4	+28	33.7	60 N	5 01	5 49	6 31	18 17	89	15	29	27
1	198	20.7		16.6	311	22.7		35.2	58		03	48	28	18 57	80	14 48	37
2	213	20.8		17.5	325	47.1		36.5	56		04	47	25	19 25	75	14 20	42
3	228	21.0		18.5	340	11.5		37.6	54		05	46	22	19 46	73	13 59	44
4	243	21.1		19.4	354	36.0		38.5	52		06	45	19	20 04	71	40	46
5	258	21.3	-7	20.4	9	00.5	+28	39.3	50	5 07	5 44	6 17	20 20	68	13 25	47	
6	273	21.5	-7	21.3	23	25.1	+28	39.9	45	5 08	5 42	6 11	20 51	65	12 54	50	
7	288	21.6		22.2	37	49.7		40.3	40		08	40	07	21 15	63	30	51
8	303	21.8		23.2	52	14.3		40.6	35		08	38	03	34	62	12	10 53
9	318	21.9		24.1	66	39.0		40.6	30		08	36	6 00	21 51	61	11 53	54
10	333	22.1		25.1	81	03.7		40.5	20		06	32	5 54	22 20	58	24	55
11	348	22.2	-7	26.0	95	28.6	+28	40.2	10 N	5 03	5 27	5 48	22 44	57	11 00	56	
12	3	22.4	-7	26.9	109	53.4	+28	39.8	0	4 58	5 22	5 43	23 07	55	10 37	57	
13	18	22.6		27.9	124	18.3		39.2	10 S		52	17	38	29	54	10	14 58
14	33	22.7		28.8	138	43.3		38.4	20		44	10	32	23 54	51	9 49	59
15	48	22.9		29.7	153	08.4		37.4	30		33	5 01	26	** ** *	**	20	60
16	63	23.0		30.7	167	33.5		36.2	35		26	4 56	22	** ** *	**	9 03	61
17	78	23.2	-7	31.6	181	58.7	+28	34.9	40	4 17	4 50	5 17	0 02	57	8 43	61	
18	93	23.3	-7	32.6	196	23.9	+28	33.5	45	4 06	4 42	5 12	0 26	57	8 18	63	
19	108	23.5		33.5	210	49.2		31.8	50	3 52	33	06	0 58	55	7 47	64	
20	123	23.6		34.4	225	14.6		30.0	52		45	28	03	1 13	55	31	65
21	138	23.8		35.4	239	40.1		28.0	54		38	23	5 00	32	54	7 12	66
22	153	23.9		36.3	254	05.6		25.9	56		29	17	4 56	1 54	53	6 50	67
23	168	24.1		37.2	268	31.2		23.6	58		19	11	53	2 23	51	6 21	70
24	183	24.3	-7	38.2	282	56.9	+28	21.1	60 S	3 07	4 04	4 48	3 07	45	5 37	76	

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 22 ^h 34 ^m 6		Mag: -4.0 PMG: 11 ^h 34 ^m			Mag: +1.6 PMG: 12 ^h 00 ^m			Mag: -1.8 PMG: 13 ^h 50 ^m			Mag: +0.6 PMG: 8 ^h 17 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	20	25.9	186	36.4	-4	28.8	179	45.2	-8	10.8	151	58.8	-17	09.5	235	20.3	+14	55.7
1	35	28.3	201	36.0		30.0	194	46.2		11.4	167	00.8		09.7	250	22.5		55.7
2	50	30.8	216	35.6		31.3	209	47.1		12.1	182	02.8		09.8	265	24.8		55.6
3	65	33.2	231	35.1		32.5	224	48.0		12.7	197	04.7		10.0	280	27.0		55.5
4	80	35.7	246	34.7		33.8	239	48.9		13.3	212	06.7		10.1	295	29.2		55.5
5	95	38.2	261	34.3	-4	35.0	254	49.8	-8	14.0	227	08.6	-17	10.2	310	31.5	+14	55.4
6	110	40.6	276	33.9	-4	36.2	269	50.7	-8	14.6	242	10.6	-17	10.4	325	33.7	+14	55.3
7	125	43.1	291	33.5		37.5	284	51.6		15.3	257	12.5		10.5	340	36.0		55.3
8	140	45.6	306	33.1		38.7	299	52.5		15.9	272	14.5		10.7	355	38.2		55.2
9	155	48.0	321	32.7		40.0	314	53.4		16.5	287	16.4		10.8	10	40.5		55.1
10	170	50.5	336	32.2		41.2	329	54.3		17.2	302	18.4		10.9	25	42.7		55.1
11	185	53.0	351	31.8	-4	42.5	344	55.3	-8	17.8	317	20.3	-17	11.1	40	44.9	+14	55.0
12	200	55.4	6	31.4	-4	43.7	359	56.2	-8	18.5	332	22.3	-17	11.2	55	47.2	+14	54.9
13	215	57.9	21	31.0		44.9	14	57.1		19.1	347	24.2		11.4	70	49.4		54.9
14	231	00.4	36	30.6		46.2	29	58.0		19.7	2	26.2		11.5	85	51.7		54.8
15	246	02.8	51	30.2		47.4	44	58.9		20.4	17	28.1		11.6	100	53.9		54.7
16	261	05.3	66	29.8		48.7	59	59.8		21.0	32	30.1		11.8	115	56.2		54.7
17	276	07.7	81	29.3	-4	49.9	75	00.7	-8	21.7	47	32.1	-17	11.9	130	58.4	+14	54.6
18	291	10.2	96	28.9	-4	51.1	90	01.6	-8	22.3	62	34.0	-17	12.0	146	00.7	+14	54.5
19	306	12.7	111	28.5		52.4	105	02.5		22.9	77	36.0		12.2	161	02.9		54.5
20	321	15.1	126	28.1		53.6	120	03.4		23.6	92	37.9		12.3	176	05.1		54.4
21	336	17.6	141	27.7		54.9	135	04.3		24.2	107	39.9		12.5	191	07.4		54.4
22	351	20.1	156	27.3		56.1	150	05.2		24.8	122	41.8		12.6	206	09.6		54.3
23	6	22.5	171	26.9		57.3	165	06.2		25.5	137	43.8		12.7	221	11.9		54.2
24	21	25.0	186	26.4	-4	58.6	180	07.1	-8	26.1	152	45.7	-17	12.9	236	14.1	+14	54.2
Dif	—		-4 -12			+9 -6			+20 -1			-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 46 ^m 3			Edad: 20 ^d 5 PHE { 4 ^h : 56/6 12 ^h : 56/4 20 ^h : 56/1 PMG: 5 ^h 20 ^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	183	24.3	-7 38.2	282	56.9	+28 21.1	26	60 N	16 57	17 39	18 27	19 46 100	15 56 9	
1	198	24.4		297	22.6	18.5	26	58	17 01	41	26	20 17 90	25 18	
2	213	24.6	40.0	311	48.5	15.7	28	56	05	42	25	40 84	15 02 23	
3	228	24.7	41.0	326	14.4	12.8	29	54	08	44	24	20 59 80	14 43 27	
4	243	24.9	41.9	340	40.4	09.7	31	52	11	45	24	21 15 76	26 31	
5	258	25.0	-7 42.9	355	06.5	+28 06.4	33	50	17 13	17 46	18 23	21 28 74	14 12 34	
6	273	25.2	-7 43.8	9	32.7	+28 03.0	34	45	17 19	17 49	18 22	21 56 69	13 44 37	
7	288	25.3	44.7	23	58.9	+27 59.5	35	40	24	51	22	22 18 66	21 41	
8	303	25.5	45.7	38	25.3	55.8	37	35	28	53	23	36 63	13 03 43	
9	318	25.6	46.6	52	51.7	51.9	39	30	32	17 56	24	22 52 61	12 47 45	
10	333	25.8	47.5	67	18.2	47.9	40	20	38	18 00	26	23 18 57	12 19 49	
11	348	25.9	-7 48.5	81	44.8	+27 43.7	42	10 N	17 44	18 05	18 30	23 41 54	11 56 51	
12	3	26.1	-7 49.4	96	11.5	+27 39.4	43	0	17 50	18 10	18 35	** ** *	11 34 53	
13	18	26.2	50.3	110	38.3	34.9	45	10 S	17 55	16	41	** ** *	11 12 55	
14	33	26.4	51.3	125	05.2	30.3	46	20	18 01	24	18 50	** ** *	10 48 58	
15	48	26.5	52.2	139	32.2	25.5	48	30	09	33	19 02	0 22 49	20 61	
16	63	26.7	53.1	153	59.3	20.6	49	35	13	39	09	39 48	10 04 63	
17	78	26.8	-7 54.1	168	26.4	+27 15.6	50	40	18 17	18 45	19 18	0 59 45	9 44 66	
18	93	27.0	-7 55.0	182	53.7	+27 10.4	52	45	18 23	18 53	19 30	1 23 43	9 21 68	
19	108	27.1	55.9	197	21.1	+27 05.1	53	50	30	19 03	44	1 53 39	8 51 72	
20	123	27.3	56.9	211	48.5	+26 59.6	55	52	33	08	51	2 08 37	36 75	
21	138	27.4	57.8	226	16.1	54.0	56	54	36	13	19 59	26 34	8 18 78	
22	153	27.6	58.7	240	43.7	48.3	57	56	40	19	20 09	2 47 31	7 57 82	
23	168	27.7	-7 59.7	255	11.5	42.4	59	58	44	26	19	3 14 25	7 31 88	
24	183	27.9	-8 00.6	269	39.3	+26 36.4	60	60 S	18 49	19 34	20 32	3 52 13	6 53 99	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 22 ^h 30 ^m 6		Mag: -4.0 PMG: 11 ^h 35 ^m			Mag: +1.6 PMG: 11 ^h 59 ^m			Mag: -1.8 PMG: 13 ^h 47 ^m			Mag: +0.6 PMG: 8 ^h 14 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'
0	21	25.0	186	26.4	-4 58.6	180	07.1	-8 26.1	152	45.7	-17 12.9	236	14.1	+14 54.2
1	36	27.5	201	26.0	-4 59.8	195	08.0	26.8	167	47.7	13.0	251	16.4	54.1
2	51	29.9	216	25.6	-5 01.1	210	08.9	27.4	182	49.6	13.2	266	18.6	54.0
3	66	32.4	231	25.2	02.3	225	09.8	28.0	197	51.6	13.3	281	20.9	54.0
4	81	34.9	246	24.8	03.5	240	10.7	28.7	212	53.5	13.4	296	23.1	53.9
5	96	37.3	261	24.4	-5 04.8	255	11.6	-8 29.3	227	55.5	-17 13.6	311	25.4	+14 53.8
6	111	39.8	276	23.9	-5 06.0	270	12.5	-8 29.9	242	57.4	-17 13.7	326	27.6	+14 53.8
7	126	42.2	291	23.5	07.2	285	13.4	30.6	257	59.4	13.9	341	29.8	53.7
8	141	44.7	306	23.1	08.5	300	14.3	31.2	273	01.3	14.0	356	32.1	53.6
9	156	47.2	321	22.7	09.7	315	15.2	31.9	288	03.3	14.1	11 34.3	53.6	
10	171	49.6	336	22.3	11.0	330	16.1	32.5	303	05.2	14.3	26 36.6	53.5	
11	186	52.1	351	21.8	-5 12.2	345	17.0	-8 33.1	318	07.2	-17 14.4	41 38.8	+14 53.4	
12	201	54.6	6	21.4	-5 13.4	0	17.9	-8 33.8	333	09.1	-17 14.5	56 41.1	+14 53.4	
13	216	57.0	21	21.0	14.7	15	18.8	34.4	348	11.1	14.7	71 43.3	53.3	
14	231	59.5	36	20.6	15.9	30	19.7	35.0	3	13.0	14.8	86 45.6	53.2	
15	247	02.0	51	20.2	17.1	45	20.7	35.7	18	15.0	15.0	101 47.8	53.2	
16	262	04.4	66	19.8	18.4	60	21.6	36.3	33	16.9	15.1	116 50.1	53.1	
17	277	06.9	81	19.3	-5 19.6	75	22.5	-8 37.0	48	18.9	-17 15.2	131 52.3	+14 53.0	
18	292	09.3	96	18.9	-5 20.9	90	23.4	-8 37.6	63	20.8	-17 15.4	146 54.6	+14 53.0	
19	307	11.8	111	18.5	22.1	105	24.3	38.2	78	22.8	15.5	161 56.8	52.9	
20	322	14.3	126	18.1	23.3	120	25.2	38.9	93	24.7	15.7	176 59.1	52.8	
21	337	16.7	141	17.7	24.6	135	26.1	39.5	108	26.7	15.8	192 01.3	52.8	
22	352	19.2	156	17.2	25.8	150	27.0	40.1	123	28.6	15.9	207 03.6	52.7	
23	7	21.7	171	16.8	27.0	165	27.9	40.8	138	30.6	16.1	222 05.8	52.7	
24	22	24.1	186	16.4	-5 28.3	180	28.8	-8 41.4	153	32.5	-17 16.2	237 08.1	+14 52.6	
Dif	—		-4	-12		+9	-6		+20	-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 0			Edad: 21 ^d 5 PHE { 4 ^h : 55'8 12 ^h : 55'6 20 ^h : 55'4 PMG: 6 ^h 15 ^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	27.9	-8	00.6	269	39.3	+26 36.4	60 N	5 06	5 54	6 36	21 26	96	16 05	2
1	198	28.0		01.5	284	07.3	90 30.3	58	07	53	32	21 47	89	15 43	9
2	213	28.2		02.4	298	35.4	91 24.0	56	08	51	29	22 04	84	25	14
3	228	28.3		03.4	313	03.5	91 17.6	54	09	50	25	19	80	15	10
4	243	28.5		04.3	327	31.8	93 11.1	52	09	49	23	31	77	14	57
5	258	28.6	-8	05.2	342	00.1	93 +26 04.5	50	5 10	5 47	6 20	22 42	74	14	46
6	273	28.7	-8	06.2	356	28.6	95 +25 57.7	45	5 10	5 44	6 14	23 05	69	14	21
7	288	28.9		07.1	10	57.2	96 50.8	40	10	42	09	24	65	14	02
8	303	29.0		08.0	25	25.8	96 43.8	35	10	39	05	39	62	13	46
9	318	29.2		09.0	39	54.6	98 36.6	30	09	37	6 01	23 53	58	32	38
10	333	29.3		09.9	54	23.5	99 29.4	20	07	32	5 54	** ** *	**	13	08
11	348	29.5	-8	10.8	68	52.5	100 +25 22.0	10 N	5 03	5 27	5 48	** ** *	**	12	47
12	3	29.6	-8	11.8	83	21.5	100 +25 14.5	0	4 58	5 22	5 43	0 02	51	12	27
13	18	29.8		12.7	97	50.7	102 +25 06.8	10 S	51	16	37	23	48	12	07
14	33	29.9		13.6	112	20.0	103 +24 59.1	20	42	5 08	31	0 45	45	11	46
15	48	30.1		14.5	126	49.4	104 51.2	30	30	4 59	23	1 11	42	21	60
16	63	30.2		15.5	141	18.9	105 43.3	35	23	53	19	27	39	11	07
17	78	30.3	-8	16.4	155	48.5	106 +24 35.2	40	4 13	4 47	5 14	1 44	36	10	50
18	93	30.5	-8	17.3	170	18.2	107 +24 27.0	45	4 02	4 38	5 09	2 06	32	10	29
19	108	30.6		18.3	184	48.0	108 18.7	50	3 47	28	5 02	32	28	10	03
20	123	30.8		19.2	199	17.9	109 10.3	52	40	23	4 59	2 45	25	9	51
21	138	30.9		20.1	213	47.9	110 +24 01.8	54	32	18	55	3 00	22	36	81
22	153	31.1		21.0	228	18.0	111 +23 53.2	56	23	12	51	18	17	9	19
23	168	31.2		22.0	242	48.2	112 44.5	58	3 12	4 05	47	3 39	12	8	59
24	183	31.3	-8	22.9	257	18.5	113 +23 35.6	60 S	2 59	3 57	4 42	4 05	4	8	32

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 22 ^h 26 ^m 7		Mag: -4.0 PMG: 11 ^h 35 ^m		Mag: +1.6 PMG: 11 ^h 57 ^m		Mag: -1.8 PMG: 13 ^h 44 ^m		Mag: +0.6 PMG: 8 ^h 10 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	22	24.1	186	16.4	-5	28.3	180	28.8	-8	41.4
1	37	26.6	201	16.0		29.5	195	29.7		42.0
2	52	29.1	216	15.5		30.7	210	30.6		42.7
3	67	31.5	231	15.1		32.0	225	31.5		43.3
4	82	34.0	246	14.7		33.2	240	32.4		43.9
5	97	36.5	261	14.3	-5	34.4	255	33.3	-8	44.6
6	112	38.9	276	13.9	-5	35.7	270	34.2	-8	45.2
7	127	41.4	291	13.4		36.9	285	35.1		45.9
8	142	43.8	306	13.0		38.1	300	36.0		46.5
9	157	46.3	321	12.6		39.4	315	36.9		47.1
10	172	48.8	336	12.2		40.6	330	37.8		47.8
11	187	51.2	351	11.7	-5	41.8	345	38.7	-8	48.4
12	202	53.7	6	11.3	-5	43.1	0	39.6	-8	49.0
13	217	56.2	21	10.9		44.3	15	40.5		49.7
14	232	58.6	36	10.5		45.5	30	41.4		50.3
15	248	01.1	51	10.1		46.8	45	42.3		50.9
16	263	03.6	66	09.6		48.0	60	43.2		51.6
17	278	06.0	81	09.2	-5	49.2	75	44.1	-8	52.2
18	293	08.5	96	08.8	-5	50.5	90	45.0	-8	52.8
19	308	11.0	111	08.4		51.7	105	45.9		53.5
20	323	13.4	126	07.9		52.9	120	46.8		54.1
21	338	15.9	141	07.5		54.2	135	47.7		54.7
22	353	18.3	156	07.1		55.4	150	48.6		55.4
23	8	20.8	171	06.6		56.6	165	49.5		56.0
24	23	23.3	186	06.2	-5	57.9	180	50.4	-8	56.6
Dif	—		-4		-12		+9		-6	
								+19		-1
									+23	
										-1

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna				
	SD: 16'0 PMG: 11 ^h 45 ^m 8			Edad: 22 ^d 5 PHE { 4 ^h : 55'2 12 ^h : 55'0 20 ^h : 54'8 SD: 15'1 PMG: 7 ^h 05 ^m R°: 45 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec			Dif		Civil	Náutico	Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m m	h m m	h m m	h m m			
0	183	31.3	-8	22.9	257	18.5	+23	35.6	60 N	16 52	17 34	18 22	23 02 90	16 07 1				
1	198	31.5		23.8	271	48.9 ¹¹⁴		26.7 ⁸⁹	58	16 56	36	21	16 85	15 52 5				
2	213	31.6		24.7	286	19.4 ¹¹⁵		17.7 ⁹⁰	56	17 00	37	20	28 81	39 9				
3	228	31.8		25.7	300	50.1 ¹¹⁷	+23	08.6	54	03	39	20	39 77	28 12				
4	243	31.9		26.6	315	20.8 ¹¹⁷	+22	59.3	52	06	40	19	48 75	18 15				
5	258	32.0	-8	27.5	329	51.6 ¹¹⁸	+22	50.0	50	17 09	17 42	18 19	23 56 73	15 09 18				
6	273	32.2	-8	28.4	344	22.5 ¹¹⁹	+22	40.6	45	17 16	17 45	18 19	** ** *	14 50 23				
7	288	32.3		29.4	358	53.5 ¹²⁰		31.1 ⁹⁵	40	21	48	19	** ** *	35 26				
8	303	32.5		30.3	13	24.6 ¹²¹		21.5 ⁹⁶	35	25	51	20	** ** *	21 30				
9	318	32.6		31.2	27	55.8 ¹²²		11.8 ⁹⁷	30	29	54	21	** ** *	14 10 32				
10	333	32.7		32.1	42	27.1 ¹²³	+22	02.0	20	37	17 59	25	0 15 54	13 50 37				
11	348	32.9	-8	33.1	56	58.5 ¹²⁴	+21	52.1	10 N	17 43	18 04	18 29	0 35 50	13 32 42				
12	3	33.0	-8	34.0	71	30.0 ¹²⁵	+21	42.1	0	17 49	18 10	18 34	0 53 47	13 16 45				
13	18	33.2		34.9	86	01.6 ¹²⁶		32.1 ¹⁰⁰	10 S	17 55	17	41	1 11 43	12 59 49				
14	33	33.3		35.8	100	33.3 ¹²⁷		21.9 ¹⁰²	20	18 02	24	18 51	30 40	42 53				
15	48	33.4		36.8	115	05.1 ¹²⁸		11.7 ¹⁰²	30	10	34	19 03	1 53 35	21 58				
16	63	33.6		37.7	129	37.0 ¹²⁹	+21	01.4 ¹⁰³	35	14	40	11	2 06 32	12 09 61				
17	78	33.7	-8	38.6	144	08.9 ¹²⁹	+20	51.0 ¹⁰⁴	40	18 20	18 47	19 21	2 20 29	11 55 64				
18	93	33.9	-8	39.5	158	41.0 ¹³¹	+20	40.5 ¹⁰⁵	45	18 26	18 56	19 33	2 38 25	11 39 68				
19	108	34.0		40.5	173	13.1 ¹³¹		29.9 ¹⁰⁶	50	33	19 07	48	3 00 20	18 73				
20	123	34.1		41.4	187	45.4 ¹³³		19.3 ¹⁰⁶	52	36	12	19 56	10 18	11 08 76				
21	138	34.3		42.3	202	17.7 ¹³³	+20	08.6 ¹⁰⁷	54	40	18	20 04	22 14	10 57 79				
22	153	34.4		43.2	216	50.1 ¹³⁴	+19	57.8 ¹⁰⁸	56	44	24	14	35 11	44 83				
23	168	34.5		44.2	231	22.6 ¹³⁵		46.9 ¹⁰⁹	58	49	31	25	3 51 6	29 88				
24	183	34.7	-8	45.1	245	55.2 ¹³⁶	+19	36.0 ¹⁰⁹	60 S	18 54	19 39	20 39	4 09 1	10 12 93				
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 22 ^h 22 ^m 8		Mag: -4.0 PMG: 11 ^h 36 ^m			Mag: +1.6 PMG: 11 ^h 56 ^m			Mag: -1.8 PMG: 13 ^h 41 ^m			Mag: +0.6 PMG: 8 ^h 07 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	23	23.3	186	06.2	-5	57.9	180	50.4	-8	56.6	154	19.3	-17	19.5	238	02.1	+14	51.0
1	38	25.7	201	05.8	-5	59.1	195	51.3		57.3	169	21.2		19.7	253	04.3		51.0
2	53	28.2	216	05.4	-6	00.3	210	52.2		57.9	184	23.1		19.8	268	06.6		50.9
3	68	30.7	231	04.9		01.5	225	53.1		58.5	199	25.1		20.0	283	08.8		50.9
4	83	33.1	246	04.5		02.8	240	54.0		59.2	214	27.0		20.1	298	11.1		50.8
5	98	35.6	261	04.1	-6	04.0	255	54.9	-8	59.8	229	29.0	-17	20.2	313	13.3	+14	50.7
6	113	38.1	276	03.7	-6	05.2	270	55.8	-9	00.4	244	30.9	-17	20.4	328	15.6	+14	50.7
7	128	40.5	291	03.2		06.5	285	56.7		01.1	259	32.9		20.5	343	17.8		50.6
8	143	43.0	306	02.8		07.7	300	57.6		01.7	274	34.8		20.7	358	20.1		50.5
9	158	45.5	321	02.4		08.9	315	58.5		02.3	289	36.8		20.8	13	22.3		50.5
10	173	47.9	336	01.9		10.1	330	59.4		03.0	304	38.7		20.9	28	24.6		50.4
11	188	50.4	351	01.5	-6	11.4	346	00.3	-9	03.6	319	40.7	-17	21.1	43	26.8	+14	50.3
12	203	52.8	6	01.1	-6	12.6	1	01.2	-9	04.2	334	42.6	-17	21.2	58	29.1	+14	50.3
13	218	55.3	21	00.7		13.8	16	02.1		04.9	349	44.5		21.4	73	31.3		50.2
14	233	57.8	36	00.2		15.1	31	03.0		05.5	4	46.5		21.5	88	33.6		50.2
15	249	00.2	50	59.8		16.3	46	03.9		06.1	19	48.4		21.6	103	35.8		50.1
16	264	02.7	65	59.4		17.5	61	04.8		06.8	34	50.4		21.8	118	38.1		50.0
17	279	05.2	80	58.9	-6	18.7	76	05.7	-9	07.4	49	52.3	-17	21.9	133	40.4	+14	50.0
18	294	07.6	95	58.5	-6	20.0	91	06.6	-9	08.0	64	54.3	-17	22.0	148	42.6	+14	49.9
19	309	10.1	110	58.1		21.2	106	07.5		08.7	79	56.2		22.2	163	44.9		49.8
20	324	12.6	125	57.6		22.4	121	08.4		09.3	94	58.2		22.3	178	47.1		49.8
21	339	15.0	140	57.2		23.6	136	09.3		09.9	110	00.1		22.5	193	49.4		49.7
22	354	17.5	155	56.8		24.9	151	10.2		10.6	125	02.0		22.6	208	51.6		49.7
23	9	19.9	170	56.4		26.1	166	11.1		11.2	140	04.0		22.7	223	53.9		49.6
24	24	22.4	185	55.9	-6	27.3	181	12.0	-9	11.8	155	05.9	-17	22.9	238	56.1	+14	49.5
Dif	—		-4		-12		+9		-6		+19		-1		+23		-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: 23 ^d 5 PHE { 4 ^h : 54'7 12 ^h : 54'5 20 ^h : 54'4 PMG: 7 ^h 50 ^m R°: 43 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m
0	183	34.7	-8	45.1	245	55.2	+19 36.0	60 N	5 11	5 59	6 41	** ** *	** ** *	16 08	**	
1	198	34.8		46.0	260	27.9 ¹³⁷	24.9 ¹¹¹	58	11	57	37	** ** *	** ** *	15 57	3	
2	213	34.9		46.9	275	00.7 ¹³⁸	13.8 ¹¹¹	56	12	55	33	** ** *	** ** *	48	6	
3	228	35.1		47.8	289	33.5 ¹³⁸	+19 02.7 ¹¹¹	54	12	53	29	** ** *	** ** *	40	9	
4	243	35.2		48.8	304	06.5 ¹⁴⁰	+18 51.4 ¹¹³	52	13	52	26	** ** *	** ** *	33	12	
5	258	35.4	-8	49.7	318	39.5 ¹⁴⁰	+18 40.1 ¹¹³	50	5 13	5 50	6 23	** ** *	** ** *	15 27	13	
6	273	35.5	-8	50.6	333	12.6 ¹⁴¹	+18 28.7 ¹¹⁴	45	5 13	5 47	6 17	0 14	67	15 13	18	
7	288	35.6		51.5	347	45.8 ¹⁴²	17.3 ¹¹⁴	40	12	44	11	29	62	15 01	22	
8	303	35.8		52.4	2	19.1 ¹⁴³	+18 05.8 ¹¹⁵	35	12	41	07	41	59	14 51	26	
9	318	35.9		53.4	16	52.4 ¹⁴³	+17 54.2 ¹¹⁶	30	10	38	6 02	0 51	57	42	29	
10	333	36.0		54.3	31	25.8 ¹⁴⁴	42.5 ¹¹⁷	20	07	33	5 55	1 09	52	27	33	
11	348	36.2	-8	55.2	45	59.3 ¹⁴⁵	+17 30.8 ¹¹⁷	10 N	5 03	5 27	5 48	1 25	47	14 14	37	
12	3	36.3	-8	56.1	60	32.9 ¹⁴⁶	+17 19.0 ¹¹⁸	0	4 57	5 21	5 42	1 40	43	14 01	42	
13	18	36.4		57.0	75	06.6 ¹⁴⁷	+17 07.2 ¹¹⁸	10 S	50	15	36	1 54	40	13 48	46	
14	33	36.6		58.0	89	40.3 ¹⁴⁷	+16 55.3 ¹¹⁹	20	41	5 07	29	2 10	35	35	50	
15	48	36.7		58.9	104	14.1 ¹⁴⁸	43.3 ¹²⁰	30	28	4 57	21	28	30	19	55	
16	63	36.8	-8	59.8	118	48.0 ¹⁴⁹	31.3 ¹²⁰	35	20	51	17	38	27	13 10	58	
17	78	36.9	-9	00.7	133	22.0 ¹⁵⁰	+16 19.2 ¹²¹	40	4 10	4 43	5 11	2 49	25	12 59	62	
18	93	37.1	-9	01.6	147	56.0 ¹⁵⁰	+16 07.1 ¹²¹	45	3 58	4 35	5 05	3 03	20	12 47	66	
19	108	37.2		02.6	162	30.1 ¹⁵¹	+15 54.9 ¹²²	50	42	24	4 58	20	15	31	71	
20	123	37.3		03.5	177	04.3 ¹⁵²	42.6 ¹²³	52	35	19	54	28	13	24	74	
21	138	37.5		04.4	191	38.5 ¹⁵²	30.3 ¹²³	54	26	13	50	36	10	16	77	
22	153	37.6		05.3	206	12.8 ¹⁵³	17.9 ¹²⁴	56	17	4 07	46	46	7	12 07	80	
23	168	37.7		06.2	220	47.2 ¹⁵⁴	+15 05.5 ¹²⁴	58	3 05	3 59	42	3 57	4	11 57	83	
24	183	37.9	-9	07.1	235	21.6 ¹⁵⁴	+14 53.1 ¹²⁴	60 S	2 52	3 51	4 36	4 10	**	11 45	88	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 22 ^h 18 ^m 8		Mag: -4.0 PMG: 11 ^h 37 ^m		Mag: +1.6 PMG: 11 ^h 54 ^m		Mag: -1.8 PMG: 13 ^h 38 ^m		Mag: +0.6 PMG: 8 ^h 03 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	24	22.4	185	55.9	-6	27.3	181	12.0	-9	11.8
1	39	24.9	200	55.5		28.5	196	12.9		12.5
2	54	27.3	215	55.1		29.8	211	13.8		13.1
3	69	29.8	230	54.6		31.0	226	14.7		13.7
4	84	32.3	245	54.2		32.2	241	15.6		14.4
5	99	34.7	260	53.8	-6	33.4	256	16.5	-9	15.0
6	114	37.2	275	53.3	-6	34.7	271	17.3	-9	15.6
7	129	39.7	290	52.9		35.9	286	18.2		16.2
8	144	42.1	305	52.5		37.1	301	19.1		16.9
9	159	44.6	320	52.0		38.3	316	20.0		17.5
10	174	47.1	335	51.6		39.6	331	20.9		18.1
11	189	49.5	350	51.2	-6	40.8	346	21.8	-9	18.8
12	204	52.0	5	50.7	-6	42.0	1	22.7	-9	19.4
13	219	54.4	20	50.3		43.2	16	23.6		20.0
14	234	56.9	35	49.8		44.4	31	24.5		20.7
15	249	59.4	50	49.4		45.7	46	25.4		21.3
16	265	01.8	65	49.0		46.9	61	26.3		21.9
17	280	04.3	80	48.5	-6	48.1	76	27.2	-9	22.6
18	295	06.8	95	48.1	-6	49.3	91	28.1	-9	23.2
19	310	09.2	110	47.7		50.6	106	29.0		23.8
20	325	11.7	125	47.2		51.8	121	29.9		24.4
21	340	14.2	140	46.8		53.0	136	30.8		25.1
22	355	16.6	155	46.4		54.2	151	31.6		25.7
23	10	19.1	170	45.9		55.4	166	32.5		26.3
24	25	21.6	185	45.5	-6	56.7	181	33.4	-9	27.0
Dif	—		-4	-12			+9	-6		
									+19	-1
										+23
										-1

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16°0			Edad: 24 ^d 5 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 45 ^m 4			SD: 14°8 PMG: 8 ^h 33 ^m R°: 40 ^m					Final del crepúsculo			Salida de Luna		Puesta de Luna	
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Civil	Náutico		Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m	m	h m	m
0	183	37.9	-9 07.1	235	21.6	+14 53.1		60 N	16 46	17 28	18 16	0 32	85	16 07	**
1	198	38.0	08.1	249	56.2 ¹⁵⁶	40.5 ¹²⁶		58	51	31	16	41	81	16 00	2
2	213	38.1	09.0	264	30.7 ¹⁵⁵	28.0 ¹²⁵		56	55	33	16	49	78	15 54	5
3	228	38.3	09.9	279	05.4 ¹⁵⁷	15.4 ¹²⁶		54	16 59	34	15	0 56	75	49	8
4	243	38.4	10.8	293	40.1 ¹⁵⁷	+14 02.7 ¹²⁷		52	17 02	36	15	1 03	72	45	9
5	258	38.5	-9 11.7	308	14.8 ¹⁵⁷	+13 50.0 ¹²⁷		50	17 05	17 38	18 15	1 09	69	15 40	12
6	273	38.6	-9 12.6	322	49.6 ¹⁵⁸	+13 37.2 ¹²⁸		45	17 12	17 42	18 16	1 21	65	15 31	16
7	288	38.8	13.6	337	24.5 ¹⁵⁹	24.4 ¹²⁸		40	18	45	17	31	61	23	20
8	303	38.9	14.5	351	59.4 ¹⁵⁹	+13 11.5 ¹²⁹		35	23	48	18	40	57	17	23
9	318	39.0	15.4	6	34.4 ¹⁶⁰	+12 58.6 ¹²⁹		30	27	51	19	1 48	54	11	26
10	333	39.1	16.3	21	09.5 ¹⁶¹	45.7 ¹²⁹		20	35	17 57	23	2 01	49	15 00	32
11	348	39.3	-9 17.2	35	44.6 ¹⁶¹	+12 32.7 ¹³⁰		10 N	17 42	18 03	18 28	2 12	45	14 51	36
12	3	39.4	-9 18.1	50	19.7 ¹⁶¹	+12 19.7 ¹³⁰		0	17 49	18 10	18 34	2 23	41	14 43	40
13	18	39.5	19.0	64	54.9 ¹⁶²	+12 06.6 ¹³¹		10 S	17 55	17	42	34	36	34	44
14	33	39.7	20.0	79	30.2 ¹⁶³	+11 53.5 ¹³¹		20	18 03	25	18 51	45	32	25	48
15	48	39.8	20.9	94	05.5 ¹⁶³	40.3 ¹³²		30	11	36	19 05	2 58	27	14	54
16	63	39.9	21.8	108	40.9 ¹⁶⁴	27.2 ¹³¹		35	16	42	13	3 05	25	08	56
17	78	40.0	-9 22.7	123	16.3 ¹⁶⁴	+11 13.9 ¹³³		40	18 22	18 50	19 23	3 14	21	14 01	60
18	93	40.2	-9 23.6	137	51.7 ¹⁶⁴	+11 00.7 ¹³²		45	18 28	18 59	19 36	3 23	18	13 53	64
19	108	40.3	24.5	152	27.2 ¹⁶⁵	+10 47.4 ¹³³		50	36	19 10	19 52	35	13	42	69
20	123	40.4	25.4	167	02.8 ¹⁶⁶	34.0 ¹³⁴		52	40	16	20 00	41	10	38	71
21	138	40.5	26.3	181	38.4 ¹⁶⁶	20.6 ¹³⁴		54	44	22	09	46	8	33	73
22	153	40.7	27.3	196	14.0 ¹⁶⁶	+10 07.2 ¹³⁴		56	48	29	19	3 53	5	27	76
23	168	40.8	28.2	210	49.7 ¹⁶⁷	+9 53.8 ¹³⁴		58	53	36	32	4 01	2	20	80
24	183	40.9	-9 29.1	225	25.4 ¹⁶⁷	+9 40.3 ¹³⁵		60 S	18 59	19 45	20 46	4 09	**	13 13	84
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG 22 ^h 14 ^m 9		Mag: -4.0 PMG: 11 ^h 37 ^m			Mag: +1.6 PMG: 11 ^h 53 ^m			Mag: -1.8 PMG: 13 ^h 35 ^m			Mag: +0.6 PMG: 7 ^h 59 ^m			
	hG ♈	Dec	hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	25	21.6	185	45.5	-6 56.7	181	33.4	-9 27.0	155	52.5	-17 26.2	239	50.3	+14 48.0	
1	40	24.0	200	45.0	57.9	196	34.3	27.6	170	54.5	26.3	254	52.5	48.0	
2	55	26.5	215	44.6	-6 59.1	211	35.2	28.2	185	56.4	26.5	269	54.8	47.9	
3	70	28.9	230	44.2	-7 00.3	226	36.1	28.9	200	58.4	26.6	284	57.1	47.8	
4	85	31.4	245	43.7	01.5	241	37.0	29.5	216	00.3	26.8	299	59.3	47.8	
5	100	33.9	260	43.3	-7 02.7	256	37.9	-9 30.1	231	02.3	-17 26.9	315	01.6	+14 47.7	
6	115	36.3	275	42.8	-7 04.0	271	38.8	-9 30.7	246	04.2	-17 27.0	330	03.8	+14 47.7	
7	130	38.8	290	42.4	05.2	286	39.7	31.4	261	06.1	27.2	345	06.1	47.6	
8	145	41.3	305	42.0	06.4	301	40.6	32.0	276	08.1	27.3	0	08.4	47.5	
9	160	43.7	320	41.5	07.6	316	41.4	32.6	291	10.0	27.5	15	10.6	47.5	
10	175	46.2	335	41.1	08.8	331	42.3	33.3	306	12.0	27.6	30	12.9	47.4	
11	190	48.7	350	40.6	-7 10.1	346	43.2	-9 33.9	321	13.9	-17 27.7	45	15.1	+14 47.4	
12	205	51.1	5 40.2	-7 11.3	1 44.1	-9 34.5	336	15.8	336	15.8	-17 27.9	60	17.4	+14 47.3	
13	220	53.6	20 39.8	12.5	16 45.0	35.1	351	17.8	351	17.8	28.0	75	19.7	47.2	
14	235	56.0	35 39.3	13.7	31 45.9	35.8	6	19.7	6	19.7	28.2	90	21.9	47.2	
15	250	58.5	50 38.9	14.9	46 46.8	36.4	21	21.7	21	21.7	28.3	105	24.2	47.1	
16	266	01.0	65 38.4	16.1	61 47.7	37.0	36	23.6	36	23.6	28.4	120	26.4	47.1	
17	281	03.4	80 38.0	-7 17.3	76 48.6	-9 37.7	51	25.5	51	25.5	-17 28.6	135	28.7	+14 47.0	
18	296	05.9	95 37.5	-7 18.6	91 49.5	-9 38.3	66	27.5	66	27.5	-17 28.7	150	31.0	+14 46.9	
19	311	08.4	110 37.1	19.8	106 50.3	38.9	81	29.4	81	29.4	28.8	165	33.2	46.9	
20	326	10.8	125 36.7	21.0	121 51.2	39.5	96	31.4	96	31.4	29.0	180	35.5	46.8	
21	341	13.3	140 36.2	22.2	136 52.1	40.2	111	33.3	111	33.3	29.1	195	37.7	46.7	
22	356	15.8	155 35.8	23.4	151 53.0	40.8	126	35.2	126	35.2	29.3	210	40.0	46.7	
23	11	18.2	170 35.3	24.6	166 53.9	41.4	141	37.2	141	37.2	29.4	225	42.3	46.6	
24	26	20.7	185 34.9	-7 25.8	181 54.8	-9 42.0	156	39.1	156	39.1	-17 29.5	240	44.5	+14 46.6	
Dif	—		-4	-12	+9	-6	+19	-1	+19	-1		+23	-1		

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'1 PMG: 11 ^h 45 ^m 2			Edad: 25 ^d 5 PHE { 4 ^h : 54'1 12 ^h : 54'0 20 ^h : 54'0 SD: 14'7 PMG: 9 ^h 13 ^m R°: 39 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°
h	°	'	°	°	'	°	°	h	m	h	m	h	m	h	m
0	183	40.9	-9 29.1	225	25.4	+9 40.3	60 N	5 15	6 04	6 46	1 57	82	16 05	**	
1	198	41.0		240	01.2 ¹⁶⁸	26.8 ¹³⁵	58	16	6 01	41	2 02	79	16 02	1	
2	213	41.1		254	37.0 ¹⁶⁸	+9 13.3 ¹³⁵	56	16	5 59	37	07	75	15 59	4	
3	228	41.3		269	12.8 ¹⁶⁸	+8 59.7 ¹³⁶	54	16	57	33	11	73	57	6	
4	243	41.4		283	48.7 ¹⁶⁹	46.1 ¹³⁶	52	16	55	30	15	70	54	9	
5	258	41.5	-9 33.6	298	24.6 ¹⁶⁹	+8 32.5 ¹³⁶	50	5 16	5 54	6 26	2 18	68	15 52	11	
6	273	41.6	-9 34.5	313	00.5 ¹⁶⁹	+8 18.8 ¹³⁷	45	5 15	5 50	6 19	2 26	63	15 47	16	
7	288	41.8		327	36.5 ¹⁷⁰	+8 05.1 ¹³⁷	40	14	46	13	32	59	43	19	
8	303	41.9		342	12.5 ¹⁷⁰	+7 51.4 ¹³⁷	35	13	43	08	37	56	40	22	
9	318	42.0		356	48.6 ¹⁷¹	37.7 ¹³⁷	30	12	39	6 04	42	53	37	25	
10	333	42.1		11	24.6 ¹⁷⁰	23.9 ¹³⁸	20	08	33	5 56	50	48	32	30	
11	348	42.2	-9 39.1	26	00.7 ¹⁷¹	+7 10.2 ¹³⁷	10 N	5 03	5 27	5 49	2 57	43	15 27	35	
12	3	42.4	-9 40.0	40	36.9 ¹⁷²	+6 56.4 ¹³⁸	0	4 57	5 21	5 42	3 04	39	15 23	38	
13	18	42.5		55	13.0 ¹⁷¹	42.5 ¹³⁹	10 S	49	14	35	10	35	18	43	
14	33	42.6		69	49.2 ¹⁷²	28.7 ¹³⁸	20	39	5 05	28	17	31	13	48	
15	48	42.7		84	25.4 ¹⁷²	14.8 ¹³⁹	30	26	4 54	19	25	25	08	52	
16	63	42.8		99	01.7 ¹⁷³	+6 00.9 ¹³⁹	35	17	48	14	30	22	04	56	
17	78	43.0	-9 44.5	113	37.9 ¹⁷²	+5 47.0 ¹³⁹	40	4 07	4 40	5 08	3 35	19	15 01	59	
18	93	43.1	-9 45.4	128	14.2 ¹⁷³	+5 33.1 ¹³⁹	45	3 54	4 31	5 02	3 41	15	14 57	63	
19	108	43.2		142	50.5 ¹⁷³	19.1 ¹⁴⁰	50	38	20	4 54	48	11	51	68	
20	123	43.3		157	26.8 ¹⁷³	+5 05.1 ¹⁴⁰	52	30	14	50	51	9	49	70	
21	138	43.4		172	03.2 ¹⁷⁴	+4 51.1 ¹⁴⁰	54	21	08	46	54	7	46	73	
22	153	43.6		186	39.5 ¹⁷³	37.1 ¹⁴⁰	56	3 10	4 01	41	3 58	5	43	76	
23	168	43.7		201	15.9 ¹⁷⁴	23.1 ¹⁴⁰	58	2 58	3 53	36	4 03	1	40	78	
24	183	43.8	-9 50.9	215	52.3 ¹⁷⁴	+4 09.1 ¹⁴⁰	60 S	2 44	3 44	4 30	4 07	**	14 37	81	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 22 ^h 11 ^m 0		Mag: -4.0 PMG: 11 ^h 38 ^m			Mag: +1.6 PMG: 11 ^h 52 ^m			Mag: -1.8 PMG: 13 ^h 32 ^m			Mag: +0.6 PMG: 7 ^h 56 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°
0	26	20.7	185	34.9	-7 25.8	181	54.8	-9 42.0	156	39.1	-17 29.5	240	44.5	+14 46.6	
1	41	23.2	200	34.4		196	55.7	42.7	171	41.0		255	46.8		46.5
2	56	25.6	215	34.0		211	56.6	43.3	186	43.0		270	49.0		46.4
3	71	28.1	230	33.5		226	57.4	43.9	201	44.9		285	51.3		46.4
4	86	30.5	245	33.1		241	58.3	44.6	216	46.9		300	53.6		46.3
5	101	33.0	260	32.7	-7 31.9	256	59.2	-9 45.2	231	48.8	-17 30.2	315	55.8	+14	46.3
6	116	35.5	275	32.2	-7 33.1	272	00.1	-9 45.8	246	50.7	-17 30.4	330	58.1	+14	46.2
7	131	37.9	290	31.8		287	01.0	46.4	261	52.7		346	00.4		46.1
8	146	40.4	305	31.3		302	01.9	47.1	276	54.6		1	02.6		46.1
9	161	42.9	320	30.9		317	02.8	47.7	291	56.6		16	04.9		46.0
10	176	45.3	335	30.4		332	03.7	48.3	306	58.5		31	07.1		46.0
11	191	47.8	350	30.0	-7 39.2	347	04.5	-9 48.9	322	00.4	-17 31.1	46	09.4	+14	45.9
12	206	50.3	5	29.5	-7 40.4	2	05.4	-9 49.6	337	02.4	-17 31.2	61	11.7	+14	45.8
13	221	52.7	20	29.1		17	06.3	50.2	352	04.3		76	13.9		45.8
14	236	55.2	35	28.6		32	07.2	50.8	7	06.2		91	16.2		45.7
15	251	57.6	50	28.2		47	08.1	51.4	22	08.2		106	18.5		45.7
16	267	00.1	65	27.7		62	09.0	52.1	37	10.1		121	20.7		45.6
17	282	02.6	80	27.3	-7 46.4	77	09.8	-9 52.7	52	12.1	-17 31.9	136	23.0	+14	45.5
18	297	05.0	95	26.8	-7 47.6	92	10.7	-9 53.3	67	14.0	-17 32.0	151	25.2	+14	45.5
19	312	07.5	110	26.4		107	11.6	53.9	82	15.9		166	27.5		45.4
20	327	10.0	125	25.9		122	12.5	54.6	97	17.9		181	29.8		45.4
21	342	12.4	140	25.5		137	13.4	55.2	112	19.8		196	32.0		45.3
22	357	14.9	155	25.0		152	14.3	55.8	127	21.7		211	34.3		45.2
23	12	17.4	170	24.6		167	15.2	56.4	142	23.7		226	36.6		45.2
24	27	19.8	185	24.1	-7 54.9	182	16.0	-9 57.1	157	25.6	-17 32.9	241	38.8	+14	45.1
Dif	—		-4	-12		+9	-6		+19		-1	+23			-1

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16:1 PMG: 11 ^h 45 ^m 0			Edad: 26 ^d 5 PHE { SD: 14:7 PMG: 9 ^h 52 ^m 4 ^h : 54:0 12 ^h : 54:0 20 ^h : 54:0 R°: 39 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m	h m	h m
0	183	43.8	-9 50.9	215	52.3	+4 09.1		60 N	16 40	17 23	18 11	3 19 81	16 04 **	
1	198	43.9		230	28.7 ¹⁷⁴	+3 55.0 ¹⁴¹		58	45	25	11	21 78	03 2	
2	213	44.0		245	05.2 ¹⁷⁵		41.0 ¹⁴⁰	56	50	28	11	22 75	03 4	
3	228	44.1		259	41.6 ¹⁷⁴		26.9 ¹⁴¹	54	54	30	11	24 72	03	
4	243	44.2		274	18.0 ¹⁷⁴	+3 12.8 ¹⁴¹		52	16 58	32	11	25 70	03 9	
5	258	44.4	-9 55.4	288	54.5 ¹⁷⁵	+2 58.7 ¹⁴¹		50	17 01	17 34	18 12	3 26 68	16 03 11	
6	273	44.5	-9 56.3	303	31.0 ¹⁷⁵	+2 44.6 ¹⁴¹		45	17 09	17 38	18 13	3 29 63	16 03 15	
7	288	44.6		318	07.4 ¹⁷⁴		30.5 ¹⁴¹	40	15	42	14	31 59	02 19	
8	303	44.7		332	43.9 ¹⁷⁵		16.3 ¹⁴²	35	20	46	15	33 56	02 23	
9	318	44.8		347	20.4 ¹⁷⁵	+2 02.2 ¹⁴¹		30	25	49	17	35 52	02 25	
10	333	44.9	-9 59.9	1	56.9 ¹⁷⁵	+1 48.1 ¹⁴¹		20	34	17 56	22	38 47	02 30	
11	348	45.1	-10 00.8	16	33.4 ¹⁷⁵	+1 33.9 ¹⁴²		10 N	17 41	18 02	18 27	3 40 43	16 02 34	
12	3	45.2	-10 01.7	31	09.9 ¹⁷⁵	+1 19.7 ¹⁴²		0	17 48	18 09	18 34	3 43 38	16 01 39	
13	18	45.3		45	46.4 ¹⁷⁵	+1 05.6 ¹⁴¹		10 S	17 56	17	42	45 35	01 43	
14	33	45.4		60	22.9 ¹⁷⁵	+0 51.4 ¹⁴²		20	18 03	26	18 52	48 30	01 47	
15	48	45.5		74	59.5 ¹⁷⁶		37.2 ¹⁴²	30	13	37	19 06	50 25	00 53	
16	63	45.6		89	36.0 ¹⁷⁵		23.1 ¹⁴¹	35	18	44	15	52 22	00 56	
17	78	45.7	-10 06.2	104	12.5 ¹⁷⁵	+0 08.9 ¹⁴²		40	18 24	18 52	19 26	3 54 19	16 00 59	
18	93	45.8	-10 07.1	118	49.0 ¹⁷⁵	-0 05.3 ¹⁴²		45	18 31	19 02	19 39	3 56 15	16 00 63	
19	108	46.0		133	25.5 ¹⁷⁵		19.5 ¹⁴²	50	40	14	19 56	3 59 10	15 59 68	
20	123	46.1		148	02.0 ¹⁷⁵		33.7 ¹⁴²	52	43	20	20 05	4 00 8	59 70	
21	138	46.2		162	38.5 ¹⁷⁵	-0 47.9 ¹⁴²		54	48	26	14	01 7	59 72	
22	153	46.3		177	14.9 ¹⁷⁴	-1 02.0 ¹⁴¹		56	53	33	25	03 4	59 75	
23	168	46.4		191	51.4 ¹⁷⁵		16.2 ¹⁴²	58	18 58	41	38	04 1	58 79	
24	183	46.5	-10 12.5	206	27.9 ¹⁷⁵	-1 30.4 ¹⁴²		60 S	19 04	19 51	20 53	4 06 **	15 58 82	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG 22 ^h 07 ^m 0		Mag: -4.0 PMG: 11 ^h 39 ^m			Mag: +1.6 PMG: 11 ^h 50 ^m			Mag: -1.8 PMG: 13 ^h 29 ^m			Mag: +0.6 PMG: 7 ^h 52 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	27	19.8	185	24.1	-7	54.9	182	16.0	-9	57.1	157	25.6	-17	32.9
1	42	22.3	200	23.7		56.1	197	16.9		57.7	172	27.5		33.0
2	57	24.8	215	23.2		57.3	212	17.8		58.3	187	29.5		33.1
3	72	27.2	230	22.8		58.5	227	18.7		58.9	202	31.4		33.3
4	87	29.7	245	22.3	-7	59.7	242	19.6	-9	59.6	217	33.4		33.4
5	102	32.1	260	21.9	-8	00.9	257	20.5	-10	00.2	232	35.3	-17	33.6
6	117	34.6	275	21.4	-8	02.1	272	21.3	-10	00.8	247	37.2	-17	33.7
7	132	37.1	290	21.0		03.3	287	22.2		01.4	262	39.2		33.8
8	147	39.5	305	20.5		04.5	302	23.1		02.1	277	41.1		34.0
9	162	42.0	320	20.0		05.7	317	24.0		02.7	292	43.0		34.1
10	177	44.5	335	19.6		06.9	332	24.9		03.3	307	45.0		34.2
11	192	46.9	350	19.1	-8	08.1	347	25.8	-10	03.9	322	46.9	-17	34.4
12	207	49.4		5 18.7	-8	09.3		2 26.6	-10	04.6	337	48.8	-17	34.5
13	222	51.9		20 18.2		10.5		17 27.5		05.2	352	50.8		34.7
14	237	54.3		35 17.8		11.7		32 28.4		05.8		7 52.7		34.8
15	252	56.8		50 17.3		12.9		47 29.3		06.4		22 54.6		34.9
16	267	59.2		65 16.9		14.1		62 30.2		07.1		37 56.6		35.1
17	283	01.7		80 16.4	-8	15.3		77 31.0	-10	07.7		52 58.5	-17	35.2
18	298	04.2		95 15.9	-8	16.5		92 31.9	-10	08.3		68 00.4	-17	35.4
19	313	06.6		110 15.5		17.7		107 32.8		08.9		83 02.4		35.5
20	328	09.1		125 15.0		18.9		122 33.7		09.6		98 04.3		35.6
21	343	11.6		140 14.6		20.1		137 34.6		10.2		113 06.3		35.8
22	358	14.0		155 14.1		21.3		152 35.4		10.8		128 08.2		35.9
23	13	16.5		170 13.7		22.5		167 36.3		11.4		143 10.1		36.0
24	28	19.0		185 13.2	-8	23.7		182 37.2	-10	12.0		158 12.1	-17	36.2
Dif	—		-5	-12		+9	-6		+19		-1		+23	-

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16'1			Edad: 27 ^d 5 PHE { 4 ^h : 54'0 12 ^h : 54'1 20 ^h : 54'1												
	PMG: 11 ^h 44 ^m 8			SD: 14'7												
hG ☉ Dec			hG ☾ Dif Dec Dif					Náutico	Civil		Hora R°	Hora R°				
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	R°
0	183	46.5	-10	12.5	206	27.9	-1 30.4	60 N	5 20	6 08	6 51	4 40	83	16 02	**	
1	198	46.6		13.4	221	04.3 ¹⁷⁴	44.6 ¹⁴²	58	20	06	46	39	79	05	1	
2	213	46.7		14.3	235	40.8 ¹⁷⁵	-1 58.8 ¹⁴²	56	20	03	41	37	76	07	5	
3	228	46.8		15.2	250	17.2 ¹⁷⁴	-2 12.9 ¹⁴¹	54	20	6 01	37	36	74	10		
4	243	46.9		16.1	264	53.6 ¹⁷⁴	27.1 ¹⁴²	52	19	5 59	33	35	71	12	9	
5	258	47.1	-10	17.0	279	30.0 ¹⁷⁴	-2 41.2 ¹⁴¹	50	5 19	5 57	6 30	4 34	69	16 14	11	
6	273	47.2	-10	17.9	294	06.4 ¹⁷⁴	-2 55.4 ¹⁴²	45	5 18	5 52	6 22	4 32	64	16 18	16	
7	288	47.3		18.8	308	42.8 ¹⁷⁴	-3 09.5 ¹⁴¹	40	16	48	15	30	60	21	20	
8	303	47.4		19.7	323	19.2 ¹⁷⁴	23.7 ¹⁴²	35	15	44	10	29	56	25	23	
9	318	47.5		20.6	337	55.5 ¹⁷³	37.8 ¹⁴¹	30	13	41	6 05	27	54	27	26	
10	333	47.6		21.5	352	31.8 ¹⁷³	-3 51.9 ¹⁴¹	20	08	34	5 56	25	48	32	31	
11	348	47.7	-10	22.4	7	08.1 ¹⁷³	-4 06.0 ¹⁴¹	10 N	5 03	5 27	5 49	4 23	44	16 36	36	
12	3	47.8	-10	23.3	21	44.4 ¹⁷³	-4 20.1 ¹⁴¹	0	4 56	5 20	5 41	4 21	40	16 40	40	
13	18	47.9		24.2	36	20.6 ¹⁷²	34.2 ¹⁴¹	10 S	48	13	34	20	35	44	44	
14	33	48.0		25.1	50	56.9 ¹⁷³	-4 48.3 ¹⁴¹	20	37	5 04	26	18	30	48	49	
15	48	48.1		26.0	65	33.1 ¹⁷²	-5 02.3 ¹⁴⁰	30	23	4 52	17	15	26	53	54	
16	63	48.2		26.9	80	09.3 ¹⁷²	16.4 ¹⁴¹	35	14	45	11	14	23	56	57	
17	78	48.3	-10	27.8	94	45.4 ¹⁷¹	-5 30.4 ¹⁴⁰	40	4 04	4 37	5 05	4 13	19	16 59	60	
18	93	48.4	-10	28.7	109	21.5 ¹⁷¹	-5 44.4 ¹⁴⁰	45	3 50	4 27	4 58	4 11	16	17 03	64	
19	108	48.6		29.6	123	57.6 ¹⁷¹	-5 58.4 ¹⁴⁰	50	33	15	50	09	11	07	69	
20	123	48.7		30.5	138	33.7 ¹⁷¹	-6 12.4 ¹⁴⁰	52	25	09	45	08	10	09	72	
21	138	48.8		31.4	153	09.8 ¹⁷¹	26.3 ¹³⁹	54	15	4 03	41	08	6	11	75	
22	153	48.9		32.3	167	45.8 ¹⁷⁰	40.3 ¹⁴⁰	56	3 04	3 56	36	07	4	14	77	
23	168	49.0		33.1	182	21.7 ¹⁶⁹	-6 54.2 ¹³⁹	58	2 51	47	31	05	2	17	80	
24	183	49.1	-10	34.0	196	57.7 ¹⁷⁰	-7 08.1 ¹³⁹	60 S	2 35	3 38	4 24	4 04	**	17 20	84	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 22 ^h 03 ^m 1		Mag: -4.0 PMG: 11 ^h 39 ^m		Mag: +1.6 PMG: 11 ^h 49 ^m		Mag: -1.8 PMG: 13 ^h 25 ^m		Mag: +0.6 PMG: 7 ^h 49 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	28	19.0	185	13.2	-8	23.7	182	37.2	-10	12.0
1	43	21.4	200	12.7		24.9	197	38.1		12.7
2	58	23.9	215	12.3		26.1	212	39.0		13.3
3	73	26.4	230	11.8		27.3	227	39.8		13.9
4	88	28.8	245	11.4		28.5	242	40.7		14.5
5	103	31.3	260	10.9	-8	29.7	257	41.6	-10	15.2
6	118	33.7	275	10.4	-8	30.9	272	42.5	-10	15.8
7	133	36.2	290	10.0		32.1	287	43.4		16.4
8	148	38.7	305	09.5		33.3	302	44.2		17.0
9	163	41.1	320	09.1		34.5	317	45.1		17.6
10	178	43.6	335	08.6		35.7	332	46.0		18.3
11	193	46.1	350	08.1	-8	36.9	347	46.9	-10	18.9
12	208	48.5	5	07.7	-8	38.1	2	47.7	-10	19.5
13	223	51.0	20	07.2		39.3	17	48.6		20.1
14	238	53.5	35	06.7		40.5	32	49.5		20.7
15	253	55.9	50	06.3		41.7	47	50.4		21.4
16	268	58.4	65	05.8		42.9	62	51.2		22.0
17	284	00.9	80	05.3	-8	44.1	77	52.1	-10	22.6
18	299	03.3	95	04.9	-8	45.3	92	53.0	-10	23.2
19	314	05.8	110	04.4		46.5	107	53.9		23.8
20	329	08.2	125	04.0		47.7	122	54.8		24.5
21	344	10.7	140	03.5		48.8	137	55.6		25.1
22	359	13.2	155	03.0		50.0	152	56.5		25.7
23	14	15.6	170	02.6		51.2	167	57.4		26.3
24	29	18.1	185	02.1	-8	52.4	182	58.3	-10	26.9
Dif	—		-5	-12		+9	-6	+19		-1

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna			
	SD: 16:1 PMG: 11 ^h 44 ^m 6			Edad: 28 ^d 5 PHE { 4 ^h : 54 ² 12 ^h : 54 ² 20 ^h : 54 ³ R°: 42 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m m	h m m	h m m	h m m	h m m	
0	183	49.1	-10	34.0	196	57.7	-7	08.1	60 N	16 34	17 17	18 06	6 03 86	16 00	**		
1	198	49.2		34.9	211	33.6 ¹⁶⁹		22.0 ¹³⁹	58	40	20	06	5 58 82	06	3		
2	213	49.3		35.8	226	09.5 ¹⁶⁹		35.8 ¹³⁸	56	45	23	06	53 79	12	6		
3	228	49.4		36.7	240	45.3 ¹⁶⁸	-7	49.7 ¹³⁹	54	50	26	07	50 75	17	9		
4	243	49.5		37.6	255	21.1 ¹⁶⁸	-8	03.5 ¹³⁸	52	54	28	07	46 73	21	12		
5	258	49.6	-10	38.5	269	56.9 ¹⁶⁸	-8	17.2 ¹³⁷	50	16 57	17 30	18 08	5 43 70	16 25	14		
6	273	49.7	-10	39.4	284	32.6 ¹⁶⁷	-8	31.0 ¹³⁸	45	17 05	17 35	18 09	5 36 65	16 34	19		
7	288	49.8		40.3	299	08.3 ¹⁶⁷		44.7 ¹³⁷	40	12	40	11	30 61	41	23		
8	303	49.9		41.2	313	43.9 ¹⁶⁶	-8	58.4 ¹³⁷	35	18	44	13	25 58	48	26		
9	318	50.0		42.1	328	19.5 ¹⁶⁶	-9	12.1 ¹³⁷	30	23	47	15	21 54	16 53	29		
10	333	50.1		43.0	342	55.1 ¹⁶⁶		25.7 ¹³⁶	20	32	17 55	20	13 50	17 03	34		
11	348	50.2	-10	43.8	357	30.6 ¹⁶⁵	-9	39.4 ¹³⁷	10 N	17 40	18 02	18 26	5 07 45	17 12	38		
12	3	50.3	-10	44.7	12	06.0 ¹⁶⁴	-9	52.9 ¹³⁵	0	17 48	18 09	18 33	5 01 40	17 20	42		
13	18	50.4		45.6	26	41.4 ¹⁶⁴	-10	06.5 ¹³⁶	10 S	17 56	17	42	4 55 36	28	46		
14	33	50.5		46.5	41	16.8 ¹⁶⁴		20.0 ¹³⁵	20	18 04	27	18 53	48 33	37	50		
15	48	50.6		47.4	55	52.1 ¹⁶³		33.5 ¹³⁵	30	14	39	19 08	41 27	47	56		
16	63	50.7		48.3	70	27.4 ¹⁶³	-10	46.9 ¹³⁴	35	20	46	17	37 24	53	58		
17	78	50.8	-10	49.2	85	02.6 ¹⁶²	-11	00.4 ¹³⁵	40	18 26	18 54	19 28	4 32 21	17 59	62		
18	93	50.9	-10	50.1	99	37.8 ¹⁶²	-11	13.7 ¹³³	45	18 34	19 05	19 42	4 27 17	18 07	66		
19	108	51.0		51.0	114	12.9 ¹⁶¹		27.1 ¹³⁴	50	43	17	20 00	20 13	16	72		
20	123	51.1		51.8	128	48.0 ¹⁶¹		40.4 ¹³³	52	47	24	09	18 10	21	74		
21	138	51.2		52.7	143	23.0 ¹⁶⁰	-11	53.7 ¹³³	54	52	30	19	14 8	26	76		
22	153	51.3		53.6	157	58.0 ¹⁶⁰	-12	06.9 ¹³²	56	18 57	38	31	11 5	31	80		
23	168	51.4		54.5	172	32.9 ¹⁵⁹		20.1 ¹³²	58	19 03	47	20 45	07 2	37	83		
24	183	51.5	-10	55.4	187	07.7 ¹⁵⁸	-12	33.2 ¹³¹	60 S	19 09	19 57	21 01	4 03 **	18 44	87		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO					
	PMG: 21 ^h 59 ^m 2		Mag: -4.0 PMG: 11 ^h 40 ^m			Mag: +1.6 PMG: 11 ^h 47 ^m			Mag: -1.8 PMG: 13 ^h 22 ^m			Mag: +0.6 PMG: 7 ^h 45 ^m					
	hG ♈		hG ♀			hG ♂			hG ♃			hG ♄					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	29	18.1	185	02.1	-8	52.4	182	58.3	-10	26.9	158	58.4	-17	39.5	243	27.7	
1	44	20.6	200	01.6		53.6	197	59.1		27.6	174	00.4		39.6	258	30.0	
2	59	23.0	215	01.2		54.8	213	00.0		28.2	189	02.3		39.8	273	32.2	
3	74	25.5	230	00.7		56.0	228	00.9		28.8	204	04.2		39.9	288	34.5	
4	89	28.0	245	00.2		57.2	243	01.8		29.4	219	06.2		40.1	303	36.8	
5	104	30.4	259	59.8	-8	58.4	258	02.6	-10	30.0	234	08.1	-17	40.2	318	39.0	
6	119	32.9	274	59.3	-8	59.6	273	03.5	-10	30.7	249	10.0	-17	40.3	333	41.3	
7	134	35.3	289	58.8	-9	00.7	288	04.4		31.3	264	12.0		40.5	348	43.6	
8	149	37.8	304	58.3		01.9	303	05.3		31.9	279	13.9		40.6	3	45.9	
9	164	40.3	319	57.9		03.1	318	06.1		32.5	294	15.8		40.7	18	48.1	
10	179	42.7	334	57.4		04.3	333	07.0		33.1	309	17.8		40.9	33	50.4	
11	194	45.2	349	56.9	-9	05.5	348	07.9	-10	33.8	324	19.7	-17	41.0	48	52.7	
12	209	47.7		56.5	-9	06.7		08.7	-10	34.4	339	21.6	-17	41.2	63	54.9	
13	224	50.1	19	56.0		07.9	18	09.6		35.0	354	23.6		41.3	78	57.2	
14	239	52.6	34	55.5		09.1	33	10.5		35.6	9	25.5		41.4	93	59.5	
15	254	55.1	49	55.1		10.2	48	11.4		36.2	24	27.4		41.6	109	01.8	
16	269	57.5	64	54.6		11.4	63	12.2		36.9	39	29.3		41.7	124	04.0	
17	285	00.0	79	54.1	-9	12.6	78	13.1	-10	37.5	54	31.3	-17	41.8	139	06.3	
18	300	02.5	94	53.6	-9	13.8	93	14.0	-10	38.1	69	33.2	-17	42.0	154	08.6	
19	315	04.9	109	53.2		15.0	108	14.9		38.7	84	35.1		42.1	169	10.9	
20	330	07.4	124	52.7		16.2	123	15.7		39.3	99	37.1		42.3	184	13.1	
21	345	09.8	139	52.2		17.3	138	16.6		39.9	114	39.0		42.4	199	15.4	
22	0	12.3	154	51.7		18.5	153	17.5		40.6	129	40.9		42.5	214	17.7	
23	15	14.8	169	51.3		19.7	168	18.3		41.2	144	42.9		42.7	229	20.0	
24	30	17.2	184	50.8	-9	20.9	183	19.2	-10	41.8	159	44.8	-17	42.8	244	22.2	
Dif	—		-5			-12	+9			-6	+19			-1	+23		

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16'1 PMG: 11 ^h 44 ^m 5			Edad: 29 ^d 5 PHE { 4 ^h : 54'4 12 ^h : 54'5 20 ^h : 54'5 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	183	51.5	-10	55.4	187	07.7	-12	33.2	60 N	5 25	6 13	6 56	7 29	91	15 59	0
1	198	51.6		56.3	201	42.5 ¹⁵⁸		46.3 ¹³¹	58	24	10	50	20	86	16 09	5
2	213	51.7		57.2	216	17.3 ¹⁵⁸	-12	59.4 ¹³¹	56	24	07	45	12	82	18	8
3	228	51.8		58.0	230	51.9 ¹⁵⁶	-13	12.4 ¹³⁰	54	23	04	41	7 05	78	26	1
4	243	51.9		58.9	245	26.6 ¹⁵⁷		25.4 ¹³⁰	52	23	02	37	6 59	75	33	14
5	258	52.0	-10	59.8	260	01.1 ¹⁵⁵	-13	38.3 ¹²⁹	50	5 22	6 00	6 33	6 53	73	16 39	17
6	273	52.0	-11	00.7	274	35.6 ¹⁵⁵	-13	51.2 ¹²⁹	45	5 20	5 55	6 25	6 41	68	16 53	22
7	288	52.1		01.6	289	10.0 ¹⁵⁴	-14	04.0 ¹²⁸	40	18	50	18	31	63	17 04	26
8	303	52.2		02.5	303	44.4 ¹⁵⁴		16.8 ¹²⁸	35	16	46	12	23	60	14	29
9	318	52.3		03.4	318	18.7 ¹⁵³		29.5 ¹²⁷	30	14	42	6 06	15	57	22	32
10	333	52.4		04.2	332	52.9 ¹⁵²		42.2 ¹²⁷	20	09	35	5 57	6 03	52	37	37
11	348	52.5	-11	05.1	347	27.1 ¹⁵²	-14	54.8 ¹²⁶	10 N	5 03	5 28	5 49	5 52	47	17 50	41
12	3	52.6	-11	06.0	2	01.2 ¹⁵¹	-15	07.3 ¹²⁵	0	4 56	5 20	5 41	5 41	44	18 02	45
13	18	52.7		06.9	16	35.3 ¹⁵¹		19.9 ¹²⁶	10 S	47	12	33	31	40	14	49
14	33	52.8		07.8	31	09.2 ¹⁴⁹		32.3 ¹²⁴	20	36	5 02	25	21	35	27	53
15	48	52.9		08.7	45	43.1 ¹⁴⁹		44.7 ¹²⁴	30	21	4 50	15	08	31	43	57
16	63	53.0		09.5	60	17.0 ¹⁴⁹	-15	57.1 ¹²⁴	35	12	43	09	5 01	28	18 51	61
17	78	53.1	-11	10.4	74	50.7 ¹⁴⁷	-16	09.4 ¹²³	40	4 00	4 34	5 02	4 53	25	19 01	65
18	93	53.2	-11	11.3	89	24.4 ¹⁴⁷	-16	21.6 ¹²²	45	3 46	4 24	4 55	4 44	20	19 13	69
19	108	53.3		12.2	103	58.0 ¹⁴⁶		33.8 ¹²²	50	28	11	46	33	15	28	74
20	123	53.3		13.1	118	31.6 ¹⁴⁶		45.9 ¹²¹	52	19	4 05	41	28	13	35	76
21	138	53.4		13.9	133	05.0 ¹⁴⁴	-16	57.9 ¹²⁰	54	3 09	3 58	37	22	11	42	80
22	153	53.5		14.8	147	38.4 ¹⁴⁴	-17	09.9 ¹²⁰	56	2 58	50	31	16	7	19 51	83
23	168	53.6		15.7	162	11.7 ¹⁴³		21.8 ¹¹⁹	58	44	42	25	09	4	20 00	88
24	183	53.7	-11	16.6	176	45.0 ¹⁴³	-17	33.7 ¹¹⁹	60 S	2 27	3 31	4 19	4 01	0	20 11	94

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 21 ^h 55 ^m 2		Mag: -4.0 PMG: 11 ^h 41 ^m		Mag: +1.6 PMG: 11 ^h 46 ^m		Mag: -1.8 PMG: 13 ^h 19 ^m		Mag: +0.6 PMG: 7 ^h 41 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	30	17.2	184	50.8	-9	20.9	183	19.2	-10	41.0
1	45	19.7	199	50.3		22.1	198	20.1		42.4
2	60	22.2	214	49.8		23.3	213	21.0		43.0
3	75	24.6	229	49.4		24.4	228	21.8		43.6
4	90	27.1	244	48.9		25.6	243	22.7		44.3
5	105	29.6	259	48.4	-9	26.8	258	23.6	-10	44.9
6	120	32.0	274	47.9	-9	28.0	273	24.4	-10	45.5
7	135	34.5	289	47.5		29.2	288	25.3		46.1
8	150	36.9	304	47.0		30.3	303	26.2		46.7
9	165	39.4	319	46.5		31.5	318	27.0		47.3
10	180	41.9	334	46.0		32.7	333	27.9		48.0
11	195	44.3	349	45.6	-9	33.9	348	28.8	-10	48.6
12	210	46.8	4	45.1	-9	35.1	3	29.7	-10	49.2
13	225	49.3	19	44.6		36.2	18	30.5		49.8
14	240	51.7	34	44.1		37.4	33	31.4		50.4
15	255	54.2	49	43.6		38.6	48	32.3		51.0
16	270	56.7	64	43.2		39.8	63	33.1		51.6
17	285	59.1	79	42.7	-9	40.9	78	34.0	-10	52.3
18	301	01.6	94	42.2	-9	42.1	93	34.9	-10	52.9
19	316	04.1	109	41.7		43.3	108	35.7		53.5
20	331	06.5	124	41.2		44.5	123	36.6		54.1
21	346	09.0	139	40.8		45.6	138	37.5		54.7
22	1	11.4	154	40.3		46.8	153	38.3		55.3
23	16	13.9	169	39.8		48.0	168	39.2		55.9
24	31	16.4	184	39.3	-9	49.2	183	40.1	-10	56.6
Dif	—		-5		-12		+9		-6	
							+19		-1	
									+23	
									-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 4			Edad: 30 ^d 5 PHE { SD: 14:9 PMG: 12 ^h 36 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	Rº	Hora	Rº
h	°	'	°	'	°	'	°	h m	h m	h m	h m	h m	m	h m	m
0	183	53.7	-11	16.6	176	45.0	-17 33.7	60 N	16 29	17 12	18 01	9 00	96	15 59	2
1	198	53.8		17.5	191	18.2 ¹⁴²	45.4 ¹¹⁷	58	35	16	01	8 46	89	16 14	8
2	213	53.9		18.3	205	51.2 ¹⁴⁰	-17 57.2 ¹¹⁸	56	40	19	02	34	84	26	14
3	228	54.0		19.2	220	24.3 ¹⁴¹	-18 08.8 ¹¹⁶	54	45	22	03	23	81	37	18
4	243	54.1		20.1	234	57.2 ¹³⁹	20.4 ¹¹⁶	52	50	24	03	14	78	47	20
5	258	54.1	-11	21.0	249	30.0 ¹³⁸	-18 31.9 ¹¹⁵	50	16 54	17 27	18 04	8 06	75	16 56	23
6	273	54.2	-11	21.9	264	02.8 ¹³⁸	-18 43.3 ¹¹⁴	45	17 02	17 32	18 06	7 49	69	17 15	28
7	288	54.3		22.7	278	35.5 ¹³⁷	-18 54.7 ¹¹⁴	40	09	37	09	34	66	30	32
8	303	54.4		23.6	293	08.1 ¹³⁶	-19 06.0 ¹¹³	35	16	41	11	23	61	43	35
9	318	54.5		24.5	307	40.6 ¹³⁵	17.2 ¹¹²	30	21	46	14	7 12	59	17 54	38
10	333	54.6		25.4	322	13.1 ¹³⁵	28.3 ¹¹¹	20	31	17 53	19	6 55	54	18 14	42
11	348	54.7	-11	26.2	336	45.5 ¹³⁴	-19 39.4 ¹¹¹	10 N	17 40	18 01	18 26	6 39	51	18 31	45
12	3	54.8	-11	27.1	351	17.7 ¹³²	-19 50.4 ¹¹⁰	0	17 48	18 09	18 33	6 25	47	18 47	49
13	18	54.8		28.0	5	49.9 ¹³²	-20 01.3 ¹⁰⁹	10 S	17 56	18	43	6 11	43	19 03	52
14	33	54.9		28.9	20	22.1 ¹³²	12.1 ¹⁰⁸	20	18 05	28	18 54	5 56	39	20	56
15	48	55.0		29.7	34	54.1 ¹³⁰	22.8 ¹⁰⁷	30	15	40	19 09	39	34	40	60
16	63	55.1		30.6	49	26.0 ¹²⁹	33.5 ¹⁰⁷	35	21	48	19	29	32	19 52	63
17	78	55.2	-11	31.5	63	57.9 ¹²⁹	-20 44.0 ¹⁰⁵	40	18 28	18 57	19 31	5 18	28	20 06	65
18	93	55.3	-11	32.4	78	29.7 ¹²⁸	-20 54.5 ¹⁰⁵	45	18 36	19 08	19 46	5 04	25	20 22	69
19	108	55.4		33.2	93	01.3 ¹²⁶	-21 04.9 ¹⁰⁴	50	46	21	20 04	4 48	20	42	74
20	123	55.4		34.1	107	32.9 ¹²⁶	15.2 ¹⁰³	52	51	27	14	41	17	20 51	77
21	138	55.5		35.0	122	04.5 ¹²⁶	25.4 ¹⁰²	54	18 56	35	24	33	14	21 02	80
22	153	55.6		35.9	136	35.9 ¹²⁴	35.6 ¹⁰²	56	19 01	43	37	23	11	14	84
23	168	55.7		36.7	151	07.2 ¹²³	45.6 ¹⁰⁰	58	08	19 52	20 51	13	7	28	90
24	183	55.8	-11	37.6	165	38.5 ¹²³	-21 55.6 ¹⁰⁰	60 S	19 15	20 03	21 09	4 01	1	21 45	97

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 21 ^h 51 ^m 3		Mag: -4.0 PMG: 11 ^h 42 ^m		Mag: +1.6 PMG: 11 ^h 45 ^m		Mag: -1.8 PMG: 13 ^h 16 ^m		Mag: +0.6 PMG: 7 ^h 38 ^m									
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec									
h	°	'	°	'	°	'	°	'	°	'								
0	31	16.4	184	39.3	-9	49.2	183	40.1	-10	56.6	160	31.1	-17	46.1	245	16.9	+14	39.6
1	46	18.8	199	38.8		50.3	198	40.9		57.2	175	33.0		46.3	260	19.1		39.6
2	61	21.3	214	38.3		51.5	213	41.8		57.8	190	34.9		46.4	275	21.4		39.5
3	76	23.8	229	37.9		52.7	228	42.7		58.4	205	36.8		46.5	290	23.7		39.4
4	91	26.2	244	37.4		53.9	243	43.5		59.0	220	38.8		46.7	305	26.0		39.4
5	106	28.7	259	36.9	-9	55.0	258	44.4	-10	59.6	235	40.7	-17	46.8	320	28.2	+14	39.3
6	121	31.2	274	36.4	-9	56.2	273	45.3	-11	00.2	250	42.6	-17	46.9	335	30.5	+14	39.3
7	136	33.6	289	35.9		57.4	288	46.1		00.9	265	44.6		47.1	350	32.8		39.2
8	151	36.1	304	35.4		58.5	303	47.0		01.5	280	46.5		47.2	5	35.1		39.2
9	166	38.6	319	34.9	-9	59.7	318	47.9		02.1	295	48.4		47.4	20	37.4		39.1
10	181	41.0	334	34.5	-10	00.9	333	48.7		02.7	310	50.3		47.5	35	39.6		39.1
11	196	43.5	349	34.0	-10	02.1	348	49.6	-11	03.3	325	52.3	-17	47.6	50	41.9	+14	39.0
12	211	45.9	4	33.5	-10	03.2	3	50.5	-11	03.9	340	54.2	-17	47.8	65	44.2	+14	39.0
13	226	48.4	19	33.0		04.4	18	51.3		04.5	355	56.1		47.9	80	46.5		38.9
14	241	50.9	34	32.5		05.6	33	52.2		05.2	10	58.0		48.0	95	48.8		38.8
15	256	53.3	49	32.0		06.7	48	53.1		05.8	26	00.0		48.2	110	51.0		38.8
16	271	55.8	64	31.5		07.9	63	53.9		06.4	41	01.9		48.3	125	53.3		38.7
17	286	58.3	79	31.0	-10	09.1	78	54.8	-11	07.0	56	03.8	-17	48.5	140	55.6	+14	38.7
18	302	00.7	94	30.6	-10	10.2	93	55.7	-11	07.6	71	05.7	-17	48.6	155	57.9	+14	38.6
19	317	03.2	109	30.1		11.4	108	56.5		08.2	86	07.7		48.7	171	00.2		38.6
20	332	05.7	124	29.6		12.6	123	57.4		08.8	101	09.6		48.9	186	02.4		38.5
21	347	08.1	139	29.1		13.7	138	58.3		09.4	116	11.5		49.0	201	04.7		38.5
22	2	10.6	154	28.6		14.9	153	59.1		10.1	131	13.4		49.1	216	07.0		38.4
23	17	13.0	169	28.1		16.1	169	00.0		10.7	146	15.4		49.3	231	09.3		38.4
24	32	15.5	184	27.6	-10	17.2	184	00.8	-11	11.3	161	17.3	-17	49.4	246	11.6	+14	38.3
Dif	—		-5		-12		+9		-6		+19		-1		+23		-	

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'1 PMG: 11 ^h 44 ^m 2			Edad: 1 ^d 8 PHE { 4 ^h : 55'0 12 ^h : 55'1 20 ^h : 55'3 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	55.8	-11	37.6	165	38.5	-21 55.6	60 N	5 29	6 18	7 01	10 36	100	16 01	7
1	198	55.8		38.5	180	09.6 ¹²¹	-22 05.4 ⁹⁸	58	28	14	6 55	10 15	90	22	16
2	213	55.9		39.3	194	40.7 ¹²¹	15.2 ⁹⁸	56	28	11	50	9 58	85	40	22
3	228	56.0		40.2	209	11.7 ¹²⁰	24.8 ⁹⁶	54	27	08	45	44 80		16 55	26
4	243	56.1		41.1	223	42.6 ¹¹⁹	34.4 ⁹⁶	52	26	05	40	32 76		17 07	30
5	258	56.2	-11	42.0	238	13.4 ¹¹⁸	-22 43.8 ⁹⁴	50	5 25	6 03	6 36	9 21	74	17 19	32
6	273	56.3	-11	42.8	252	44.1 ¹¹⁷	-22 53.2 ⁹⁴	45	5 23	5 57	6 27	8 58	69	17 43	36
7	288	56.3		43.7	267	14.7 ¹¹⁶	-23 02.5 ⁹³	40	21	52	20	40 65		18 02	39
8	303	56.4		44.6	281	45.2 ¹¹⁵	11.6 ⁹¹	35	18	48	13	24 63		18	42
9	318	56.5		45.4	296	15.7 ¹¹⁵	20.7 ⁹¹	30	15	43	6 08	8 11	61	32	44
10	333	56.6		46.3	310	46.0 ¹¹³	29.7 ⁹⁰	20	10	36	5 58	7 49	57	18 56	47
11	348	56.7	-11	47.2	325	16.3 ¹¹³	-23 38.5 ⁸⁸	10 N	5 03	5 28	5 49	7 30	53	19 16	50
12	3	56.7	-11	48.0	339	46.5 ¹¹²	-23 47.2 ⁸⁷	0	4 55	5 20	5 41	7 12	50	19 36	52
13	18	56.8		48.9	354	16.6 ¹¹¹	-23 55.9 ⁸⁷	10 S	46	11	32	6 54	48	19 55	55
14	33	56.9		49.8	8	46.6 ¹¹⁰	-24 04.4 ⁸⁵	20	34	5 01	23	35 45		20 16	57
15	48	57.0		50.6	23	16.5 ¹⁰⁹	12.8 ⁸⁴	30	19	4 48	13	13 41		40 61	
16	63	57.0		51.5	37	46.3 ¹⁰⁸	21.1 ⁸³	35	4 09	40	07	6 01	38	20 55	62
17	78	57.1	-11	52.4	52	16.0 ¹⁰⁷	-24 29.3 ⁸²	40	3 57	4 31	5 00	5 46	36	21 11	65
18	93	57.2	-11	53.2	66	45.7 ¹⁰⁷	-24 37.4 ⁸¹	45	3 42	4 20	4 52	5 29	32	21 31	68
19	108	57.3		54.1	81	15.2 ¹⁰⁵	45.4 ⁸⁰	50	23	07	42	5 08	27	21 56	72
20	123	57.4		55.0	95	44.7 ¹⁰⁵	-24 53.2 ⁷⁸	52	14	4 00	37	4 58	25	22 08	74
21	138	57.4		55.8	110	14.0 ¹⁰³	-25 00.9 ⁷⁷	54	3 03	3 53	32	47 21		22 77	
22	153	57.5		56.7	124	43.3 ¹⁰³	08.6 ⁷⁷	56	2 51	45	26	34 18		38 81	
23	168	57.6		57.6	139	12.5 ¹⁰²	16.0 ⁷⁴	58	36	36	20	20 12		22 58	86
24	183	57.7	-11	58.4	153	41.6 ¹⁰¹	-25 23.4 ⁷⁴	60 S	2 18	3 25	4 13	4 02 5		23 22	97

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 21 ^h 47 ^m 4		Mag: -4.0 PMG: 11 ^h 43 ^m			Mag: +1.6 PMG: 11 ^h 43 ^m			Mag: -1.7 PMG: 13 ^h 13 ^m			Mag: +0.6 PMG: 7 ^h 34 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	32	15.5	184	27.6	-10	17.2	184	00.8	-11	11.3	161	17.3	-17	49.4	246	11.6	+14	38.3
1	47	18.0	199	27.1		18.4	199	01.7		11.9	176	19.2		49.6	261	13.9		38.3
2	62	20.4	214	26.6		19.5	214	02.6		12.5	191	21.2		49.7	276	16.1		38.2
3	77	22.9	229	26.1		20.7	229	03.4		13.1	206	23.1		49.8	291	18.4		38.1
4	92	25.4	244	25.6		21.9	244	04.3		13.7	221	25.0		50.0	306	20.7		38.1
5	107	27.8	259	25.1	-10	23.0	259	05.2	-11	14.3	236	26.9	-17	50.1	321	23.0	+14	38.0
6	122	30.3	274	24.7	-10	24.2	274	06.0	-11	14.9	251	28.9	-17	50.2	336	25.3	+14	38.0
7	137	32.8	289	24.2		25.4	289	06.9		15.6	266	30.8		50.4	351	27.5		37.9
8	152	35.2	304	23.7		26.5	304	07.7		16.2	281	32.7		50.5	6	29.8		37.9
9	167	37.7	319	23.2		27.7	319	08.6		16.8	296	34.6		50.7	21	32.1		37.8
10	182	40.2	334	22.7		28.8	334	09.5		17.4	311	36.5		50.8	36	34.4		37.8
11	197	42.6	349	22.2	-10	30.0	349	10.3	-11	18.0	326	38.5	-17	50.9	51	36.7	+14	37.7
12	212	45.1	4	21.7	-10	31.2	4	11.2	-11	18.6	341	40.4	-17	51.1	66	39.0	+14	37.7
13	227	47.5	19	21.2		32.3	19	12.0		19.2	356	42.3		51.2	81	41.2		37.6
14	242	50.0	34	20.7		33.5	34	12.9		19.8	11	44.2		51.3	96	43.5		37.6
15	257	52.5	49	20.2		34.6	49	13.8		20.4	26	46.2		51.5	111	45.8		37.5
16	272	54.9	64	19.7		35.8	64	14.6		21.1	41	48.1		51.6	126	48.1		37.4
17	287	57.4	79	19.2	-10	36.9	79	15.5	-11	21.7	56	50.0	-17	51.8	141	50.4	+14	37.4
18	302	59.9	94	18.7	-10	38.1	94	16.3	-11	22.3	71	51.9	-17	51.9	156	52.7	+14	37.3
19	318	02.3	109	18.2		39.3	109	17.2		22.9	86	53.9		52.0	171	54.9		37.3
20	333	04.8	124	17.7		40.4	124	18.1		23.5	101	55.8		52.2	186	57.2		37.2
21	348	07.3	139	17.2		41.6	139	18.9		24.1	116	57.7		52.3	201	59.5		37.2
22	3	09.7	154	16.7		42.7	154	19.8		24.7	131	59.6		52.4	217	01.8		37.1
23	18	12.2	169	16.2		43.9	169	20.6		25.3	147	01.6		52.6	232	04.1		37.1
24	33	14.7	184	15.7	-10	45.0	184	21.5	-11	25.9	162	03.5	-17	52.7	247	06.4	+14	37.0
Dif	—		-5	-12		+9	-6			+19	-1		+23		-1			

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna					
	SD: 16°1			Edad: 2 ^d 8 PHE { 4 ^h : 55/4 12 ^h : 55/6 20 ^h : 55/7 R°: 55 ^m														
	PMG: 11 ^h 44 ^m 1				SD: 15°1				PMG: 14 ^h 15 ^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	57.7	-11 58.4	153	41.6	-25 23.4		60 N	16 23	17 07	17 56	12 16 91		16 08 22				
1	198	57.7	-11 59.3	168	10.7 ¹⁰¹	30.7 ⁷³		58	30	11	57	11 45 81		16 38 33				
2	213	57.8	-12 00.2	182	39.6 ⁹⁹	37.8 ⁷¹		56	36	14	58	23 75		17 02 38				
3	228	57.9	01.0	197	08.4 ⁹⁸	44.8 ⁷⁰		54	41	17	59	11 04 72		21 4				
4	243	58.0	01.9	211	37.2 ⁹⁸	51.7 ⁶⁹		52	45	20	00	10 48 70		37 43				
5	258	58.0	-12 02.8	226	05.9 ⁹⁷	-25 58.4 ⁶⁷		50	16 50	17 23	18 01	10 35 68		17 51 44				
6	273	58.1	-12 03.6	240	34.5 ⁹⁶	-26 05.1 ⁶⁷		45	16 59	17 29	18 03	10 07 65		18 19 47				
7	288	58.2	04.5	255	03.0 ⁹⁵	11.6 ⁶⁵		40	17 07	34	06	9 45 63		18 41 49				
8	303	58.2	05.3	269	31.4 ⁹⁴	17.9 ⁶³		35	13	39	09	27 62		19 00 50				
9	318	58.3	06.2	283	59.8 ⁹⁴	24.2 ⁶³		30	19	44	12	9 12 60		16 51				
10	333	58.4	07.1	298	28.0 ⁹²	30.3 ⁶¹		20	30	17 52	18	8 46 57		19 43 53				
11	348	58.5	-12 07.9	312	56.2 ⁹²	-26 36.2 ⁵⁹		10 N	17 39	18 00	18 25	8 23 56		20 06 55				
12	3	58.5	-12 08.8	327	24.3 ⁹¹	-26 42.1 ⁵⁹		0	17 47	18 09	18 33	8 02 55		20 28 55				
13	18	58.6	09.7	341	52.3 ⁹⁰	47.8 ⁵⁷		10 S	17 56	18	43	7 42 52		20 50 56				
14	33	58.7	10.5	356	20.3 ⁹⁰	53.4 ⁵⁶		20	18 06	29	18 55	7 20 50		21 13 58				
15	48	58.7	11.4	10	48.2 ⁸⁹	-26 58.8 ⁵⁴		30	17	42	19 11	6 54 48		41 59				
16	63	58.8	12.2	25	15.9 ⁸⁷	-27 04.1 ⁵³		35	23	50	21	39 46		21 57 60				
17	78	58.9	-12 13.1	39	43.7 ⁸⁸	-27 09.2 ⁵¹		40	18 31	18 59	19 34	6 22 44		22 16 60				
18	93	59.0	-12 14.0	54	11.3 ⁸⁶	-27 14.3 ⁵¹		45	18 39	19 11	19 49	6 01 42		22 39 61				
19	108	59.0	14.8	68	38.9 ⁸⁶	19.1 ⁴⁸		50	50	25	20 09	5 35 38		23 08 63				
20	123	59.1	15.7	83	06.3 ⁸⁴	23.9 ⁴⁸		52	18 54	31	18	23 36		22 65				
21	138	59.2	16.5	97	33.8 ⁸⁵	28.5 ⁴⁶		54	19 00	39	30	5 08 34		39 66				
22	153	59.2	17.4	112	01.1 ⁸³	32.9 ⁴⁴		56	06	48	43	4 52 29		23 59 67				
23	168	59.3	18.2	126	28.4 ⁸³	37.2 ⁴³		58	12	19 57	20 58	32 24		** ** *				
24	183	59.4	-12 19.1	140	55.6 ⁸²	-27 41.4 ⁴²		60 S	19 20	20 09	21 18	4 07 14		** ** *				
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 21 ^h 43 ^m 5		Mag: -4.0 PMG: 11 ^h 43 ^m			Mag: +1.6 PMG: 11 ^h 42 ^m			Mag: -1.7 PMG: 13 ^h 10 ^m			Mag: +0.6 PMG: 7 ^h 30 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°			
0	33	14.7	184	15.7	-10	45.0	184	21.5	-11	25.9	162	03.5	-17	52.7	247	06.4	+14	37.0
1	48	17.1	199	15.2		46.2	199	22.4		26.5	177	05.4		52.9	262	08.7		37.0
2	63	19.6	214	14.7		47.3	214	23.2		27.1	192	07.3		53.0	277	10.9		36.9
3	78	22.0	229	14.2		48.5	229	24.1		27.8	207	09.3		53.1	292	13.2		36.9
4	93	24.5	244	13.7		49.6	244	24.9		28.4	222	11.2		53.3	307	15.5		36.8
5	108	27.0	259	13.2	-10	50.8	259	25.8	-11	29.0	237	13.1	-17	53.4	322	17.8	+14	36.8
6	123	29.4	274	12.7	-10	51.9	274	26.6	-11	29.6	252	15.0	-17	53.5	337	20.1	+14	36.7
7	138	31.9	289	12.2		53.1	289	27.5		30.2	267	16.9		53.7	352	22.4		36.7
8	153	34.4	304	11.7		54.2	304	28.4		30.8	282	18.9		53.8	7	24.7		36.6
9	168	36.8	319	11.2		55.4	319	29.2		31.4	297	20.8		53.9	22	26.9		36.5
10	183	39.3	334	10.7		56.5	334	30.1		32.0	312	22.7		54.1	37	29.2		36.5
11	198	41.8	349	10.2	-10	57.7	349	30.9	-11	32.6	327	24.6	-17	54.2	52	31.5	+14	36.4
12	213	44.2	4	09.7	-10	58.8	4	31.8	-11	33.2	342	26.6	-17	54.4	67	33.8	+14	36.4
13	228	46.7	19	09.2	-11	00.0	19	32.6		33.8	357	28.5		54.5	82	36.1		36.3
14	243	49.1	34	08.7	-11	01.1	34	33.5		34.4	12	30.4		54.6	97	38.4		36.3
15	258	51.6	49	08.1		02.3	49	34.3		35.1	27	32.3		54.8	112	40.7		36.2
16	273	54.1	64	07.6		03.4	64	35.2		35.7	42	34.2		54.9	127	42.9		36.2
17	288	56.5	79	07.1	-11	04.6	79	36.1	-11	36.3	57	36.2	-17	55.0	142	45.2	+14	36.1
18	303	59.0	94	06.6	-11	05.7	94	36.9	-11	36.9	72	38.1	-17	55.2	157	47.5	+14	36.1
19	319	01.5	109	06.1		06.9	109	37.8		37.5	87	40.0		55.3	172	49.8		36.0
20	334	03.9	124	05.6		08.0	124	38.6		38.1	102	41.9		55.5	187	52.1		36.0
21	349	06.4	139	05.1		09.2	139	39.5		38.7	117	43.9		55.6	202	54.4		35.9
22	4	08.9	154	04.6		10.3	154	40.3		39.3	132	45.8		55.7	217	56.7		35.9
23	19	11.3	169	04.1		11.4	169	41.2		39.9	147	47.7		55.9	232	59.0		35.8
24	34	13.8	184	03.6	-11	12.6	184	42.0	-11	40.5	162	49.6	-17	56.0	248	01.2	+14	35.8
Dif	—		-5		-11	+9		-6		+19		-1		+23		-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: 3 ^d 8 PHE { 4 ^h : 55'9 12 ^h : 56'1 20 ^h : 56'3 R°: 57 ^m													
	hG ☉		Dec		hG ☾		Dif			Dif			Náutico	Civil	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m
0	183	59.4	-12	19.1	140	55.6	-27	41.4	60 N	5	34	6	22	7	06	13	47	57
1	198	59.4		20.0	155	22.7		45.4	58	33	19	7	00	13	06	58	17	11
2	213	59.5		20.8	169	49.8		49.2	56	31	15	6	54	12	38	58	17	40
3	228	59.6		21.7	184	16.8		52.9	54	30	12	48		12	16	58	18	02
4	243	59.6		22.5	198	43.8		56.5	52	29	09	44		11	58	58	20	60
5	258	59.7	-12	23.4	213	10.6	-27	59.9	50	5	28	6	06	6	39	11	43	58
6	273	59.8	-12	24.2	227	37.5	-28	03.2	45	5	25	6	00	6	30	11	12	58
7	288	59.8		25.1	242	04.2		06.3	40	23	5	54	22	10	48	58		30
8	303	59.9		25.9	256	30.9		09.2	35	20	49	15		29	57		19	50
9	319	00.0		26.8	270	57.6		12.1	30	17	45	6	09	10	12	57	20	07
10	334	00.0		27.7	285	24.2		14.7	20	10	36	5	59	9	43	57	20	36
11	349	00.1	-12	28.5	299	50.7	-28	17.2	10 N	5	03	5	49	9	19	57	21	01
12	4	00.2	-12	29.4	314	17.2	-28	19.5	0	4	55	5	19	5	41	8	57	56
13	19	00.2		30.2	328	43.6		21.7	10 S	45	5	10	32		34	56	21	46
14	34	00.3		31.1	343	10.0		23.8	20	33	4	59	22	8	10	56	22	11
15	49	00.3		31.9	357	36.3		25.6	30	17	46	11		7	42	55		40
16	64	00.4		32.8	12	02.6		27.3	35	4	06	38	5	04	25	55	22	57
17	79	00.5	-12	33.6	26	28.8	-28	28.9	40	3	54	4	28	4	57	7	06	54
18	94	00.5	-12	34.5	40	55.0	-28	30.3	45	3	39	4	17	4	48	6	43	53
19	109	00.6		35.3	55	21.2		31.5	50	19	4	03	38	6	13	52	**	**
20	124	00.7		36.2	69	47.3		32.6	52	3	09	3	56	33	5	59	51	**
21	139	00.7		37.0	84	13.4		33.5	54	2	58	48	28		42	50	**	**
22	154	00.8		37.9	98	39.4		34.3	56	45	40	22		5	21	49	**	**
23	169	00.8		38.7	113	05.4		34.9	58	29	30	15		4	56	46	0	24
24	184	00.9	-12	39.6	127	31.4	-28	35.3	60 S	2	10	3	18	4	07	4	21	41

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 21 ^h 39 ^m 5		Mag: -4.0 PMG: 11 ^h 44 ^m		Mag: +1.6 PMG: 11 ^h 41 ^m		Mag: -1.7 PMG: 13 ^h 07 ^m		Mag: +0.6 PMG: 7 ^h 27 ^m	
	hG ♂		hG ♀		hG ♂		hG ♀		hG ♀	
h	°	'	°	'	°	'	°	'	°	'
0	34	13.8	184	03.6	-11	12.6	184	42.0	-11	40.5
1	49	16.3	199	03.1		13.7	199	42.9		41.1
2	64	18.7	214	02.6		14.9	214	43.7		41.7
3	79	21.2	229	02.0		16.0	229	44.6		42.3
4	94	23.6	244	01.5		17.2	244	45.5		42.9
5	109	26.1	259	01.0	-11	18.3	259	46.3	-11	43.5
6	124	28.6	274	00.5	-11	19.4	274	47.2	-11	44.1
7	139	31.0	289	00.0		20.6	289	48.0		44.7
8	154	33.5	303	59.5		21.7	304	48.9		45.4
9	169	36.0	318	59.0		22.9	319	49.7		46.0
10	184	38.4	333	58.5		24.0	334	50.6		46.6
11	199	40.9	348	57.9	-11	25.1	349	51.4	-11	47.2
12	214	43.4	3	57.4	-11	26.3	4	52.3	-11	47.8
13	229	45.8	18	56.9		27.4	19	53.1		48.4
14	244	48.3	33	56.4		28.5	34	54.0		49.0
15	259	50.8	48	55.9		29.7	49	54.8		49.6
16	274	53.2	63	55.4		30.8	64	55.7		50.2
17	289	55.7	78	54.8	-11	32.0	79	56.5	-11	50.8
18	304	58.1	93	54.3	-11	33.1	94	57.4	-11	51.4
19	320	00.6	108	53.8		34.2	109	58.2		52.0
20	335	03.1	123	53.3		35.4	124	59.1		52.6
21	350	05.5	138	52.8		36.5	139	59.9		53.2
22	5	08.0	153	52.3		37.6	155	00.8		53.8
23	20	10.5	168	51.7		38.8	170	01.6		54.4
24	35	12.9	183	51.2	-11	39.9	185	02.5	-11	55.0
Dif	—		-5		-11		+9		-6	

UT	SOL			 LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16:1 PMG: 11 ^h 43 ^m 9			Edad: 4 ^d 8 PHE { 4 ^h : 56:5 12 ^h : 56:6 20 ^h : 56:9 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	184	00.9	-12 39.6	127	31.4	-28 35.3	3	60 N	16 18	17 02	17 51	14 44 20	17 32 99		
1	199	01.0		141	57.3	35.6	1	58	25	06	52	14 04 31	18 12 88		
2	214	01.0		156	23.2	35.7	1	56	31	10	53	13 36 37	18 40 82		
3	229	01.1		170	49.1	35.6	1	54	37	13	55	13 14 40	19 02 78		
4	244	01.1		185	14.9	35.4	2	52	42	17	56	12 56 43	20 75		
5	259	01.2	-12 43.8	199	40.7	35.0	4	50	16 46	17 19	17 57	12 41 44	19 35 73		
6	274	01.3	-12 44.7	214	06.5	34.4	6	45	16 56	17 26	18 00	12 10 47	20 05 70		
7	289	01.3		228	32.3	33.7	7	40	17 04	32	04	11 46 49	29 67		
8	304	01.4		242	58.1	32.8	9	35	11	37	07	26 51	20 49 65		
9	319	01.4		257	23.8	31.8	10	30	17	42	10	11 09 52	21 06 63		
10	334	01.5		271	49.5	30.6	12	20	28	17 51	17	10 40 55	34 61		
11	349	01.5	-12 48.9	286	15.2	29.2	14	10 N	17 38	18 00	18 24	10 16 56	21 58 59		
12	4	01.6	-12 49.7	300	40.9	27.6	16	0	17 47	18 08	18 33	9 53 57	22 20 57		
13	19	01.7		315	06.6	25.9	17	10 S	17 57	18	43	30 58	22 43 54		
14	34	01.7		329	32.3	24.0	19	20	18 07	29	18 56	9 06 59	23 07 52		
15	49	01.8		343	57.9	22.0	20	30	18	43	19 13	8 37 61	34 50		
16	64	01.8		358	23.6	19.8	22	35	25	18 52	24	20 62	23 51 47		
17	79	01.9	-12 53.9	12	49.2	17.4	24	40	18 33	19 02	19 36	8 00 64	*** ** *		
18	94	01.9	-12 54.8	27	14.9	14.8	26	45	18 42	19 14	19 52	7 36 65	*** ** *		
19	109	02.0		55.6	41	40.5	27	50	53	28	20 13	7 05 67	0 11 51		
20	124	02.0		56.5	56	06.2	29	52	18 58	36	23	6 50 68	27 50		
21	139	02.1		57.3	70	31.8	30	54	19 04	44	35	32 70	0 45 48		
22	154	02.1		58.2	84	57.5	32	56	10	19 53	20 49	6 10 72	1 06 47		
23	169	02.2		59.0	99	23.2	34	58	17	20 03	21 06	5 42 76	1 34 44		
24	184	02.3	-12 59.8	113	48.8	27.6	36	60 S	19 25	20 15	21 26	5 02 83	2 15 36		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 21 ^h 35 ^m 6		Mag: -4.0 PMG: 11 ^h 45 ^m		Mag: +1.6 PMG: 11 ^h 39 ^m		Mag: -1.7 PMG: 13 ^h 04 ^m		Mag: +0.6 PMG: 7 ^h 23 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	35	12.9	183	51.2	-11 39.9	185	02.5	-11 55.0	163	35.7
1	50	15.4	198	50.7	41.0	200	03.3	55.6	178	37.6
2	65	17.9	213	50.2	42.1	215	04.2	56.2	193	39.6
3	80	20.3	228	49.7	43.3	230	05.0	56.8	208	41.5
4	95	22.8	243	49.1	44.4	245	05.9	57.4	223	43.4
5	110	25.3	258	48.6	-11 45.5	260	06.7	-11 58.0	238	45.3
6	125	27.7	273	48.1	-11 46.7	275	07.6	-11 58.6	253	47.2
7	140	30.2	288	47.6	47.8	290	08.4	59.2	268	49.1
8	155	32.6	303	47.0	48.9	305	09.3	-11 59.8	283	51.1
9	170	35.1	318	46.5	50.0	320	10.1	-12 00.4	298	53.0
10	185	37.6	333	46.0	51.2	335	11.0	01.0	313	54.9
11	200	40.0	348	45.5	-11 52.3	350	11.8	-12 01.6	328	56.8
12	215	42.5	3	44.9	-11 53.4	5	12.7	-12 02.2	343	58.7
13	230	45.0	18	44.4	54.6	20	13.5	02.8	359	00.7
14	245	47.4	33	43.9	55.7	35	14.3	03.4	14	02.6
15	260	49.9	48	43.4	56.8	50	15.2	04.0	29	04.5
16	275	52.4	63	42.8	57.9	65	16.0	04.6	44	06.4
17	290	54.8	78	42.3	-11 59.1	80	16.9	-12 05.2	59	08.3
18	305	57.3	93	41.8	-12 00.2	95	17.7	-12 05.8	74	10.3
19	320	59.8	108	41.3	01.3	110	18.6	06.4	89	12.2
20	336	02.2	123	40.7	02.4	125	19.4	07.0	104	14.1
21	351	04.7	138	40.2	03.5	140	20.3	07.6	119	16.0
22	6	07.1	153	39.7	04.7	155	21.1	08.2	134	17.9
23	21	09.6	168	39.2	05.8	170	22.0	08.8	149	19.8
24	36	12.1	183	38.6	-12 06.9	185	22.8	-12 09.4	164	21.8
Dif	—		-5		-11	+8		-6	+19	
									-1	
									+23	
									0	

UT	SOL			 LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16 ^h 1			Edad: 5 ^d 8	PHE {	SD: 15 ^h 5	20 ^h : 57 ^h 5	R°: 55 ^m		Náutico	Civil		Hora	R°	Hora	R°
	PMG: 11 ^h 43 ^m 8															
	hG ☉	Dec		hG ☾	Dif	Dec	Dif									
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	184	02.3	-12	59.8	113	48.8	-27	56.0	37	58	5	38	6	27	7	11
1	199	02.3	-13	00.7	128	14.5	67	52.3	37	58	37	23	7	04	14	35
2	214	02.4		01.5	142	40.2	67	48.5	38	56	35	19	6	58	14	13
3	229	02.4		02.4	157	05.9	67	44.4	41	54	34	15	52	13	54	27
4	244	02.5		03.2	171	31.6	67	40.2	42	52	32	12	47	39	29	
5	259	02.5	-13	04.0	185	57.3	67	-27	35.8	44	50	5	31	6	09	13
6	274	02.6	-13	04.9	200	23.1	68	-27	31.3	45	45	5	28	6	02	12
7	289	02.6		05.7	214	48.8	67	26.6	47	40	25	5	56	24	35	42
8	304	02.7		06.6	229	14.6	68	21.7	49	35	21	51	17	17	44	
9	319	02.7		07.4	243	40.4	68	16.7	50	30	18	46	11	12	01	47
10	334	02.8		08.2	258	06.2	68	11.5	52	20	11	37	6	00	11	35
11	349	02.8	-13	09.1	272	32.1	69	-27	06.1	54	10 N	5	03	5	28	11
12	4	02.9	-13	09.9	286	58.0	69	-27	00.6	55	0	4	55	5	19	10
13	19	02.9		10.7	301	23.9	69	-26	54.9	57	10 S	44	5	09	31	28
14	34	03.0		11.6	315	49.8	69	49.0	59	20	31	4	58	21	10	05
15	49	03.0		12.4	330	15.8	70	43.0	60	30	14	44	09	9	38	66
16	64	03.1		13.2	344	41.8	70	36.8	62	35	4	04	36	5	02	22
17	79	03.1	-13	14.1	359	07.8	70	-26	30.5	63	40	3	51	4	26	4
18	94	03.1	-13	14.9	13	33.8	70	-26	24.0	65	45	3	35	4	14	4
19	109	03.2		15.7	27	59.9	71	17.3	67	50	14	3	59	34	8	12
20	124	03.2		16.6	42	26.0	71	10.5	68	52	3	04	51	29	7	58
21	139	03.3		17.4	56	52.2	72	-26	03.6	69	54	2	52	43	23	42
22	154	03.3		18.2	71	18.4	72	-25	56.4	72	56	38	34	17	7	22
23	169	03.4		19.1	85	44.7	73	49.1	73	58	21	24	10	6	58	94
24	184	03.4	-13	19.9	100	10.9	72	-25	41.7	74	60 S	2	00	3	12	4

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 21 ^h 31 ^m 7		Mag: -4.0 PMG: 11 ^h 46 ^m			Mag: +1.6 PMG: 11 ^h 38 ^m			Mag: -1.7 PMG: 13 ^h 01 ^m			Mag: +0.6 PMG: 7 ^h 19 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	36	12.1	183	38.6	-12	06.9	185	22.8	-12	09.4	164	21.8	-18	02.6
1	51	14.5	198	38.1		08.0	200	23.7		10.0	179	23.7		02.7
2	66	17.0	213	37.6		09.1	215	24.5		10.6	194	25.6		02.8
3	81	19.5	228	37.0		10.3	230	25.3		11.2	209	27.5		03.0
4	96	21.9	243	36.5		11.4	245	26.2		11.8	224	29.4		03.1
5	111	24.4	258	36.0	-12	12.5	260	27.0	-12	12.4	239	31.3	-18	03.2
6	126	26.9	273	35.4	-12	13.6	275	27.9	-12	13.0	254	33.3	-18	03.4
7	141	29.3	288	34.9		14.7	290	28.7		13.6	269	35.2		03.5
8	156	31.8	303	34.4		15.8	305	29.6		14.2	284	37.1		03.6
9	171	34.2	318	33.8		17.0	320	30.4		14.8	299	39.0		03.8
10	186	36.7	333	33.3		18.1	335	31.2		15.4	314	40.9		03.9
11	201	39.2	348	32.8	-12	19.2	350	32.1	-12	16.0	329	42.8	-18	04.1
12	216	41.6	3	32.2	-12	20.3	5	32.9	-12	16.6	344	44.8	-18	04.2
13	231	44.1	18	31.7		21.4	20	33.8		17.2	359	46.7		04.3
14	246	46.6	33	31.2		22.5	35	34.6		17.8	14	48.6		04.5
15	261	49.0	48	30.6		23.6	50	35.5		18.4	29	50.5		04.6
16	276	51.5	63	30.1		24.8	65	36.3		19.0	44	52.4		04.7
17	291	54.0	78	29.6	-12	25.9	80	37.1	-12	19.6	59	54.3	-18	04.9
18	306	56.4	93	29.0	-12	27.0	95	38.0	-12	20.2	74	56.3	-18	05.0
19	321	58.9	108	28.5		28.1	110	38.8		20.8	89	58.2		05.1
20	337	01.4	123	27.9		29.2	125	39.7		21.4	105	00.1		05.3
21	352	03.8	138	27.4		30.3	140	40.5		22.0	120	02.0		05.4
22	7	06.3	153	26.9		31.4	155	41.3		22.6	135	03.9		05.5
23	22	08.7	168	26.3		32.5	170	42.2		23.2	150	05.8		05.7
24	37	11.2	183	25.8	-12	33.6	185	43.0	-12	23.8	165	07.8	-18	05.8

Dif	—	-5	-11	+8	-6	+19	-1	+23	0

UT	SOL			 LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16 ^h 1			Edad: 6 ^d 8	PHE {	4 ^h : 57/8 12 ^h : 58/0 20 ^h : 58/2			Civil		Náutico	Hora	R°	Hora	R°
	PMG: 11 ^h 43 ^m 7								hG ☉	Dec					
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m m	h m m	h m m	h m m
0	184	03.4	-13	19.9	100	10.9	-25	41.7	60 N	16 12	16 57	17 46	15 10 2	21 01 108	
1	199	03.5		20.7	114	37.3	74	34.1	58	20	17 01	48	14 51 8	19 102	
2	214	03.5		21.6	129	03.6	73	26.3	56	26	06	49	35 13	35 97	
3	229	03.6		22.4	143	30.0	74	18.4	54	32	09	51	21 17	21 48 93	
4	244	03.6		23.2	157	56.5	75	10.3	52	38	13	52	14 08 22	22 00 89	
5	259	03.6	-13	24.1	172	23.0	75	-25 02.1	50	16 42	17 16	17 54	13 58 24	22 10 86	
6	274	03.7	-13	24.9	186	49.5	75	-24 53.8	45	16 53	17 23	17 58	13 35 30	22 32 79	
7	289	03.7		25.7	201	16.1	76	45.2	40	17 02	29	18 01	17 34	22 49 74	
8	304	03.8		26.5	215	42.7	76	36.6	35	09	35	05	13 01 38	23 03 71	
9	319	03.8		27.4	230	09.4	77	27.7	30	16	40	08	12 48 41	16 67	
10	334	03.9		28.2	244	36.1	77	18.8	20	27	50	16	25 46	37 62	
11	349	03.9	-13	29.0	259	02.9	78	-24 09.6	10 N	17 37	17 59	18 24	12 05 50	23 55 57	
12	4	03.9	-13	29.9	273	29.7	78	-24 00.4	0	17 47	18 08	18 33	11 46 54	*** ** *	
13	19	04.0		30.7	287	56.6	79	-23 51.0	10 S	17 57	19	44	27 58	*** ** *	
14	34	04.0		31.5	302	23.5	79	41.4	20	18 08	30	18 57	11 07 62	*** ** *	
15	49	04.1		32.3	316	50.5	80	31.7	30	20	45	19 15	10 44 67	0 24 43	
16	64	04.1		33.2	331	17.5	80	21.8	35	27	18 54	26	30 70	38 41	
17	79	04.1	-13	34.0	345	44.6	81	-23 11.8	40	18 35	19 04	19 39	10 14 74	0 55 38	
18	94	04.2	-13	34.8	0	11.8	82	-23 01.7	45	18 45	19 17	19 56	9 55 78	1 15 34	
19	109	04.2		35.6	14	38.9	81	-22 51.4	50	18 56	32	20 17	31 84	40 28	
20	124	04.2		36.5	29	06.2	83	41.0	52	19 02	40	28	19 87	1 52 25	
21	139	04.3		37.3	43	33.5	83	30.5	54	08	48	41	9 06 91	2 06 22	
22	154	04.3		38.1	58	00.8	83	19.8	56	14	19 58	20 55	8 51 95	22 17	
23	169	04.4		38.9	72	28.2	84	-22 08.9	58	22	20 08	21 13	32 101	2 41 12	
24	184	04.4	-13	39.8	86	55.7	85	-21 58.0	60 S	19 30	20 21	21 36	8 10 109	3 04 4	
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG: 21 ^h 27 ^m 7		Mag: -4.0 PMG: 11 ^h 47 ^m		Mag: +1.6 PMG: 11 ^h 36 ^m		Mag: -1.7 PMG: 12 ^h 58 ^m		Mag: +0.5 PMG: 7 ^h 16 ^m						
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'					
0	37	11.2	183	25.8	-12	33.6	185	43.0	-12	23.8					
1	52	13.7	198	25.2		34.7	200	43.9		24.4					
2	67	16.1	213	24.7		35.9	215	44.7		25.0					
3	82	18.6	228	24.2		37.0	230	45.5		25.6					
4	97	21.1	243	23.6		38.1	245	46.4		26.2					
5	112	23.5	258	23.1	-12	39.2	260	47.2	-12	26.8					
6	127	26.0	273	22.5	-12	40.3	275	48.1	-12	27.4					
7	142	28.5	288	22.0		41.4	290	48.9		28.0					
8	157	30.9	303	21.5		42.5	305	49.7		28.6					
9	172	33.4	318	20.9		43.6	320	50.6		29.2					
10	187	35.9	333	20.4		44.7	335	51.4		29.7					
11	202	38.3	348	19.8	-12	45.8	350	52.3	-12	30.3					
12	217	40.8	3	19.3	-12	46.9	5	53.1	-12	30.9					
13	232	43.2	18	18.7		48.0	20	53.9		31.5					
14	247	45.7	33	18.2		49.1	35	54.8		32.1					
15	262	48.2	48	17.6		50.2	50	55.6		32.7					
16	277	50.6	63	17.1		51.3	65	56.4		33.3					
17	292	53.1	78	16.5	-12	52.4	80	57.3	-12	33.9					
18	307	55.6	93	16.0	-12	53.5	95	58.1	-12	34.5					
19	322	58.0	108	15.4		54.6	110	59.0		35.1					
20	338	00.5	123	14.9		55.7	125	59.8		35.7					
21	353	03.0	138	14.4		56.8	141	00.6		36.3					
22	8	05.4	153	13.8		57.9	156	01.5		36.9					
23	23	07.9	168	13.3	-12	59.0	171	02.3		37.5					
24	38	10.4	183	12.7	-13	00.1	186	03.1	-12	38.1					
Dif	—		-5	-11	+8	-6	+19	-1	+23	0					

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16 ^h 1			Edad: 7 ^d 8	PHE { 4 ^h : 58 ^m 5 12 ^h : 58 ^m 7 20 ^h : 58 ^m 9									
	PMG: 11 ^h 43 ^m 7					SD: 15 ^h 9		PMG: 18 ^h 53 ^m			R ^o : 51 ^m			
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico	Civil		Hora	R ^o	Hora	R ^o
h	°	'	°	°	'	°	'	h	m	h	m	h	m	m
0	184	04.4	-13 39.8	86	55.7	-21 58.0	60 N	5 43	6 32	7 17	15 12	0	22 49	106
1	199	04.4	40.6	101	23.2	85 46.9	58	41	27	09	14 59	5	23 01	101
2	214	04.5	41.4	115	50.8	86 35.6	56	39	23	7 02	48 9		12 96	
3	229	04.5	42.2	130	18.4	86 24.3	54	37	19	6 56	38 13		21 92	
4	244	04.5	43.0	144	46.1	87 12.8	52	36	16	51	30 15		29 89	
5	259	04.6	-13 43.9	159	13.8	87 -21 01.1	50	5 34	6 12	6 46	14 22	18	23 36	86
6	274	04.6	-13 44.7	173	41.6	88 -20 49.4	45	5 30	6 05	6 35	14 05	24	23 51	80
7	289	04.7	45.5	188	09.4	88 37.5	40	27	5 59	27	13 51	29	** ** *	**
8	304	04.7	46.3	202	37.3	89 25.5	35	23	53	19	39 33		** ** *	**
9	319	04.7	47.1	217	05.3	90 13.3	30	19	48	12	29 36		** ** *	**
10	334	04.8	48.0	231	33.3	90 -20 01.1	20	12	38	6 00	13 11	42	** ** *	**
11	349	04.8	-13 48.8	246	01.3	90 -19 48.7	10 N	5 04	5 29	5 50	12 55	47	** ** *	**
12	4	04.8	-13 49.6	260	29.4	91 -19 36.2	0	4 54	5 19	5 40	12 40	52	0 12	53
13	19	04.9	50.4	274	57.6	92 23.5	10 S	43	5 09	30	25 57		29 48	
14	34	04.9	51.2	289	25.8	92 -19 10.8	20	30	4 57	20	12 09	62	0 47	44
15	49	04.9	52.1	303	54.1	93 -18 57.9	30	12	42	07	11 51	67	1 07	39
16	64	05.0	52.9	318	22.4	93 44.9	35	4 01	33	5 00	40 71		19 35	
17	79	05.0	-13 53.7	332	50.8	94 -18 31.8	40	3 48	4 23	4 52	11 28	75	1 33	31
18	94	05.0	-13 54.5	347	19.2	94 -18 18.6	45	3 31	4 10	4 42	11 13	80	1 49	27
19	109	05.0	55.3	1	47.7	95 -18 05.2	50	3 09	3 55	30	10 55	86	2 08	21
20	124	05.1	56.1	16	16.2	95 -17 51.8	52	2 59	47	25	46 89		17 19	
21	139	05.1	57.0	30	44.8	96 38.2	54	46	39	19	37 92		28 15	
22	154	05.1	57.8	45	13.4	96 24.6	56	31	29	12	26 96		39 12	
23	169	05.2	58.6	59	42.1	97 -17 10.8	58	2 14	18	4 05	10 13	102	2 53	6
24	184	05.2	-13 59.4	74	10.8	97 -16 56.9	60 S	1 51	3 05	3 56	9 59	107	3 08	1

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 21 ^h 23 ^m 8		Mag: -4.0 PMG: 11 ^h 48 ^m		Mag: +1.6 PMG: 11 ^h 35 ^m		Mag: -1.7 PMG: 12 ^h 55 ^m		Mag: +0.5 PMG: 7 ^h 12 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	38	10.4	183 12.7	-13 00.1	186 03.1	-12 38.1	165 53.7	-18 09.1	251 41.6	+14 31.1
1	53	12.8	198 12.2	01.2	201 04.0	38.7	180 55.6	09.2	266 43.9	31.0
2	68	15.3	213 11.6	02.3	216 04.8	39.2	195 57.5	09.3	281 46.3	31.0
3	83	17.7	228 11.0	03.3	231 05.6	39.8	210 59.5	09.5	296 48.6	30.9
4	98	20.2	243 10.5	04.4	246 06.5	40.4	226 01.4	09.6	311 50.9	30.9
5	113	22.7	258 09.9	-13 05.5	261 07.3	-12 41.0	241 03.3	-18 09.8	326 53.2	+14 30.8
6	128	25.1	273 09.4	-13 06.6	276 08.1	-12 41.6	256 05.2	-18 09.9	341 55.5	+14 30.8
7	143	27.6	288 08.8	07.7	291 09.0	42.2	271 07.1	10.0	356 57.8	30.7
8	158	30.1	303 08.3	08.8	306 09.8	42.8	286 09.0	10.2	12 00.1	30.7
9	173	32.5	318 07.7	09.9	321 10.7	43.4	301 10.9	10.3	27 02.4	30.6
10	188	35.0	333 07.2	11.0	336 11.5	44.0	316 12.9	10.4	42 04.7	30.6
11	203	37.5	348 06.6	-13 12.1	351 12.3	-12 44.6	331 14.8	-18 10.6	57 07.0	+14 30.5
12	218	39.9	3 06.1	-13 13.2	6 13.2	-12 45.2	346 16.7	-18 10.7	72 09.3	+14 30.5
13	233	42.4	18 05.5	14.2	21 14.0	45.8	1 18.6	10.8	87 11.6	30.5
14	248	44.9	33 05.0	15.3	36 14.8	46.3	16 20.5	11.0	102 13.9	30.4
15	263	47.3	48 04.4	16.4	51 15.6	46.9	31 22.4	11.1	117 16.2	30.4
16	278	49.8	63 03.8	17.5	66 16.5	47.5	46 24.3	11.2	132 18.5	30.3
17	293	52.2	78 03.3	-13 18.6	81 17.3	-12 48.1	61 26.3	-18 11.4	147 20.8	+14 30.3
18	308	54.7	93 02.7	-13 19.7	96 18.1	-12 48.7	76 28.2	-18 11.5	162 23.1	+14 30.2
19	323	57.2	108 02.2	20.8	111 19.0	49.3	91 30.1	11.6	177 25.4	30.2
20	338	59.6	123 01.6	21.8	126 19.8	49.9	106 32.0	11.8	192 27.7	30.1
21	354	02.1	138 01.0	22.9	141 20.6	50.5	121 33.9	11.9	207 30.0	30.1
22	9	04.6	153 00.5	24.0	156 21.5	51.1	136 35.8	12.1	222 32.4	30.0
23	24	07.0	167 59.9	25.1	171 22.3	51.7	151 37.7	12.2	237 34.7	30.0
24	39	09.5	182 59.4	-13 26.2	186 23.1	-12 52.2	166 39.6	-18 12.3	252 37.0	+14 30.0
Dif	—		-6	-11	+8	-6	+19	-1	+23	0

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 16'1			Edad: 8 ^d 8	PHE	SD: 16'1			R ^o : 50 ^m						
	PMG: 11 ^h 43 ^m 6														
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Civil	Náutico		Hora	R ^o	Hora	R ^o
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	m	h m m	m
0	184	05.2	-13 59.4	74	10.8	-16 56.9		60 N	16 07	16 52	17 41	15 12 **		** ** *	** ** *
1	199	05.2	-14 00.2	88	39.6	98 42.9 ¹⁴⁰		58	15	16 57	43	15 04 4		** ** *	** ** *
2	214	05.3	01.0	103	08.4	98 28.8 ¹⁴¹		56	22	17 01	45	14 57 7		** ** *	** ** *
3	229	05.3	01.8	117	37.3	99 14.6 ¹⁴²		54	28	06	47	51 10		** ** *	** ** *
4	244	05.3	02.6	132	06.2	99 -16 00.3 ¹⁴³		52	34	09	49	45 14		** ** *	** ** *
5	259	05.3	-14 03.5	146	35.2 ¹⁰⁰	-15 45.9 ¹⁴⁴		50	16 39	17 13	17 51	14 40 16		** ** *	** ** *
6	274	05.4	-14 04.3	161	04.2 ¹⁰⁰	-15 31.4 ¹⁴⁵		45	16 50	17 20	17 55	14 29 22		** ** *	** ** *
7	289	05.4	05.1	175	33.2 ¹⁰⁰	16.8 ¹⁴⁶		40	16 59	27	17 59	20 26	0 03 75		
8	304	05.4	05.9	190	02.3 ¹⁰¹	-15 02.1 ¹⁴⁷		35	17 07	33	18 03	12 30	14 71		
9	319	05.4	06.7	204	31.5 ¹⁰²	-14 47.3 ¹⁴⁸		30	14	39	07	14 05 34	23 67		
10	334	05.5	07.5	219	00.7 ¹⁰²	32.4 ¹⁴⁹		20	26	49	15	13 53 39	39 61		
11	349	05.5	-14 08.3	233	29.9 ¹⁰²	-14 17.4 ¹⁵⁰		10 N	17 37	17 58	18 23	13 42 45	0 52 56		
12	4	05.5	-14 09.1	247	59.1 ¹⁰²	-14 02.3 ¹⁵¹		0	17 47	18 08	18 33	13 32 50	1 05 51		
13	19	05.5	09.9	262	28.5 ¹⁰⁴	-13 47.1 ¹⁵²		10 S	17 57	19	45	22 55	17 46		
14	34	05.6	10.7	276	57.8 ¹⁰³	31.9 ¹⁵²		20	18 08	31	18 58	13 11 60	31 40		
15	49	05.6	11.6	291	27.2 ¹⁰⁴	16.5 ¹⁵⁴		30	21	47	19 17	12 58 67	46 34		
16	64	05.6	12.4	305	56.6 ¹⁰⁴	-13 01.1 ¹⁵⁴		35	29	18 56	28	51 71	1 54 32		
17	79	05.6	-14 13.2	320	26.1 ¹⁰⁵	-12 45.6 ¹⁵⁵		40	18 37	19 07	19 42	12 43 75	2 04 28		
18	94	05.7	-14 14.0	334	55.6 ¹⁰⁵	-12 30.0 ¹⁵⁶		45	18 47	19 20	19 59	12 33 80	2 16 22		
19	109	05.7	14.8	349	25.1 ¹⁰⁵	-12 14.3 ¹⁵⁷		50	19 00	36	20 22	21 86	29 17		
20	124	05.7	15.6	3	54.6 ¹⁰⁵	-11 58.5 ¹⁵⁸		52	05	44	33	15 89	36 14		
21	139	05.7	16.4	18	24.2 ¹⁰⁶	42.7 ¹⁵⁸		54	12	19 53	20 46	09 92	43 11		
22	154	05.8	17.2	32	53.9 ¹⁰⁷	26.8 ¹⁵⁹		56	19	20 03	21 02	12 02 96	51 8		
23	169	05.8	18.0	47	23.5 ¹⁰⁶	-11 10.8 ¹⁶⁰		58	27	14	21	11 55 100	2 59 5		
24	184	05.8	-14 18.8	61	53.2 ¹⁰⁷	-10 54.7 ¹⁶¹		60 S	19 36	20 28	21 45	11 46 104	3 09 0		
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG 21 ^h 19 ^m 9		Mag: -4.0 PMG: 11 ^h 48 ^m		Mag: +1.6 PMG: 11 ^h 34 ^m		Mag: -1.7 PMG: 12 ^h 52 ^m		Mag: +0.5 PMG: 7 ^h 08 ^m						
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'					
0	39	09.5	182 59.4	-13 26.2	186 23.1	-12 52.2	166 39.6	-18 12.3	252 37.0	+14 30.0					
1	54	12.0	197 58.8	27.3	201 24.0	52.8	181 41.6	12.5	267 39.3	29.9					
2	69	14.4	212 58.2	28.3	216 24.8	53.4	196 43.5	12.6	282 41.6	29.9					
3	84	16.9	227 57.7	29.4	231 25.6	54.0	211 45.4	12.7	297 43.9	29.8					
4	99	19.3	242 57.1	30.5	246 26.5	54.6	226 47.3	12.9	312 46.2	29.8					
5	114	21.8	257 56.5	-13 31.6	261 27.3	-12 55.2	241 49.2	-18 13.0	327 48.5	+14 29.7					
6	129	24.3	272 56.0	-13 32.7	276 28.1	-12 55.8	256 51.1	-18 13.1	342 50.8	+14 29.7					
7	144	26.7	287 55.4	33.7	291 28.9	56.4	271 53.0	13.3	357 53.1	29.6					
8	159	29.2	302 54.9	34.8	306 29.8	57.0	286 54.9	13.4	12 55.4	29.6					
9	174	31.7	317 54.3	35.9	321 30.6	57.5	301 56.9	13.5	27 57.7	29.5					
10	189	34.1	332 53.7	37.0	336 31.4	58.1	316 58.8	13.7	43 00.0	29.5					
11	204	36.6	347 53.2	-13 38.0	351 32.3	-12 58.7	332 00.7	-18 13.8	58 02.3	+14 29.5					
12	219	39.1	2 52.6	-13 39.1	6 33.1	-12 59.3	347 02.6	-18 13.9	73 04.7	+14 29.4					
13	234	41.5	17 52.0	40.2	21 33.9	-12 59.9	2 04.5	14.1	88 07.0	29.4					
14	249	44.0	32 51.5	41.3	36 34.8	-13 00.5	17 06.4	14.2	103 09.3	29.3					
15	264	46.5	47 50.9	42.3	51 35.6	01.1	32 08.3	14.3	118 11.6	29.3					
16	279	48.9	62 50.3	43.4	66 36.4	01.7	47 10.2	14.5	133 13.9	29.2					
17	294	51.4	77 49.8	-13 44.5	81 37.2	-13 02.2	62 12.1	-18 14.6	148 16.2	+14 29.2					
18	309	53.8	92 49.2	-13 45.5	96 38.1	-13 02.8	77 14.1	-18 14.7	163 18.5	+14 29.1					
19	324	56.3	107 48.6	46.6	111 38.9	03.4	92 16.0	14.9	178 20.8	29.1					
20	339	58.8	122 48.0	47.7	126 39.7	04.0	107 17.9	15.0	193 23.1	29.1					
21	355	01.2	137 47.5	48.7	141 40.5	04.6	122 19.8	15.2	208 25.4	29.0					
22	10	03.7	152 46.9	49.8	156 41.4	05.2	137 21.7	15.3	223 27.8	29.0					
23	25	06.2	167 46.3	50.9	171 42.2	05.8	152 23.6	15.4	238 30.1	28.9					
24	40	08.6	182 45.8	-13 52.0	186 43.0	-13 06.3	167 25.5	-18 15.6	253 32.4	+14 28.9					
Dif	—	-6	-11	+8	-6	+19	-1	+23	0						

UT	SOL			LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16'1 PMG: 11 ^h 43 ^m 6			Edad: 9 ^d 8 PHE { 4 ^h : 59'8 12 ^h : 60'0 20 ^h : 60'2 Rº: 49 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico		Civil	Hora		Rº	Hora	Rº	
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	184	05.8	-14	18.8	61	53.2	-10	54.7	60 N	5	47	6	37	7	22	15	11 **
1	199	05.8		19.6	76	22.9 ¹⁰⁷		38.6 ¹⁶¹	58	45		31		14		08	2
2	214	05.8		20.4	90	52.6 ¹⁰⁷		22.4 ¹⁶²	56	43		27		07		04	6
3	229	05.9		21.2	105	22.4 ¹⁰⁸	-10	06.1 ¹⁶³	54	41		23	7	00	15	01	10
4	244	05.9		22.0	119	52.2 ¹⁰⁸	-9	49.7 ¹⁶⁴	52	39		19	6	54	14	59	12
5	259	05.9	-14	22.8	134	22.0 ¹⁰⁸	-9	33.3 ¹⁶⁴	50	5	37	6	15	6	49	14	56 15
6	274	05.9	-14	23.6	148	51.9 ¹⁰⁹	-9	16.8 ¹⁶⁵	45	5	33	6	07	6	38	14	51 20
7	289	05.9		24.4	163	21.7 ¹⁰⁸	-9	00.3 ¹⁶⁵	40	29		6	01	29		46	25
8	304	06.0		25.2	177	51.6 ¹⁰⁹	-8	43.7 ¹⁶⁶	35	25		5	55	21		42	29
9	319	06.0		26.0	192	21.5 ¹⁰⁹		27.0 ¹⁶⁷	30	21		49	14			39	32
10	334	06.0		26.8	206	51.4 ¹⁰⁹	-8	10.3 ¹⁶⁷	20	13		39	6	01		32	39
11	349	06.0	-14	27.6	221	21.4 ¹¹⁰	-7	53.5 ¹⁶⁸	10 N	5	04	5	29	5	50	14	27 44
12	4	06.0	-14	28.4	235	51.3 ¹⁰⁹	-7	36.6 ¹⁶⁹	0	4	54	5	19	5	40	14	22 50
13	19	06.0		29.2	250	21.3 ¹¹⁰		19.7 ¹⁶⁹	10 S	43		5	08	30		17	55
14	34	06.1		30.0	264	51.3 ¹¹⁰	-7	02.8 ¹⁶⁹	20	29		4	56	19		11	61
15	49	06.1		30.8	279	21.2 ¹⁰⁹	-6	45.8 ¹⁷⁰	30	4	10	40		5	06	05	67
16	64	06.1		31.6	293	51.2 ¹¹⁰		28.7 ¹⁷¹	35	3	59	31		4	58	14	02 71
17	79	06.1	-14	32.4	308	21.3 ¹¹¹	-6	11.6 ¹⁷¹	40	3	45	4	20	4	49	13	58 75
18	94	06.1	-14	33.2	322	51.3 ¹¹⁰	-5	54.5 ¹⁷¹	45	3	28	4	07	4	39	13	53 80
19	109	06.1		34.0	337	21.3 ¹¹⁰		37.3 ¹⁷²	50	3	05	3	51	27		47	86
20	124	06.1		34.8	351	51.4 ¹¹¹		20.1 ¹⁷²	52	2	53	43		21		44	90
21	139	06.2		35.6	6	21.4 ¹¹⁰	-5	02.8 ¹⁷³	54	40		34	15			41	93
22	154	06.2		36.4	20	51.4 ¹¹⁰	-4	45.5 ¹⁷³	56	25		24	08			38	96
23	169	06.2		37.2	35	21.5 ¹¹¹	28.1 ¹⁷⁴		58	2	06	3	12	4	00	35	99
24	184	06.2	-14	38.0	49	51.5 ¹¹⁰	-4	10.7 ¹⁷⁴	60 S	1	41	2	59	3	51	13	30 104

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 21 ^h 15 ^m 9		Mag: -4.0 PMG: 11 ^h 49 ^m		Mag: +1.6 PMG: 11 ^h 32 ^m		Mag: -1.7 PMG: 12 ^h 49 ^m		Mag: +0.5 PMG: 7 ^h 05 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	40	08.6	182	45.8	-13	52.0	186	43.0	-13	06.3
1	55	11.1	197	45.2		53.0	201	43.8		06.9
2	70	13.6	212	44.6		54.1	216	44.7		07.5
3	85	16.0	227	44.0		55.2	231	45.5		08.1
4	100	18.5	242	43.5		56.2	246	46.3		08.7
5	115	21.0	257	42.9	-13	57.3	261	47.2	-13	09.3
6	130	23.4	272	42.3	-13	58.3	276	48.0	-13	09.9
7	145	25.9	287	41.7	-13	59.4	291	48.8		10.4
8	160	28.3	302	41.2	-14	00.5	306	49.6		11.0
9	175	30.8	317	40.6		01.5	321	50.5		11.6
10	190	33.3	332	40.0		02.6	336	51.3		12.2
11	205	35.7	347	39.4	-14	03.7	351	52.1	-13	12.8
12	220	38.2	2	38.9	-14	04.7	6	52.9	-13	13.4
13	235	40.7	17	38.3		05.8	21	53.7		14.0
14	250	43.1	32	37.7		06.8	36	54.6		14.5
15	265	45.6	47	37.1		07.9	51	55.4		15.1
16	280	48.1	62	36.5		08.9	66	56.2		15.7
17	295	50.5	77	36.0	-14	10.0	81	57.0	-13	16.3
18	310	53.0	92	35.4	-14	11.1	96	57.9	-13	16.9
19	325	55.4	107	34.8		12.1	111	58.7		17.5
20	340	57.9	122	34.2		13.2	126	59.5		18.0
21	356	00.4	137	33.6		14.2	142	00.3		18.6
22	11	02.8	152	33.1		15.3	157	01.2		19.2
23	26	05.3	167	32.5		16.3	172	02.0		19.8
24	41	07.8	182	31.9	-14	17.4	187	02.8	-13	20.4
Dif	—		-6		-11		+8		-6	
							+19		-1	
									+23	
									0	

UT	SOL			☾ LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 16°1 PMG: 11 ^h 43 ^m 6			Edad: 10 ^d 8 PHE { 4 ^h : 60'4 12 ^h : 60'5 20 ^h : 60'6 R°: 51 ^m						Civil		Náutico	Hora	R°	Hora	R°
	hG ☉	Dec		hG ☾	Dif	Dec	Dif									
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m
0	184	06.2	-14 38.0	49	51.5	-4	10.7	60 N	16	02	16	47	17	37	15	10 0
1	199	06.2	38.8	64	21.6 ¹¹¹	-3	53.3 ¹⁷⁴	58	10	53	39	10	3	22	100	
2	214	06.2	39.6	78	51.6 ¹¹⁰		35.8 ¹⁷⁵	56	18	16	57	42	10	7	23	97
3	229	06.2	40.4	93	21.7 ¹¹¹		18.4 ¹⁷⁴	54	24	17	02	44	11	9	25	93
4	244	06.3	41.2	107	51.7 ¹¹⁰	-3	00.8 ¹⁷⁶	52	30	06	46	11	12	27	89	
5	259	06.3	-14 42.0	122	21.8 ¹¹¹	-2	43.3 ¹⁷⁵	50	16	36	17	10	17	48	15	11 15
6	274	06.3	-14 42.7	136	51.8 ¹¹⁰	-2	25.7 ¹⁷⁶	45	16	47	17	18	17	52	15	11 20
7	289	06.3	43.5	151	21.8 ¹¹⁰	-2	08.1 ¹⁷⁶	40	16	57	25	17	57	11	25	33 76
8	304	06.3	44.3	165	51.8 ¹¹⁰	-1	50.5 ¹⁷⁶	35	17	05	31	18	01	11	29	35 72
9	319	06.3	45.1	180	21.8 ¹¹⁰		32.8 ¹⁷⁷	30	12	37	05	11	33	37	68	
10	334	06.3	45.9	194	51.8 ¹¹⁰	-1	15.2 ¹⁷⁶	20	25	48	14	11	40	40	61	
11	349	06.3	-14 46.7	209	21.8 ¹¹⁰	-0	57.5 ¹⁷⁷	10 N	17	36	17	58	18	23	15	11 46
12	4	06.3	-14 47.5	223	51.8 ¹¹⁰	-0	39.8 ¹⁷⁷	0	17	47	18	08	18	33	15	12 50
13	19	06.3	48.3	238	21.7 ¹⁰⁹		22.1 ¹⁷⁷	10 S	17	58	20	18	45	12	56	48 44
14	34	06.3	49.1	252	51.6 ¹⁰⁹	-0	04.4 ¹⁷⁷	20	18	09	32	19	00	12	62	50 39
15	49	06.4	49.9	267	21.6 ¹¹⁰	+0	13.4 ¹⁷⁸	30	23	48	18	12	69	53	33	
16	64	06.4	50.6	281	51.5 ¹⁰⁹		31.1 ¹⁷⁷	35	31	18	58	30	13	72	55	29
17	79	06.4	-14 51.4	296	21.3 ¹⁰⁸	+0	48.8 ¹⁷⁷	40	18	40	19	09	19	45	15	13 76
18	94	06.4	-14 52.2	310	51.2 ¹⁰⁹	+1	06.6 ¹⁷⁸	45	18	50	19	23	20	03	15	13 82
19	109	06.4	53.0	325	21.0 ¹⁰⁸		24.3 ¹⁷⁷	50	19	03	40	26	13	88	3	01 15
20	124	06.4	53.8	339	50.8 ¹⁰⁸		42.1 ¹⁷⁸	52	09	48	38	14	90	02	12	
21	139	06.4	54.6	354	20.6 ¹⁰⁸	+1	59.9 ¹⁷⁸	54	16	19	57	20	52	14	94	04 9
22	154	06.4	55.4	8	50.3 ¹⁰⁷	+2	17.6 ¹⁷⁷	56	23	20	08	21	08	14	97	05 6
23	169	06.4	56.1	23	20.0 ¹⁰⁷		35.4 ¹⁷⁸	58	32	20	29	14	102	07	2	
24	184	06.4	-14 56.9	37	49.7 ¹⁰⁷	+2	53.1 ¹⁷⁷	60 S	19	41	20	34	21	56	15	14 106

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 21 ^h 12 ^m 0		Mag: -4.0 PMG: 11 ^h 50 ^m		Mag: +1.6 PMG: 11 ^h 31 ^m		Mag: -1.7 PMG: 12 ^h 46 ^m		Mag: +0.5 PMG: 7 ^h 01 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	41	07.8	182	31.9	-14	17.4	187	02.8	-13	20.4
1	56	10.2	197	31.3		18.4	202	03.6		20.9
2	71	12.7	212	30.7		19.5	217	04.4		21.5
3	86	15.2	227	30.1		20.5	232	05.3		22.1
4	101	17.6	242	29.6		21.6	247	06.1		22.7
5	116	20.1	257	29.0	-14	22.6	262	06.9	-13	23.3
6	131	22.6	272	28.4	-14	23.7	277	07.7	-13	23.9
7	146	25.0	287	27.8		24.7	292	08.5		24.4
8	161	27.5	302	27.2		25.8	307	09.4		25.0
9	176	29.9	317	26.6		26.8	322	10.2		25.6
10	191	32.4	332	26.0		27.9	337	11.0		26.2
11	206	34.9	347	25.4	-14	28.9	352	11.8	-13	26.8
12	221	37.3	2	24.9	-14	30.0	7	12.6	-13	27.3
13	236	39.8	17	24.3		31.0	22	13.5		27.9
14	251	42.3	32	23.7		32.1	37	14.3		28.5
15	266	44.7	47	23.1		33.1	52	15.1		29.1
16	281	47.2	62	22.5		34.1	67	15.9		29.7
17	296	49.7	77	21.9	-14	35.2	82	16.7	-13	30.2
18	311	52.1	92	21.3	-14	36.2	97	17.5	-13	30.8
19	326	54.6	107	20.7		37.3	112	18.4		31.4
20	341	57.0	122	20.1		38.3	127	19.2		32.0
21	356	59.5	137	19.5		39.3	142	20.0		32.6
22	12	02.0	152	18.9		40.4	157	20.8		33.1
23	27	04.4	167	18.3		41.4	172	21.6		33.7
24	42	06.9	182	17.7	-14	42.5	187	22.5	-13	34.3
Dif	—		-6	-10		+8	-6		+19	-1

0	254	27.9	+14	27.8
1	269	30.2		27.8
2	284	32.5		27.8
3	299	34.8		27.7
4	314	37.1		27.7
5	329	39.5	+14	27.6
6	344	41.8	+14	27.6
7	359	44.1		27.5
8	14	46.4		27.5
9	29	48.7		27.5
10	44	51.0		27.4
11	59	53.3	+14	27.4
12	74	55.7	+14	27.3
13	89	58.0		27.3
14	105	00.3		27.2
15	120	02.6		27.2
16	135	04.9		27.2
17	150	07.2	+14	27.1
18	165	09.6	+14	27.1
19	180	11.9		27.0
20	195	14.2		27.0
21	210	16.5		27.0
22	225	18.8		26.9
23	240	21.2		26.9
24	255	23.5	+14	26.8

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 6			Edad: 11 ^d 8 PHE { SD: 16'5 PMG: 22 ^h 14 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m
0	184	06.4	-14	56.9	37	49.7	+2	53.1	60 N	5 51	6 41	7 27	15 10	**	4 04	107
1	199	06.4		57.7	52	19.4 ¹⁰⁷	+3	10.8 ¹⁷⁷	58	49	36	18	13	4	02	103
2	214	06.4		58.5	66	49.0 ¹⁰⁶		28.6 ¹⁷⁸	56	47	31	11	17	8	4 00	98
3	229	06.4	-14	59.3	81	18.6 ¹⁰⁶	+3	46.3 ¹⁷⁷	54	44	26	7 04	20	11	3 58	99
4	244	06.4	-15	00.1	95	48.2 ¹⁰⁶	+4	04.0 ¹⁷⁷	52	42	22	6 58	23	14	56	92
5	259	06.4	-15	00.8	110	17.7 ¹⁰⁵	+4	21.6 ¹⁷⁶	50	5 40	6 18	6 53	15 26	17	3 55	89
6	274	06.4	-15	01.6	124	47.2 ¹⁰⁵	+4	39.3 ¹⁷⁷	45	5 35	6 10	6 41	15 31	23	3 52	82
7	289	06.4		02.4	139	16.6 ¹⁰⁴	+4	56.9 ¹⁷⁶	40	31	6 03	31	36	28	49	77
8	304	06.4		03.2	153	46.0 ¹⁰⁴	+5	14.6 ¹⁷⁷	35	26	5 56	23	40	32	47	73
9	319	06.4		04.0	168	15.4 ¹⁰⁴		32.2 ¹⁷⁶	30	22	50	15	44	36	45	69
10	334	06.4		04.7	182	44.7 ¹⁰³	+5	49.7 ¹⁷⁵	20	13	40	6 02	51	42	41	63
11	349	06.4	-15	05.5	197	14.0 ¹⁰³	+6	07.3 ¹⁷⁶	10 N	5 04	5 29	5 51	15 57	47	3 38	57
12	4	06.4	-15	06.3	211	43.2 ¹⁰²	+6	24.8 ¹⁷⁵	0	4 54	5 19	5 40	16 02	53	3 35	52
13	19	06.4		07.1	226	12.4 ¹⁰²		42.3 ¹⁷⁵	10 S	42	5 07	29	08	58	32	46
14	34	06.4		07.9	240	41.5 ¹⁰¹	+6	59.7 ¹⁷⁴	20	27	4 54	17	14	63	29	41
15	49	06.4		08.6	255	10.6 ¹⁰¹	+7	17.1 ¹⁷⁴	30	4 08	39	5 04	21	70	26	34
16	64	06.4		09.4	269	39.6 ¹⁰⁰		34.5 ¹⁷⁴	35	3 56	29	4 56	25	74	24	30
17	79	06.4	-15	10.2	284	08.6 ¹⁰⁰	+7	51.8 ¹⁷³	40	3 42	4 18	4 47	16 29	79	3 22	26
18	94	06.4	-15	11.0	298	37.6 ¹⁰⁰	+8	09.1 ¹⁷³	45	3 24	4 04	4 36	16 35	84	3 19	21
19	109	06.4		11.8	313	06.4 ⁹⁸		26.4 ¹⁷³	50	3 00	3 47	23	41	91	16	15
20	124	06.4		12.5	327	35.3 ⁹⁹	+8	43.6 ¹⁷²	52	2 48	39	17	44	94	14	13
21	139	06.4		13.3	342	04.0 ⁹⁷	+9	00.8 ¹⁷²	54	35	29	11	48	96	13	10
22	154	06.4		14.1	356	32.8 ⁹⁸		17.9 ¹⁷¹	56	2 18	19	4 03	51	101	11	7
23	169	06.4		14.9	11	01.4 ⁹⁶		34.9 ¹⁷⁰	58	1 57	3 07	3 55	16 56	105	09	3
24	184	06.4	-15	15.6	25	30.0 ⁹⁶	+9	51.9 ¹⁷⁰	60 S	1 30	2 52	3 45	17 00	110	3 07	**
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO				
	PMG: 21 ^h 08 ^m 1		Mag: -4.0 PMG: 11 ^h 51 ^m			Mag: +1.6 PMG: 11 ^h 30 ^m			Mag: -1.7 PMG: 12 ^h 43 ^m			Mag: +0.5 PMG: 6 ^h 57 ^m				
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	42	06.9	182	17.7	-14	42.5	187	22.5	-13	34.3	168	57.2	-18	22.0	255	23.5
1	57	09.4	197	17.1		43.5	202	23.3		34.9	183	59.1		22.1	270	25.8
2	72	11.8	212	16.6		44.5	217	24.1		35.4	199	01.0		22.3	285	28.1
3	87	14.3	227	16.0		45.6	232	24.9		36.0	214	02.9		22.4	300	30.4
4	102	16.8	242	15.4		46.6	247	25.7		36.6	229	04.8		22.5	315	32.7
5	117	19.2	257	14.8	-14	47.6	262	26.5	-13	37.2	244	06.7	-18	22.7	330	35.1
6	132	21.7	272	14.2	-14	48.7	277	27.3	-13	37.8	259	08.6	-18	22.8	345	37.4
7	147	24.2	287	13.6		49.7	292	28.2		38.3	274	10.5		22.9	0	39.7
8	162	26.6	302	13.0		50.7	307	29.0		38.9	289	12.4		23.1	15	42.0
9	177	29.1	317	12.4		51.8	322	29.8		39.5	304	14.3		23.2	30	44.3
10	192	31.5	332	11.8		52.8	337	30.6		40.1	319	16.2		23.3	45	46.7
11	207	34.0	347	11.2	-14	53.8	352	31.4	-13	40.6	334	18.2	-18	23.5	60	49.0
12	222	36.5	2	10.6	-14	54.9	7	32.2	-13	41.2	349	20.1	-18	23.6	75	51.3
13	237	38.9	17	10.0		55.9	22	33.0		41.8	4	22.0		23.7	90	53.6
14	252	41.4	32	09.4		56.9	37	33.9		42.4	19	23.9		23.9	105	55.9
15	267	43.9	47	08.8		57.9	52	34.7		42.9	34	25.8		24.0	120	58.3
16	282	46.3	62	08.2	-14	59.0	67	35.5		43.5	49	27.7		24.1	136	00.6
17	297	48.8	77	07.6	-15	00.0	82	36.3	-13	44.1	64	29.6	-18	24.3	151	02.9
18	312	51.3	92	07.0	-15	01.0	97	37.1	-13	44.7	79	31.5	-18	24.4	166	05.2
19	327	53.7	107	06.3		02.1	112	37.9		45.2	94	33.4		24.5	181	07.5
20	342	56.2	122	05.7		03.1	127	38.7		45.8	109	35.3		24.7	196	09.9
21	357	58.6	137	05.1		04.1	142	39.6		46.4	124	37.2		24.8	211	12.2
22	13	01.1	152	04.5		05.1	157	40.4		47.0	139	39.1		24.9	226	14.5
23	28	03.6	167	03.9		06.1	172	41.2		47.5	154	41.0		25.1	241	16.8
24	43	06.0	182	03.3	-15	07.2	187	42.0	-13	48.1	169	42.9	-18	25.2	256	19.2
Dif	—		-6	-10			+8	-6			+19	-1			+23	0

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna		
	SD: 16'1 PMG: 11 ^h 43 ^m 6			Edad: 12 ^d 8 PHE { 4 ^h : 60'8 12 ^h : 60'8 20 ^h : 60'7 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	184	06.4	-15	15.6	25	30.0	+9	51.9	60 N	15 57	16 43	17 32	15 09	1	5 51	113
1	199	06.4		16.4	39	58.5	+10	08.9	58	16 06		48	35	17	7	45
2	214	06.4		17.2	54	27.0		25.8	56	13	54	38	25	11	38	102
3	229	06.4		17.9	68	55.4		42.6	54	20	16 58	40	31	15	33	98
4	244	06.4		18.7	83	23.8	+10	59.3	52	27	17 03	43	37	18	28	94
5	259	06.4	-15	19.5	97	52.1	+11	16.0	50	16 32	17 06	17 45	15 43	21	5 24	91
6	274	06.4	-15	20.3	112	20.3	+11	32.7	45	16 44	17 15	17 50	15 54	27	5 14	85
7	289	06.4		21.0	126	48.4	+11	49.2	40	16 54		23	55	16	04	80
8	304	06.4		21.8	141	16.5	+12	05.7	35	17 03		29	17 59	12	36	75
9	319	06.4		22.6	155	44.6		22.2	30	11	36	18 04	20	39	4 54	71
10	334	06.4		23.3	170	12.5		38.5	20	24	47	13	33	45	44	64
11	349	06.4	-15	24.1	184	40.4	+12	54.8	10 N	17 36	17 58	18 23	16 44	51	4 35	59
12	4	06.4	-15	24.9	199	08.2	+13	11.0	0	17 47	18 08	18 33	16 55	56	4 27	54
13	19	06.3		25.6	213	36.0		27.1	10 S	17 58		20	18 46	17	06	60
14	34	06.3		26.4	228	03.6		43.1	20	18 10	34	19 01	17	66	10	43
15	49	06.3		27.2	242	31.2	+13	59.1	30	24	18 50	20	31	72	4 00	37
16	64	06.3		28.0	256	58.8	+14	14.9	35	33	19 00	33	39	76	3 54	34
17	79	06.3	-15	28.7	271	26.2	+14	30.7	40	18 42	19 12	19 47	17 48	80	3 48	29
18	94	06.3	-15	29.5	285	53.6	+14	46.4	45	18 53	19 26	20 06	17 59	85	3 40	25
19	109	06.3		30.3	300	20.9	+15	02.0	50	19 07	43	31	18 12	91	31	19
20	124	06.3		31.0	314	48.1		17.5	52	13	19 52	43	18	95	27	16
21	139	06.3		31.8	329	15.3		32.9	54	20	20 02	20 58	24	99	23	12
22	154	06.3		32.5	343	42.3	+15	48.1	56	28	13	21 15	32	104	18	9
23	169	06.2		33.3	358	09.3	+16	03.3	58	36	26	21 37	41	108	12	5
24	184	06.2	-15	34.1	12	36.3	+16	18.4	60 S	19 47	20 41	22 07	18 50	116	3 06	0
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO							
	PMG: 21 ^h 04 ^m 1		Mag: -4.0 PMG: 11 ^h 52 ^m		Mag: +1.6 PMG: 11 ^h 29 ^m		Mag: -1.7 PMG: 12 ^h 40 ^m		Mag: +0.5 PMG: 6 ^h 54 ^m							
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec				
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	43	06.0	182	03.3	-15	07.2	187	42.0	-13	48.1	169	42.9	-18	25.2	256	19.2
1	58	08.5	197	02.7		08.2	202	42.8		48.7	184	44.8		25.3	271	21.5
2	73	11.0	212	02.1		09.2	217	43.6		49.3	199	46.8		25.5	286	23.8
3	88	13.4	227	01.5		10.2	232	44.4		49.8	214	48.7		25.6	301	26.1
4	103	15.9	242	00.9		11.3	247	45.2		50.4	229	50.6		25.7	316	28.4
5	118	18.4	257	00.3	-15	12.3	262	46.0	-13	51.0	244	52.5	-18	25.9	331	30.8
6	133	20.8	271	59.7	-15	13.3	277	46.9	-13	51.6	259	54.4	-18	26.0	346	33.1
7	148	23.3	286	59.1		14.3	292	47.7		52.1	274	56.3		26.1	1	35.4
8	163	25.8	301	58.4		15.3	307	48.5		52.7	289	58.2		26.3	16	37.7
9	178	28.2	316	57.8		16.3	322	49.3		53.3	305	00.1		26.4	31	40.1
10	193	30.7	331	57.2		17.4	337	50.1		53.9	320	02.0		26.5	46	42.4
11	208	33.1	346	56.6	-15	18.4	352	50.9	-13	54.4	335	03.9	-18	26.7	61	44.7
12	223	35.6	1	56.0	-15	19.4	7	51.7	-13	55.0	350	05.8	-18	26.8	76	47.0
13	238	38.1	16	55.4		20.4	22	52.5		55.6	5	07.7		26.9	91	49.4
14	253	40.5	31	54.8		21.4	37	53.3		56.1	20	09.6		27.1	106	51.7
15	268	43.0	46	54.2		22.4	52	54.1		56.7	35	11.5		27.2	121	54.0
16	283	45.5	61	53.5		23.4	67	54.9		57.3	50	13.4		27.3	136	56.3
17	298	47.9	76	52.9	-15	24.4	82	55.8	-13	57.9	65	15.3	-18	27.5	151	58.7
18	313	50.4	91	52.3	-15	25.4	97	56.6	-13	58.4	80	17.2	-18	27.6	167	01.0
19	328	52.9	106	51.7		26.5	112	57.4		59.0	95	19.2		27.7	182	03.3
20	343	55.3	121	51.1		27.5	127	58.2	-13	59.6	110	21.1		27.9	197	05.6
21	358	57.8	136	50.5		28.5	142	59.0	-14	00.1	125	23.0		28.0	212	08.0
22	14	00.3	151	49.8		29.5	157	59.8		00.7	140	24.9		28.1	227	10.3
23	29	02.7	166	49.2		30.5	173	00.6		01.3	155	26.8		28.3	242	12.6
24	44	05.2	181	48.6	-15	31.5	188	01.4	-14	01.9	170	28.7	-18	28.4	257	14.9
Dif	—		-6		-10		+8		-6		+19		-1		+23	

0

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'1 PMG: 11 ^h 43 ^m 6			Edad: 13 ^d 8 PHE { SD: 16'5 PMG: ***h ***m											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	m
0	184	06.2	-15	34.1	12	36.3	+16	18.4	60 N	5 56	6 46	7 32	15 10	4	7 44 117
1	199	06.2		34.8	27	03.1	78	33.4	58	53	40	23	24	11	31 110
2	214	06.2		35.6	41	29.9	78	+16 48.3	56	50	35	15	36	17	20 104
3	229	06.2		36.4	55	56.6	77	+17 03.1	54	48	30	08	46	21	11 95
4	244	06.2		37.1	70	23.2	76	17.7	52	45	26	7 02	15 55	25	7 02 95
5	259	06.2	-15	37.9	84	49.7	75	+17 32.3	50	5 43	6 22	6 56	16 04	28	6 55 91
6	274	06.2	-15	38.6	99	16.2	75	+17 46.7	45	5 38	6 13	6 44	16 21	35	6 39 85
7	289	06.1		39.4	113	42.5	73	+18 01.0	40	33	6 05	33	36	39	26 80
8	304	06.1		40.2	128	08.8	73	15.2	35	28	5 58	25	48	43	15 76
9	319	06.1		40.9	142	35.0	72	29.3	30	23	52	17	16 59	46	6 05 72
10	334	06.1		41.7	157	01.2	72	43.2	20	14	40	6 03	17 18	51	5 48 67
11	349	06.1	-15	42.4	171	27.2	70	+18 57.0	10 N	5 04	5 30	5 51	17 35	55	5 34 62
12	4	06.1	-15	43.2	185	53.2	70	+19 10.7	0	4 54	5 19	5 40	17 51	59	5 21 57
13	19	06.0		44.0	200	19.1	69	24.3	10 S	41	5 07	29	18 06	63	5 07 53
14	34	06.0		44.7	214	44.9	68	37.7	20	26	4 53	16	23	68	4 53 48
15	49	06.0		45.5	229	10.6	67	+19 51.0	30	4 07	37	5 02	43	72	37 43
16	64	06.0		46.2	243	36.3	67	+20 04.2	35	3 54	27	4 54	18 55	75	28 39
17	79	06.0	-15	47.0	258	01.8	65	+20 17.3	40	3 39	4 15	4 45	19 08	79	4 17 35
18	94	06.0	-15	47.7	272	27.3	65	+20 30.2	45	3 20	4 01	4 34	19 24	84	4 05 30
19	109	05.9		48.5	286	52.8	65	42.9	50	2 56	3 43	20	20	43	91
20	124	05.9		49.3	301	18.1	63	+20 55.5	52	43	34	14	19 53	93	43 21
21	139	05.9		50.0	315	43.4	63	+21 08.0	54	29	25	4 07	20 03	98	35 18
22	154	05.9		50.8	330	08.5	61	20.3	56	2 11	14	3 59	16	102	27 13
23	169	05.9		51.5	344	33.7	62	32.5	58	1 49	3 01	50	29	110	17 8
24	184	05.8	-15	52.3	358	58.7	60	+21 44.5	60 S	1 19	2 46	3 40	20 46	119	3 06 2

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 21 ^h 00 ^m 2		Mag: -4.0 PMG: 11 ^h 53 ^m		Mag: +1.6 PMG: 11 ^h 27 ^m		Mag: -1.7 PMG: 12 ^h 36 ^m		Mag: +0.5 PMG: 6 ^h 50 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	44	05.2	181	48.6	-15	31.5	188	01.4	-14	01.9
1	59	07.6	196	48.0		32.5	203	02.2		02.4
2	74	10.1	211	47.4		33.5	218	03.0		03.0
3	89	12.6	226	46.7		34.5	233	03.8		03.6
4	104	15.0	241	46.1		35.5	248	04.6		04.1
5	119	17.5	256	45.5	-15	36.5	263	05.4	-14	04.7
6	134	20.0	271	44.9	-15	37.5	278	06.2	-14	05.3
7	149	22.4	286	44.3		38.5	293	07.1		05.9
8	164	24.9	301	43.6		39.5	308	07.9		06.4
9	179	27.4	316	43.0		40.5	323	08.7		07.0
10	194	29.8	331	42.4		41.5	338	09.5		07.6
11	209	32.3	346	41.8	-15	42.5	353	10.3	-14	08.1
12	224	34.7	1	41.1	-15	43.5	8	11.1	-14	08.7
13	239	37.2	16	40.5		44.5	23	11.9		09.3
14	254	39.7	31	39.9		45.5	38	12.7		09.8
15	269	42.1	46	39.3		46.5	53	13.5		10.4
16	284	44.6	61	38.6		47.5	68	14.3		11.0
17	299	47.1	76	38.0	-15	48.5	83	15.1	-14	11.5
18	314	49.5	91	37.4	-15	49.5	98	15.9	-14	12.1
19	329	52.0	106	36.8		50.5	113	16.7		12.7
20	344	54.5	121	36.1		51.5	128	17.5		13.2
21	359	56.9	136	35.5		52.5	143	18.3		13.8
22	14	59.4	151	34.9		53.4	158	19.1		14.4
23	30	01.9	166	34.2		54.4	173	19.9		14.9
24	45	04.3	181	33.6	-15	55.4	188	20.7	-14	15.5
Dif	—		-6	-10		+8	-6		+19	-1
										+23
										0

UT	SOL			☉ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16°1			Edad: 14 ^d 8 PHE { 4 ^h : 60°1 12 ^h : 59°9 20 ^h : 59°7											
	PMG: 11 ^h 43 ^m 6			SD: 16°4 PMG: 0 ^h 04 ^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
0	184	05.8	-15 52.3	358	58.7	+21 44.5	60 N	15 52	16 38	17 28	15 14 12	9 41 115			
1	199	05.8	53.0	13	23.7 60	+21 56.4 119	58	16 01	44	31	35 23	21 104			
2	214	05.8	53.8	27	48.5 58	+22 08.1 117	56	09	50	34	15 53 28	9 04 98			
3	229	05.8	54.5	42	13.4 59	19.7 116	54	17	55	37	16 07 34	8 50 93			
4	244	05.7	55.3	56	38.1 57	31.1 114	52	23	16 59	40	20 37	37 90			
5	259	05.7	-15 56.0	71	02.8 57	+22 42.4 113	50	16 29	17 03	17 42	16 32 39	8 26 87			
6	274	05.7	-15 56.8	85	27.4 56	+22 53.5 111	45	16 42	17 13	17 48	16 56 44	8 04 81			
7	289	05.7	57.5	99	51.9 55	+23 04.5 110	40	16 52	21	53	17 15 47	7 46 77			
8	304	05.7	58.3	114	16.3 54	15.2 107	35	17 01	28	17 58	31 50	31 74			
9	319	05.6	59.0	128	40.7 54	25.9 107	30	09	34	18 03	17 45 52	7 17 72			
10	334	05.6	-15 59.8	143	05.1 54	36.3 104	20	23	46	12	18 09 56	6 55 67			
11	349	05.6	-16 00.5	157	29.3 52	+23 46.6 103	10 N	17 36	17 57	18 23	18 30 59	6 36 64			
12	4	05.6	-16 01.3	171	53.5 52	+23 56.8 102	0	17 47	18 09	18 34	18 50 61	6 18 61			
13	19	05.5	02.0	186	17.6 51	+24 06.7 99	10 S	17 59	21	18 46	19 09 64	6 00 57			
14	34	05.5	02.8	200	41.7 51	16.5 98	20	18 11	35	19 02	31 66	5 41 54			
15	49	05.5	03.5	215	05.7 50	26.1 96	30	26	18 52	22	19 55 70	20 49			
16	64	05.5	04.2	229	29.7 50	35.6 95	35	35	19 02	35	20 10 72	5 07 46			
17	79	05.4	-16 05.0	243	53.5 48	+24 44.8 92	40	18 44	19 14	19 50	20 27 74	4 52 43			
18	94	05.4	-16 05.7	258	17.4 49	+24 53.9 91	45	18 56	19 29	20 10	20 48 77	4 35 39			
19	109	05.4	06.5	272	41.2 48	+25 02.9 90	50	19 10	47	35	21 14 81	14 33			
20	124	05.3	07.2	287	04.9 47	11.6 87	52	17	19 56	20 48	26 84	4 04 30			
21	139	05.3	08.0	301	28.6 47	20.2 86	54	24	20 06	21 04	41 87	3 53 26			
22	154	05.3	08.7	315	52.2 46	28.6 84	56	32	18	22	21 58 91	40 21			
23	169	05.3	09.5	330	15.8 46	36.8 82	58	41	31	21 46	22 19 97	25 15			
24	184	05.2	-16 10.2	344	39.3 45	+25 44.8 80	60 S	19 52	20 47	22 20	22 45 110	3 08 5			
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO		
	PMG			Mag: -4.0			Mag: +1.6			Mag: -1.7			Mag: +0.5		
	20 ^h 56 ^m 3			PMG: 11 ^h 54 ^m			PMG: 11 ^h 26 ^m			PMG: 12 ^h 33 ^m			PMG: 6 ^h 46 ^m		
	hG ♈			hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	
0	45	04.3	181	33.6	-15 55.4	188	20.7	-14 15.5	171	14.4	-18 31.6	258	10.8	+14 24.0	
1	60	06.8	196	33.0	56.4	203	21.5	16.1	186	16.3	31.7	273	13.1	23.9	
2	75	09.2	211	32.3	57.4	218	22.3	16.6	201	18.2	31.8	288	15.5	23.9	
3	90	11.7	226	31.7	58.4	233	23.1	17.2	216	20.1	32.0	303	17.8	23.9	
4	105	14.2	241	31.1	-15 59.4	248	23.9	17.8	231	22.0	32.1	318	20.1	23.8	
5	120	16.6	256	30.4	-16 00.4	263	24.7	-14 18.3	246	23.9	-18 32.2	333	22.5	+14 23.8	
6	135	19.1	271	29.8	-16 01.3	278	25.5	-14 18.9	261	25.8	-18 32.4	348	24.8	+14 23.8	
7	150	21.6	286	29.2	02.3	293	26.3	19.5	276	27.7	32.5	3	27.1	23.7	
8	165	24.0	301	28.5	03.3	308	27.1	20.0	291	29.6	32.6	18	29.5	23.7	
9	180	26.5	316	27.9	04.3	323	27.9	20.6	306	31.5	32.8	33	31.8	23.7	
10	195	29.0	331	27.3	05.3	338	28.7	21.2	321	33.4	32.9	48	34.1	23.6	
11	210	31.4	346	26.6	-16 06.2	353	29.5	-14 21.7	336	35.3	-18 33.0	63	36.4	+14 23.6	
12	225	33.9	1	26.0	-16 07.2	8	30.3	-14 22.3	351	37.2	-18 33.1	78	38.8	+14 23.5	
13	240	36.4	16	25.4	08.2	23	31.1	22.9	6	39.1	33.3	93	41.1	23.5	
14	255	38.8	31	24.7	09.2	38	31.9	23.4	21	41.0	33.4	108	43.4	23.5	
15	270	41.3	46	24.1	10.2	53	32.7	24.0	36	42.9	33.5	123	45.8	23.4	
16	285	43.7	61	23.4	11.1	68	33.5	24.6	51	44.8	33.7	138	48.1	23.4	
17	300	46.2	76	22.8	-16 12.1	83	34.3	-14 25.1	66	46.7	-18 33.8	153	50.4	+14 23.4	
18	315	48.7	91	22.2	-16 13.1	98	35.1	-14 25.7	81	48.6	-18 33.9	168	52.8	+14 23.3	
19	330	51.1	106	21.5	14.1	113	35.9	26.2	96	50.5	34.1	183	55.1	23.3	
20	345	53.6	121	20.9	15.0	128	36.7	26.8	111	52.4	34.2	198	57.4	23.2	
21	0	56.1	136	20.2	16.0	143	37.5	27.4	126	54.3	34.3	213	59.8	23.2	
22	15	58.5	151	19.6	17.0	158	38.3	27.9	141	56.2	34.5	229	02.1	23.2	
23	31	01.0	166	18.9	18.0	173	39.1	28.5	156	58.2	34.6	244	04.4	23.1	
24	46	03.5	181	18.3	-16 18.9	188	39.9	-14 29.1	172	00.1	-18 34.7	259	06.8	+14 23.1	
Dif	—			-6			+8			+19			-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 7			Edad: 15 ^d 8 PHE { 4 ^h : 59/5 12 ^h : 59/2 20 ^h : 58/9 SD: 16'2 PMG: 1 ^h 04 ^m R°: 61 ^m																	
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico		Civil	Hora		R°	Hora	R°						
h	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m			
0	184	05.2	-16	10.2	344	39.3	+25	44.8	78	60 N	6 00	6 50	7 37	15 26	36	11 36	93				
1	199	05.2		10.9	359	02.8	45	+25	52.6	78	58	5 57	44	28	15 58	44	11 05	85			
2	214	05.2		11.7	13	26.3	45	+26	00.3	77	56	54	39	19	16 21	48	10 42	80			
3	229	05.1		12.4	27	49.7	44		07.8	75	54	51	34	12	41 50		23	77			
4	244	05.1		13.2	42	13.0	43		15.1	73	52	49	29	7 05	16 57	52	10 07	76			
5	259	05.1	-16	13.9	56	36.4	44	+26	22.2	71	50	5 46	6 25	6 59	17 11	53	9 53	74			
6	274	05.0	-16	14.6	70	59.7	43	+26	29.1	69	45	5 40	6 15	6 46	17 40	55	9 25	71			
7	289	05.0		15.4	85	22.9	42		35.9	68	40	35	07	36	18 02	57	9 03	70			
8	304	05.0		16.1	99	46.2	43		42.4	65	35	30	6 00	26	21 58		8 45	68			
9	319	04.9		16.8	114	09.4	42		48.8	64	30	25	5 53	18	18 37	59	29	67			
10	334	04.9		17.6	128	32.6	42	+26	55.0	62	20	15	41	6 04	19 05	59	8 02	65			
11	349	04.9	-16	18.3	142	55.7	41	+27	00.9	59	10 N	5 05	5 30	5 52	19 29	60	7 40	63			
12	4	04.8	-16	19.1	157	18.9	42	+27	06.7	58	0	4 54	5 19	5 40	19 51	61	7 19	61			
13	19	04.8		19.8	171	42.0	41		12.4	57	10 S	41	5 06	28	20 13	62	6 57	60			
14	34	04.8		20.5	186	05.1	41		17.8	54	20	25	4 52	16	20 37	62	35	58			
15	49	04.7		21.3	200	28.2	41		23.0	52	30	4 05	35	5 01	21 05	63	6 09	55			
16	64	04.7		22.0	214	51.3	41		28.0	50	35	3 52	25	4 52	22 63		5 53	54			
17	79	04.7	-16	22.7	229	14.4	41	+27	32.9	49	40	3 37	4 13	4 42	21 41	64	5 35	53			
18	94	04.6	-16	23.5	243	37.4	40	+27	37.5	46	45	3 17	3 58	4 31	22 05	64	5 14	50			
19	109	04.6		24.2	258	00.5	41		42.0	45	50	2 51	39	17	22 50	65	4 47	46			
20	124	04.6		24.9	272	23.5	40		46.3	43	52	38	30	10	22 50	66	34	44			
21	139	04.5		25.7	286	46.6	41		50.3	40	54	23	20	4 03	23 08	66	19	41			
22	154	04.5		26.4	301	09.7	41		54.2	39	56	2 04	3 09	3 55	29 67		4 01	38			
23	169	04.4		27.1	315	32.7	40	+27	57.9	37	58	1 40	2 55	45	23 56	68	3 40	31			
24	184	04.4	-16	27.9	329	55.8	41	+28	01.4	35	60 S	1 06	2 39	3 35	** ** *	**	3 13	19			
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO								
	PMG: 20 ^h 52 ^m 3			Mag: -4.0 PMG: 11 ^h 55 ^m			Mag: +1.6 PMG: 11 ^h 25 ^m			Mag: -1.7 PMG: 12 ^h 30 ^m			Mag: +0.5 PMG: 6 ^h 43 ^m								
	hG ♈		Dec	hG ♀		Dec	hG ♂		Dec	hG ♃		Dec	hG ♄		Dec						
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'					
0	46	03.5	181	18.3	-16	18.9	188	39.9	-14	29.1	172	00.1	-18	34.7	259	06.8	+14	23.1			
1	61	05.9	196	17.7		19.9	203	40.7		29.6	187	02.0		34.9	274	09.1		23.1			
2	76	08.4	211	17.0		20.9	218	41.5		30.2	202	03.9		35.0	289	11.4		23.0			
3	91	10.9	226	16.4		21.8	233	42.3		30.7	217	05.8		35.1	304	13.8		23.0			
4	106	13.3	241	15.7		22.8	248	43.1		31.3	232	07.7		35.3	319	16.1		23.0			
5	121	15.8	256	15.1	-16	23.8	263	43.9	-14	31.9	247	09.6	-18	35.4	334	18.4	+14	22.9			
6	136	18.2	271	14.4	-16	24.8	278	44.7	-14	32.4	262	11.5	-18	35.5	349	20.8	+14	22.9			
7	151	20.7	286	13.8		25.7	293	45.5		33.0	277	13.4		35.7	4	23.1		22.9			
8	166	23.2	301	13.1		26.7	308	46.2		33.6	292	15.3		35.8	19	25.5		22.8			
9	181	25.6	316	12.5		27.6	323	47.0		34.1	307	17.2		35.9	34	27.8		22.8			
10	196	28.1	331	11.8		28.6	338	47.8		34.7	322	19.1		36.0	49	30.1		22.7			
11	211	30.6	346	11.2	-16	29.6	353	48.6	-14	35.2	337	21.0	-18	36.2	64	32.5	+14	22.7			
12	226	33.0	1	10.5	-16	30.5	8	49.4	-14	35.8	352	22.9	-18	36.3	79	34.8	+14	22.7			
13	241	35.5	16	09.9		31.5	23	50.2		36.4	7	24.8		36.4	94	37.1		22.6			
14	256	38.0	31	09.2		32.5	38	51.0		36.9	22	26.7		36.6	109	39.5		22.6			
15	271	40.4	46	08.6		33.4	53	51.8		37.5	37	28.6		36.7	124	41.8		22.6			
16	286	42.9	61	07.9		34.4	68	52.6		38.0	52	30.5		36.8	139	44.1		22.5			
17	301	45.4	76	07.3	-16	35.3	83	53.4	-14	38.6	67	32.4	-18	37.0	154	46.5	+14	22.5			
18	316	47.8	91	06.6	-16	36.3	98	54.2	-14	39.2	82	34.3	-18	37.1	169	48.8	+14	22.5			
19	331	50.3	106	06.0		37.3	113	55.0		39.7	97	36.2		37.2	184	51.1		22.4			
20	346	52.7	121	05.3		38.2	128	55.8		40.3	112	38.1		37.4	199	53.5		22.4			
21	1	55.2	136	04.7		39.2	143	56.6		40.8	127	40.0		37.5	214	55.8		22.4			
22	16	57.7	151	04.0		40.1	158	57.4		41.4	142	41.9		37.6	229	58.2		22.3			
23	32	00.1	166	03.4		41.1	173	58.1		41.9	157	43.8		37.8	245	00.5		22.3			
24	47	02.6	181	02.7	-16	42.0	188	58.9	-14	42.5	172	45.7	-18	37.9	260	02.8	+14	22.3			
Dif	—			-6			+8			-6			+19			-1			+23		

UT	SOL				LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna				
	SD: 16:1 PMG: 11 ^h 43 ^m 7				Edad: 16 ^d 8 PHE { 4 ^h : 58/6 12 ^h : 58/3 20 ^h : 58/0 SD: 16:0 PMG: 2 ^h 05 ^m R°: 61 ^m															
	hG ☉		Dec		hG ☾		Dif				Dec		Dif		Civil		Náutico		Hora R°	
h	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	h	m
0	184	04.4	-16	27.9	329	55.8	+28	01.4	60 N	15 47	16 34	17 24	16 02	78	13 09	47				
1	199	04.4		28.6	344	18.9		04.7	58	15 57		40	28	16 42	72	12 30				
2	214	04.3		29.3	358	42.0		07.8	56	16 05		46	31	17 09	71	12 02				
3	229	04.3		30.0	13	05.1		10.8	54	13	51	34	31	69	11 40	55				
4	244	04.3		30.8	27	28.2		13.5	52	20	16 56	37	17 49	67	23	55				
5	259	04.2	-16	31.5	41	51.4	+28	16.0	50	16 26	17 01	17 39	18 04	67	11 07	57				
6	274	04.2	-16	32.2	56	14.5	+28	18.4	45	16 39	17 10	17 45	18 35	65	10 36	58				
7	289	04.1		33.0	70	37.7		20.6	40	16 50		19	51	18 59	64	10 13				
8	304	04.1		33.7	85	01.0		22.5	35	17 00		26	17 56	19 19	63	9 53				
9	319	04.1		34.4	99	24.2		24.3	30	08	33	18 02	19 36	62	36	59				
10	334	04.0		35.1	113	47.5		25.9	20	22	45	12	20 04	61	9 07	60				
11	349	04.0	-16	35.9	128	10.8	+28	27.3	10 N	17 35	17 57	18 22	20 29	60	8 43	60				
12	4	03.9	-16	36.6	142	34.2	+28	28.5	0	17 47	18 09	18 34	20 52	58	8 20	60				
13	19	03.9		37.3	156	57.6		29.5	10 S	17 59		21	18 47	21 15	57	7 57				
14	34	03.8		38.0	171	21.1		30.4	20	18 13		36	19 03	21 39	57	33				
15	49	03.8		38.8	185	44.5		31.0	30	28	18 53	24	22 08	55	7 04	61				
16	64	03.7		39.5	200	08.1		31.5	35	37	19 04	37	25 54		6 47	61				
17	79	03.7	-16	40.2	214	31.7	+28	31.8	40	18 47	19 17	19 53	22 45	52	6 28	60				
18	94	03.7	-16	40.9	228	55.3	+28	31.9	45	18 59	19 32	20 13	23 09	51	6 04	60				
19	109	03.6		41.6	243	19.0		31.8	50	19 13	19 51	40	40 48		5 33	61				
20	124	03.6		42.4	257	42.7		31.5	52	20	20 00	20 54	23 56	46	18	60				
21	139	03.5		43.1	272	06.5		31.1	54	28	11	21 10	** ** *	**	5 00	60				
22	154	03.5		43.8	286	30.4		30.4	56	36	23	30	** ** *	**	4 39	59				
23	169	03.4		44.5	300	54.3		29.6	58	46	37	21 56	** ** *	**	4 11	59				
24	184	03.4	-16	45.2	315	18.3	+28	28.6	60 S	19 57	20 54	22 35	0 35	71	3 32	57				
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO					
	PMG: 20 ^h 48 ^m 4		Mag: -4.0 PMG: 11 ^h 56 ^m				Mag: +1.6 PMG: 11 ^h 23 ^m				Mag: -1.7 PMG: 12 ^h 27 ^m				Mag: +0.5 PMG: 6 ^h 39 ^m					
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	47	02.6	181	02.7	-16	42.0	188	58.9	-14	42.5	172	45.7	-18	37.9	260	02.8	+14	22.3		
1	62	05.1	196	02.0		43.0	203	59.7		43.1	187	47.6		38.0	275	05.2		22.2		
2	77	07.5	211	01.4		43.9	219	00.5		43.6	202	49.5		38.1	290	07.5		22.2		
3	92	10.0	226	00.7		44.9	234	01.3		44.2	217	51.4		38.3	305	09.9		22.2		
4	107	12.5	241	00.1		45.8	249	02.1		44.7	232	53.3		38.4	320	12.2		22.1		
5	122	14.9	255	59.4	-16	46.8	264	02.9	-14	45.3	247	55.2	-18	38.5	335	14.5	+14	22.1		
6	137	17.4	270	58.8	-16	47.7	279	03.7	-14	45.9	262	57.1	-18	38.7	350	16.9	+14	22.0		
7	152	19.8	285	58.1		48.7	294	04.5		46.4	277	59.0		38.8	5	19.2		22.0		
8	167	22.3	300	57.4		49.6	309	05.3		47.0	293	00.9		38.9	20	21.5		22.0		
9	182	24.8	315	56.8		50.6	324	06.0		47.5	308	02.8		39.1	35	23.9		21.9		
10	197	27.2	330	56.1		51.5	339	06.8		48.1	323	04.7		39.2	50	26.2		21.9		
11	212	29.7	345	55.5	-16	52.5	354	07.6	-14	48.6	338	06.6	-18	39.3	65	28.6	+14	21.9		
12	227	32.2	0	54.8	-16	53.4	9	08.4	-14	49.2	353	08.5	-18	39.5	80	30.9	+14	21.8		
13	242	34.6	15	54.1		54.4	24	09.2		49.8	8	10.4		39.6	95	33.2		21.8		
14	257	37.1	30	53.5		55.3	39	10.0		50.3	23	12.3		39.7	110	35.6		21.8		
15	272	39.6	45	52.8		56.2	54	10.8		50.9	38	14.2		39.8	125	37.9		21.7		
16	287	42.0	60	52.1		57.2	69	11.6		51.4	53	16.1		40.0	140	40.3		21.7		
17	302	44.5	75	51.5	-16	58.1	84	12.4	-14	52.0	68	18.0	-18	40.1	155	42.6	+14	21.7		
18	317	47.0	90	50.8	-16	59.1	99	13.1	-14	52.5	83	19.9	-18	40.2	170	44.9	+14	21.6		
19	332	49.4	105	50.1	-17	00.0	114	13.9		53.1	98	21.8		40.4	185	47.3		21.6		
20	347	51.9	120	49.5	-17	00.9	129	14.7		53.6	113	23.7		40.5	200	49.6		21.6		
21	2	54.3	135	48.8		01.9	144	15.5		54.2	128	25.6		40.6	215	52.0		21.5		
22	17	56.8	150	48.1		02.8	159	16.3		54.7	143	27.5		40.8	230	54.3		21.5		
23	32	59.3	165	47.5		03.8	174	17.1		55.3	158	29.4		40.9	245	56.7		21.5		
24	48	01.7	180	46.8	-17	04.7	189	17.9	-14	55.9	173	31.3	-18	41.0	260	59.0	+14	21.4		
Dif	—		-7		-9		+8		-6		+19		-1		+23					

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16 ^h 1			Edad: 17 ^d 8 PHE { 4 ^h : 57 ^m 7 12 ^h : 57 ^m 4 20 ^h : 57 ^m 1														
	PMG: 11 ^h 43 ^m 8			SD: 15 ^h 8 PMG: 3 ^h 06 ^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	184	03.4	-16	45.2	315	18.3	+28	28.6	60 N	6 04	6 55	7 42	17 20	100	13 56	16		
1	199	03.3		46.0	329	42.4		27.4	58	6 01	48	32	17 54	90	13 21	26		
2	214	03.3		46.7	344	06.5		26.1	56	5 58	42	24	18 20	83	12 56	31		
3	229	03.2		47.4	358	30.7		24.6	54	54	37	16	40	79	35	36		
4	244	03.2		48.1	12	55.0		22.8	52	52	32	09	18 56	77	18	38		
5	259	03.1	-16	48.8	27	19.4	+28	21.0	50	5 49	6 28	7 03	19 11	74	12 04	40		
6	274	03.1	-16	49.5	41	43.8	+28	18.9	45	5 43	6 18	6 49	19 40	70	11 34	44		
7	289	03.0		50.3	56	08.3		16.7	40	37	09	38	20 03	67	11 11	46		
8	304	03.0		51.0	70	32.9		14.3	35	32	6 02	28	22	64	10 52	48		
9	319	02.9		51.7	84	57.5		11.7	30	26	5 55	20	20 38	63	35	50		
10	334	02.9		52.4	99	22.3		09.0	20	16	42	6 05	21 05	60	10 07	53		
11	349	02.8	-16	53.1	113	47.1	+28	06.1	10 N	5 05	5 31	5 52	21 29	56	9 43	55		
12	4	02.8	-16	53.8	128	12.1	+28	03.0	0	4 54	5 19	5 40	21 50	55	9 20	57		
13	19	02.7		54.5	142	37.1	+27	59.8	10 S	40	5 06	28	22 12	52	8 58	58		
14	34	02.7		55.3	157	02.2		56.4	20	24	4 52	15	22 36	49	33	61		
15	49	02.6		56.0	171	27.4		52.8	30	4 03	34	5 00	23 03	45	8 05	63		
16	64	02.6		56.7	185	52.7		49.1	35	3 50	23	4 51		19 43	7 48	65		
17	79	02.5	-16	57.4	200	18.1	+27	45.2	40	3 34	4 10	4 40	23 37	41	7 28	67		
18	94	02.5	-16	58.1	214	43.5	+27	41.1	45	3 14	3 55	4 28	*** ** *		7 04	69		
19	109	02.4		58.8	229	09.1		36.9	50	2 47	36	14	*** ** *		6 34	71		
20	124	02.4	-16	59.5	243	34.8		32.6	52	33	27	4 07	*** ** *		18	74		
21	139	02.3	-17	00.2	258	00.6		28.0	54	2 17	16	3 59	0 14	44	6 00	76		
22	154	02.2		00.9	272	26.5		23.4	56	1 57	3 04	50	0 36	41	5 38	79		
23	169	02.2		01.6	286	52.4		18.6	58	1 31	2 50	41	1 04	36	5 10	84		
24	184	02.1	-17	02.3	301	18.5	+27	13.6	60 S	0 52	2 33	3 29	1 46	25	4 29	95		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 20 ^h 44 ^m 5		Mag: -4.0 PMG: 11 ^h 57 ^m			Mag: +1.6 PMG: 11 ^h 22 ^m			Mag: -1.7 PMG: 12 ^h 24 ^m			Mag: +0.5 PMG: 6 ^h 35 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	
0	48	01.7	180	46.8	-17	04.7	189	17.9	-14	55.9	173	31.3	-18	41.0	260	59.0	+14	21.4
1	63	04.2	195	46.1		05.6	204	18.7		56.4	188	33.2		41.2	276	01.3		21.4
2	78	06.7	210	45.5		06.6	219	19.4		57.0	203	35.1		41.3	291	03.7		21.4
3	93	09.1	225	44.8		07.5	234	20.2		57.5	218	37.0		41.4	306	06.0		21.3
4	108	11.6	240	44.1		08.4	249	21.0		58.1	233	38.9		41.5	321	08.4		21.3
5	123	14.1	255	43.5	-17	09.4	264	21.8	-14	58.6	248	40.8	-18	41.7	336	10.7	+14	21.3
6	138	16.5	270	42.8	-17	10.3	279	22.6	-14	59.2	263	42.7	-18	41.8	351	13.1	+14	21.2
7	153	19.0	285	42.1		11.2	294	23.4	-14	59.7	278	44.6		41.9	6	15.4		21.2
8	168	21.5	300	41.4		12.1	309	24.1	-15	00.3	293	46.5		42.1	21	17.7		21.2
9	183	23.9	315	40.8		13.1	324	24.9		00.8	308	48.4		42.2	36	20.1		21.1
10	198	26.4	330	40.1		14.0	339	25.7		01.4	323	50.3		42.3	51	22.4		21.1
11	213	28.8	345	39.4	-17	14.9	354	26.5	-15	01.9	338	52.2	-18	42.5	66	24.8	+14	21.1
12	228	31.3	0	38.7	-17	15.9	9	27.3	-15	02.5	353	54.1	-18	42.6	81	27.1	+14	21.0
13	243	33.8	15	38.1		16.8	24	28.1		03.0	8	56.0		42.7	96	29.5		21.0
14	258	36.2	30	37.4		17.7	39	28.8		03.6	23	57.9		42.9	111	31.8		21.0
15	273	38.7	45	36.7		18.6	54	29.6		04.1	38	59.8		43.0	126	34.1		20.9
16	288	41.2	60	36.0		19.5	69	30.4		04.7	54	01.7		43.1	141	36.5		20.9
17	303	43.6	75	35.4	-17	20.5	84	31.2	-15	05.2	69	03.6	-18	43.2	156	38.8	+14	20.9
18	318	46.1	90	34.7	-17	21.4	99	32.0	-15	05.8	84	05.5	-18	43.4	171	41.2	+14	20.8
19	333	48.6	105	34.0		22.3	114	32.8		06.4	99	07.4		43.5	186	43.5		20.8
20	348	51.0	120	33.3		23.2	129	33.5		06.9	114	09.3		43.6	201	45.9		20.8
21	3	53.5	135	32.6		24.2	144	34.3		07.5	129	11.2		43.8	216	48.2		20.8
22	18	56.0	150	32.0		25.1	159	35.1		08.0	144	13.1		43.9	231	50.6		20.7
23	33	58.4	165	31.3		26.0	174	35.9		08.6	159	15.0		44.0	246	52.9		20.7
24	49	00.9	180	30.6	-17	26.9	189	36.7	-15	09.1	174	16.9	-18	44.2	261	55.3	+14	20.7
Dif	—		-7 -9		-9		+8 -6		-6		+19 -1		-1		+23			

UT	SOL			☾ LUNA					Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16 ^d 1			Edad: 18 ^d 8 PHE { 4 ^h : 56 ^m 8 12 ^h : 56 ^m 5 20 ^h : 56 ^m 2							Civil			Náutico		Hora R°	
	PMG: 11 ^h 43 ^m 9			SD: 15 ^h 5 PMG: 4 ^h 04 ^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	184	02.1	-17	02.3	301	18.5	+27	13.6	60 N	15 42	16 30	17 20	19 00 99	14 12 5			
1	199	02.1		03.1	315	44.7		08.5	58	15 52	37	24	24 91	13 47 13			
2	214	02.0		03.8	330	11.0	+27	03.2	56	16 01	43	28	43 86	27 18			
3	229	02.0		04.5	344	37.4	+26	57.8	54	09	48	31	19 59 82	13 11 22			
4	244	01.9		05.2	359	03.9		52.2	52	17	53	34	20 13 79	12 56 25			
5	259	01.8	-17	05.9	13	30.6	+26	46.5	50	16 23	16 58	17 37	20 25 76	12 44 28			
6	274	01.8	-17	06.6	27	57.3	+26	40.7	45	16 37	17 08	17 43	20 50 71	12 18 33			
7	289	01.7		07.3	42	24.1		34.7	40	48	17	49	21 10 66	11 57 37			
8	304	01.7		08.0	56	51.1		28.5	35	16 58	25	17 55	26 64	40 39			
9	319	01.6		08.7	71	18.1		22.3	30	17 07	32	18 00	21 41 60	25 42			
10	334	01.6		09.4	85	45.3		15.9	20	22	45	11	22 05 56	11 00 45			
11	349	01.5	-17	10.1	100	12.6	+26	09.3	10 N	17 35	17 57	18 22	22 25 53	10 38 49			
12	4	01.4	-17	10.8	114	40.0	+26	02.7	0	17 47	18 09	18 34	22 45 49	10 17 52			
13	19	01.4		11.5	129	07.5	+25	55.9	10 S	18 00	22	18 48	23 04 46	9 56 55			
14	34	01.3		12.2	143	35.1		48.9	20	14	37	19 05	25 42	34 58			
15	49	01.2		12.9	158	02.8		41.9	30	29	18 55	26	23 48 38	9 08 62			
16	64	01.2		13.6	172	30.7		34.7	35	39	19 06	40	*** ** *	8 53 64			
17	79	01.1	-17	14.3	186	58.6	+25	27.4	40	18 49	19 19	19 56	*** ** *	8 35 67			
18	94	01.1	-17	15.0	201	26.7	+25	19.9	45	19 02	19 35	20 17	0 00 37	8 13 71			
19	109	01.0		15.7	215	54.9		12.3	50	17	19 55	45	28 33	7 45 76			
20	124	00.9		16.4	230	23.2	+25	04.7	52	24	20 05	20 59	42 30	32 78			
21	139	00.9		17.1	244	51.6	+24	56.8	54	32	16	21 16	0 58 27	7 16 82			
22	154	00.8		17.8	259	20.2		48.9	56	41	28	21 37	1 17 23	6 57 87			
23	169	00.7		18.5	273	48.8		40.9	58	19 51	20 43	22 06	1 40 17	34 93			
24	184	00.7	-17	19.2	288	17.6	+24	32.7	60 S	20 03	21 01	22 53	2 11 7	6 04 103			
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO					
	PMG: 20 ^h 40 ^m 5		Mag: -4.0 PMG: 11 ^h 59 ^m			Mag: +1.6 PMG: 11 ^h 21 ^m			Mag: -1.7 PMG: 12 ^h 21 ^m			Mag: +0.5 PMG: 6 ^h 31 ^m					
	hG ♈	hG ♎	Dec	hG ♂	Dec	hG ♎	Dec	hG ♏	Dec	hG ♏	Dec	hG ♏	Dec				
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	49	00.9	180	30.6	-17	26.9	189	36.7	-15	09.1	174	16.9	-18	44.2	261	55.3	
1	64	03.3	195	29.9		27.8	204	37.4		09.7	189	18.8		44.3	276	57.6	
2	79	05.8	210	29.2		28.7	219	38.2		10.2	204	20.7		44.4	291	59.9	
3	94	08.3	225	28.5		29.6	234	39.0		10.8	219	22.6		44.5	307	02.3	
4	109	10.7	240	27.9		30.6	249	39.8		11.3	234	24.5		44.7	322	04.6	
5	124	13.2	255	27.2	-17	31.5	264	40.6	-15	11.8	249	26.4	-18	44.8	337	07.0	
6	139	15.7	270	26.5	-17	32.4	279	41.3	-15	12.4	264	28.3	-18	44.9	352	09.3	
7	154	18.1	285	25.8		33.3	294	42.1		12.9	279	30.2		45.1	7	11.7	
8	169	20.6	300	25.1		34.2	309	42.9		13.5	294	32.1		45.2	22	14.0	
9	184	23.1	315	24.4		35.1	324	43.7		14.0	309	34.0		45.3	37	16.4	
10	199	25.5	330	23.8		36.0	339	44.5		14.6	324	35.9		45.5	52	18.7	
11	214	28.0	345	23.1	-17	36.9	354	45.2	-15	15.1	339	37.8	-18	45.6	67	21.1	
12	229	30.5	0	22.4	-17	37.8	9	46.0	-15	15.7	354	39.7	-18	45.7	82	23.4	
13	244	32.9	15	21.7		38.7	24	46.8		16.2	9	41.6		45.8	97	25.8	
14	259	35.4	30	21.0		39.6	39	47.6		16.8	24	43.5		46.0	112	28.1	
15	274	37.8	45	20.3		40.5	54	48.3		17.3	39	45.4		46.1	127	30.5	
16	289	40.3	60	19.6		41.5	69	49.1		17.9	54	47.3		46.2	142	32.8	
17	304	42.8	75	18.9	-17	42.4	84	49.9	-15	18.4	69	49.2	-18	46.4	157	35.2	
18	319	45.2	90	18.2	-17	43.3	99	50.7	-15	19.0	84	51.0	-18	46.5	172	37.5	
19	334	47.7	105	17.5		44.2	114	51.5		19.5	99	52.9		46.6	187	39.9	
20	349	50.2	120	16.9		45.1	129	52.2		20.1	114	54.8		46.7	202	42.2	
21	4	52.6	135	16.2		46.0	144	53.0		20.6	129	56.7		46.9	217	44.6	
22	19	55.1	150	15.5		46.9	159	53.8		21.2	144	58.6		47.0	232	46.9	
23	34	57.6	165	14.8		47.8	174	54.6		21.7	160	00.5		47.1	247	49.3	
24	50	00.0	180	14.1	-17	48.7	189	55.3	-15	22.2	175	02.4	-18	47.3	262	51.6	
Dif	—		-7	-9			+8	-5			+19	-1			+23	0	

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'2 PMG: 11 ^h 44 ^m 0			Edad: 19 ^d 8 PHE { SD: 15'3 PMG: 4 ^h 57 ^m R°: 48 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°
h	°	'	°	°	'	°	°	h	m	h	m	h	m	h	m
0	184	00.7	-17	288	17.6	+24	32.7	6	08	7	00	7	47	20	39
1	199	00.6		302	46.4		24.4	05	6	53	37	20	55	88	14
2	214	00.5		317	15.4		16.1	6	01	46	28	21	09	84	13
3	229	00.5		331	44.5	+24	07.6	5	58	41	20	21	80		33
4	244	00.4		346	13.8	+23	59.0	55	36		12	32	76		21
5	259	00.3	-17	0	43.1	+23	50.2	5	52	6	31	7	06	21	41
6	274	00.3	-17	15	12.5	+23	41.4	5	45	6	20	6	52	22	01
7	289	00.2		29	42.1		32.5	39	12	40		16	65		34
8	304	00.1		44	11.8		23.4	33	6	04	30	30	61		19
9	319	00.1		58	41.6		14.3	28	5	56	22	22	41	58	12
10	334	00.0		73	11.5	+23	05.1	17	43	6	06	23	01	53	11
11	348	59.9	-17	87	41.5	+22	55.7	5	06	5	53	23	18	49	11
12	3	59.9	-17	102	11.6	+22	46.3	4	54	5	40	23	34	45	11
13	18	59.8		116	41.8		36.7	40	5	06	28	23	50	41	10
14	33	59.7		131	12.2		27.1	23	4	51	5	23	50	41	10
15	48	59.7		145	42.6		17.4	4	02	32	4	58	23	50	41
16	63	59.6		160	13.2	+22	07.6	3	48	21	49	0	02	36	9
17	78	59.5	-17	174	43.9	+21	57.6	3	31	4	08	0	18	32	9
18	93	59.4	-17	189	14.6	+21	47.6	3	11	3	52	0	37	28	9
19	108	59.4		203	45.5		37.5	2	43	32	11	1	01	23	9
20	123	59.3		218	16.5		27.4	28	23	4	03	12	21		8
21	138	59.2		232	47.6		17.1	2	11	3	12	25	17		38
22	153	59.1		247	18.8	+21	06.7	1	50	2	59	40	13		24
23	168	59.1		261	50.2	+20	56.3	1	22	44	36	1	57	9	8
24	183	59.0	-17	276	21.6	+20	45.8	0	34	2	26	2	18	2	7
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 20 ^h 36 ^m 6		Mag: -4.0 PMG: 12 ^h 00 ^m			Mag: +1.6 PMG: 11 ^h 20 ^m			Mag: -1.7 PMG: 12 ^h 18 ^m			Mag: +0.5 PMG: 6 ^h 28 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°
0	50	00.0	180	14.1	-17	48.7	189	55.3	-15	22.2	175	02.4	-18	47.3	262
1	65	02.5	195	13.4		49.5	204	56.1		22.8	190	04.3		47.4	277
2	80	05.0	210	12.7		50.4	219	56.9		23.3	205	06.2		47.5	292
3	95	07.4	225	12.0		51.3	234	57.7		23.9	220	08.1		47.7	307
4	110	09.9	240	11.3		52.2	249	58.4		24.4	235	10.0		47.8	323
5	125	12.3	255	10.6	-17	53.1	264	59.2	-15	25.0	250	11.9	-18	47.9	338
6	140	14.8	270	09.9	-17	54.0	280	00.0	-15	25.5	265	13.8	-18	48.0	353
7	155	17.3	285	09.2		54.9	295	00.8		26.1	280	15.7		48.2	8
8	170	19.7	300	08.5		55.8	310	01.5		26.6	295	17.6		48.3	23
9	185	22.2	315	07.8		56.7	325	02.3		27.1	310	19.5		48.4	38
10	200	24.7	330	07.1		57.6	340	03.1		27.7	325	21.4		48.6	53
11	215	27.1	345	06.4	-17	58.5	355	03.9	-15	28.2	340	23.3	-18	48.7	68
12	230	29.6	0	05.7	-17	59.3	10	04.6	-15	28.8	355	25.2	-18	48.8	83
13	245	32.1	15	05.0	-18	00.2	25	05.4		29.3	10	27.1		48.9	98
14	260	34.5	30	04.3		01.1	40	06.2		29.9	25	29.0		49.1	113
15	275	37.0	45	03.6		02.0	55	06.9		30.4	40	30.9		49.2	128
16	290	39.4	60	02.9		02.9	70	07.7		30.9	55	32.8		49.3	143
17	305	41.9	75	02.2	-18	03.8	85	08.5	-15	31.5	70	34.7	-18	49.5	158
18	320	44.4	90	01.5	-18	04.7	100	09.3	-15	32.0	85	36.6	-18	49.6	173
19	335	46.8	105	00.8		05.5	115	10.0		32.6	100	38.5		49.7	188
20	350	49.3	120	00.1		06.4	130	10.8		33.1	115	40.4		49.8	203
21	5	51.8	134	59.4		07.3	145	11.6		33.7	130	42.3		50.0	218
22	20	54.2	149	58.7		08.2	160	12.3		34.2	145	44.2		50.1	233
23	35	56.7	164	58.0		09.0	175	13.1		34.7	160	46.1		50.2	248
24	50	59.2	179	57.3	-18	09.9	190	13.9	-15	35.3	175	48.0	-18	50.4	263
Dif	—		-7	-9		+8	-5			+19	-1		+24		0

UT	SOL				☾ LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16:2 PMG: 11 ^h 44 ^m 1				Edad: 20 ^d 8 PHE { SD: 15:1 PMG: 5 ^h 45 ^m R°: 45 ^m 4 ^h : 55:3 12 ^h : 55:1 20 ^h : 54:9												
	hG ☉	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	59.0	-17	35.7	276	21.6	+20	45.8	60 N	15 38	16 26	17 17	22 12 88		14 18 0		
1	198	58.9		36.4	290	53.1 ¹²⁵		35.2 ¹⁰⁶	58	48	33	21	23 83		14 06 4		
2	213	58.8		37.0	305	24.7 ¹²⁶		24.5 ¹⁰⁷	56	15 58	39	25	33 79		13 56 7		
3	228	58.8		37.7	319	56.4 ¹²⁷		13.7 ¹⁰⁸	54	16 06	45	28	41 76		47 10		
4	243	58.7		38.4	334	28.3 ¹²⁹	+20	02.9 ¹⁰⁸	52	13	50	31	48 74		39 13		
5	258	58.6	-17	39.1	349	00.2 ¹²⁹	+19	51.9 ¹¹⁰	50	16 20	16 55	17 34	22 55 71		13 32 15		
6	273	58.5	-17	39.8	3	32.2 ¹³⁰	+19	40.9 ¹¹⁰	45	16 35	17 06	17 41	23 09 66		13 16 20		
7	288	58.5		40.4	18	04.3 ¹³¹		29.9 ¹¹⁰	40	46	15	48	21 62		13 03 24		
8	303	58.4		41.1	32	36.5 ¹³²		18.7 ¹¹²	35	16 57	23	54	31 58		12 52 27		
9	318	58.3		41.8	47	08.9 ¹³⁴	+19	07.5 ¹¹²	30	17 06	31	17 59	39 56		42 30		
10	333	58.2		42.5	61	41.3 ¹³⁴	+18	56.2 ¹¹³	20	21	44	18 11	23 54 51		25 35		
11	348	58.2	-17	43.2	76	13.8 ¹³⁵	+18	44.8 ¹¹⁴	10 N	17 35	17 57	18 22	** ** *		12 10 40		
12	3	58.1	-17	43.8	90	46.4 ¹³⁶	+18	33.4 ¹¹⁴	0	17 48	18 09	18 35	** ** *		11 56 44		
13	18	58.0		44.5	105	19.1 ¹³⁷		21.9 ¹¹⁵	10 S	18 01	23	18 49	** ** *		42 48		
14	33	57.9		45.2	119	51.8 ¹³⁷	+18	10.3 ¹¹⁶	20	15	38	19 06	0 07 37		27 52		
15	48	57.8		45.9	134	24.7 ¹³⁹	+17	58.7 ¹¹⁶	30	31	18 57	28	26 33		10 57		
16	63	57.8		46.5	148	57.7 ¹⁴⁰		47.0 ¹¹⁷	35	41	19 08	42	38 29		11 00 59		
17	78	57.7	-17	47.2	163	30.7 ¹⁴⁰	+17	35.2 ¹¹⁸	40	18 51	19 22	19 59	0 50 27		10 48 63		
18	93	57.6	-17	47.9	178	03.9 ¹⁴²	+17	23.4 ¹¹⁸	45	19 04	19 38	20 20	1 05 23		10 34 67		
19	108	57.5		48.5	192	37.1 ¹⁴²	+17	11.5 ¹¹⁹	50	20	19 59	20 49	24 17		17 73		
20	123	57.4		49.2	207	10.4 ¹⁴³	+16	59.6 ¹¹⁹	52	28	20 09	21 04	33 14		09 75		
21	138	57.4		49.9	221	43.8 ¹⁴⁴		47.6 ¹²⁰	54	36	20	22	42 12		10 00 78		
22	153	57.3		50.6	236	17.3 ¹⁴⁵		35.5 ¹²¹	56	45	33	21 45	1 53 9		9 49 82		
23	168	57.2		51.2	250	50.9 ¹⁴⁶		23.4 ¹²¹	58	19 56	20 49	22 16	2 06 4		38 85		
24	183	57.1	-17	51.9	265	24.5 ¹⁴⁶	+16	11.2 ¹²²	60 S	20 08	21 08	23 21	2 20 0		9 24 91		
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO								
	PMG: 20 ^h 32 ^m 7		Mag: -3.9 PMG: 12 ^h 01 ^m		Mag: +1.6 PMG: 11 ^h 18 ^m		Mag: -1.7 PMG: 12 ^h 15 ^m		Mag: +0.5 PMG: 6 ^h 24 ^m								
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	50	59.2	179	57.3	-18	09.9	190	13.9	-15	35.3	175	48.0	-18	50.4	263	48.1	
1	66	01.6	194	56.5		10.8	205	14.6		35.8	190	49.9		50.5	278	50.4	
2	81	04.1	209	55.8		11.7	220	15.4		36.4	205	51.8		50.6	293	52.8	
3	96	06.6	224	55.1		12.5	235	16.2		36.9	220	53.7		50.7	308	55.1	
4	111	09.0	239	54.4		13.4	250	17.0		37.4	235	55.5		50.9	323	57.5	
5	126	11.5	254	53.7	-18	14.3	265	17.7	-15	38.0	250	57.4	-18	51.0	338	59.8	
6	141	13.9	269	53.0	-18	15.2	280	18.5	-15	38.5	265	59.3	-18	51.1	354	02.2	
7	156	16.4	284	52.3		16.0	295	19.3		39.1	281	01.2		51.3	9	04.5	
8	171	18.9	299	51.6		16.9	310	20.0		39.6	296	03.1		51.4	24	06.9	
9	186	21.3	314	50.9		17.8	325	20.8		40.1	311	05.0		51.5	39	09.3	
10	201	23.8	329	50.2		18.6	340	21.6		40.7	326	06.9		51.6	54	11.6	
11	216	26.3	344	49.4	-18	19.5	355	22.3	-15	41.2	341	08.8	-18	51.8	69	14.0	
12	231	28.7	359	48.7	-18	20.4	10	23.1	-15	41.7	356	10.7	-18	51.9	84	16.3	
13	246	31.2	14	48.0		21.2	25	23.9		42.3	11	12.6		52.0	99	18.7	
14	261	33.7	29	47.3		22.1	40	24.6		42.8	26	14.5		52.2	114	21.0	
15	276	36.1	44	46.6		23.0	55	25.4		43.4	41	16.4		52.3	129	23.4	
16	291	38.6	59	45.9		23.8	70	26.2		43.9	56	18.3		52.4	144	25.8	
17	306	41.1	74	45.1	-18	24.7	85	26.9	-15	44.4	71	20.2	-18	52.5	159	28.1	
18	321	43.5	89	44.4	-18	25.6	100	27.7	-15	45.0	86	22.1	-18	52.7	174	30.5	
19	336	46.0	104	43.7		26.4	115	28.5		45.5	101	24.0		52.8	189	32.8	
20	351	48.4	119	43.0		27.3	130	29.2		46.0	116	25.9		52.9	204	35.2	
21	6	50.9	134	42.3		28.1	145	30.0		46.6	131	27.8		53.1	219	37.5	
22	21	53.4	149	41.6		29.0	160	30.8		47.1	146	29.7		53.2	234	39.9	
23	36	55.8	164	40.8		29.9	175	31.5		47.7	161	31.6		53.3	249	42.3	
24	51	58.3	179	40.1	-18	30.7	190	32.3	-15	48.2	176	33.5	-18	53.4	264	44.6	
Dif	—		-7		-9		+8		-5		+19		-1		+24		
															0		

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna						
	SD: 16'2 PMG: 11 ^h 44 ^m 3			Edad: 21 ^d 8 PHE { 4 ^h : 54'7 12 ^h : 54'6 20 ^h : 54'5 SD: 14'9 PMG: 6 ^h 30 ^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	h	m	
0	183	57.1	-17	51.9	265	24.5	+16	11.2	60 N	6 13	7 04	7 52	23 40	83	14 18	**			
1	198	57.0		52.6	279	58.2 ¹⁴⁷	+15	59.0 ¹²²	58	08	6 57	41	46	80	10	3			
2	213	56.9		53.2	294	32.0 ¹⁴⁸		46.7 ¹²³	56	05	50	32	52	76	14	03	6		
3	228	56.9		53.9	309	05.9 ¹⁴⁹		34.3 ¹²⁴	54	6 01	44	24	23	57	74	13	57	8	
4	243	56.8		54.6	323	39.9 ¹⁵⁰		22.0 ¹²³	52	5 58	39	16	**	**	**	52	10		
5	258	56.7	-17	55.2	338	13.9 ¹⁵⁰	+15	09.5 ¹²⁵	50	5 55	6 34	7 09	**	**	**	13 47	12		
6	273	56.6	-17	55.9	352	48.0 ¹⁵¹	+14	57.0 ¹²⁵	45	5 48	6 23	6 55	**	**	**	13 36	17		
7	288	56.5		56.6	7	22.2 ¹⁵²		44.5 ¹²⁵	40	41	14	43	**	**	**	27	21		
8	303	56.4		57.2	21	56.5 ¹⁵³		31.9 ¹²⁶	35	35	6 05	32	**	**	**	19	25		
9	318	56.3		57.9	36	30.8 ¹⁵³		19.2 ¹²⁷	30	29	5 58	23	**	**	**	12	27		
10	333	56.3		58.6	51	05.2 ¹⁵⁴	+14	06.5 ¹²⁷	20	18	44	6 08	**	**	**	13 00	32		
11	348	56.2	-17	59.2	65	39.7 ¹⁵⁵	+13	53.8 ¹²⁷	10 N	5 06	5 32	5 54	0 07	46	12 50	36			
12	3	56.1	-17	59.9	80	14.2 ¹⁵⁵	+13	41.0 ¹²⁸	0	4 54	5 19	5 41	0 19	42	12 40	40			
13	18	56.0	-18	00.6	94	48.8 ¹⁵⁶		28.2 ¹²⁸	10 S	39	5 05	5 28	31	38	30	45			
14	33	55.9		01.2	109	23.5 ¹⁵⁷		15.3 ¹²⁹	20	22	4 50	5 13	44	34	19	49			
15	48	55.8		01.9	123	58.2 ¹⁵⁷	+13	02.4 ¹²⁹	30	4 00	31	4 57	0 59	28	12 07	54			
16	63	55.7		02.5	138	33.0 ¹⁵⁸	+12	49.4 ¹³⁰	35	3 46	20	47	1 07	26	11 59	58			
17	78	55.6	-18	03.2	153	07.9 ¹⁵⁹	+12	36.4 ¹³⁰	40	3 29	4 06	4 36	1 17	22	11 51	61			
18	93	55.5	-18	03.9	167	42.8 ¹⁵⁹	+12	23.4 ¹³⁰	45	3 07	3 50	4 24	1 28	18	11 41	65			
19	108	55.4		04.5	182	17.8 ¹⁶⁰	+12	10.3 ¹³¹	50	2 38	29	08	41	14	30	69			
20	123	55.4		05.2	196	52.8 ¹⁶⁰	+11	57.2 ¹³¹	52	23	19	4 00	47	12	24	72			
21	138	55.3		05.8	211	27.9 ¹⁶¹		44.1 ¹³¹	54	2 05	3 08	3 52	1 54	9	18	75			
22	153	55.2		06.5	226	03.1 ¹⁶²		30.9 ¹³²	56	1 43	2 54	43	2 02	6	11	78			
23	168	55.1		07.2	240	38.3 ¹⁶²		17.7 ¹³²	58	1 11	39	32	10	3	11	03	82		
24	183	55.0	-18	07.8	255	13.5 ¹⁶²	+11	04.4 ¹³³	60 S	0 07	2 20	3 20	2 20	**	10 55	85			
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO				
	PMG: 20 ^h 28 ^m 7		Mag: -3.9 PMG: 12 ^h 02 ^m				Mag: +1.6 PMG: 11 ^h 17 ^m				Mag: -1.7 PMG: 12 ^h 12 ^m				Mag: +0.5 PMG: 6 ^h 20 ^m				
	hG ♈		hG ♀	Dec			hG ♂	Dec			hG ♃	Dec			hG ♄	Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	51	58.3	179	40.1	-18	30.7	190	32.3	-15	48.2	176	33.5	-18	53.4	264	44.6	+14	18.5	
1	67	00.8	194	39.4		31.6	205	33.1		48.7	191	35.4		53.6	279	47.0		18.5	
2	82	03.2	209	38.7		32.4	220	33.8		49.3	206	37.3		53.7	294	49.3		18.5	
3	97	05.7	224	38.0		33.3	235	34.6		49.8	221	39.1		53.8	309	51.7		18.4	
4	112	08.2	239	37.2		34.1	250	35.3		50.3	236	41.0		54.0	324	54.0		18.4	
5	127	10.6	254	36.5	-18	35.0	265	36.1	-15	50.9	251	42.9	-18	54.1	339	56.4	+14	18.4	
6	142	13.1	269	35.8	-18	35.8	280	36.9	-15	51.4	266	44.8	-18	54.2	354	58.8	+14	18.4	
7	157	15.5	284	35.1		36.7	295	37.6		51.9	281	46.7		54.3	10	01.1		18.3	
8	172	18.0	299	34.3		37.5	310	38.4		52.5	296	48.6		54.5	25	03.5		18.3	
9	187	20.5	314	33.6		38.4	325	39.2		53.0	311	50.5		54.6	40	05.8		18.3	
10	202	22.9	329	32.9		39.2	340	39.9		53.5	326	52.4		54.7	55	08.2		18.2	
11	217	25.4	344	32.2	-18	40.1	355	40.7	-15	54.1	341	54.3	-18	54.9	70	10.6	+14	18.2	
12	232	27.9	359	31.4	-18	40.9	10	41.5	-15	54.6	356	56.2	-18	55.0	85	12.9	+14	18.2	
13	247	30.3	14	30.7		41.8	25	42.2		55.1	11	58.1		55.1	100	15.3		18.2	
14	262	32.8	29	30.0		42.6	40	43.0		55.7	27	00.0		55.2	115	17.7		18.1	
15	277	35.3	44	29.3		43.4	55	43.7		56.2	42	01.9		55.4	130	20.0		18.1	
16	292	37.7	59	28.5		44.3	70	44.5		56.7	57	03.8		55.5	145	22.4		18.1	
17	307	40.2	74	27.8	-18	45.1	85	45.3	-15	57.3	72	05.7	-18	55.6	160	24.7	+14	18.1	
18	322	42.7	89	27.1	-18	46.0	100	46.0	-15	57.8	87	07.6	-18	55.7	175	27.1	+14	18.0	
19	337	45.1	104	26.3		46.8	115	46.8		58.3	102	09.5		55.9	190	29.5		18.0	
20	352	47.6	119	25.6		47.6	130	47.5		58.9	117	11.4		56.0	205	31.8		18.0	
21	7	50.0	134	24.9		48.5	145	48.3		59.4	132	13.3		56.1	220	34.2		18.0	
22	22	52.5	149	24.1		49.3	160	49.1	-15	59.9	147	15.2		56.3	235	36.5		17.9	
23	37	55.0	164	23.4		50.2	175	49.8	-16	00.5	162	17.0		56.4	250	38.9		17.9	
24	52	57.4	179	22.7	-18	51.0	190	50.6	-16	01.0	177	18.9	-18	56.5	265	41.3	+14	17.9	
Dif	—		-7		-8		+8		-5		+19		-1		+24				

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16°2			Edad: 22 ^d 8 PHE { 4 ^h : 54/4 12 ^h : 54/3 20 ^h : 54/2										
	PMG: 11 ^h 44 ^m 4			SD: 14°8 PMG: 7 ^h 11 ^m R°: 39 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m
0	183	55.0	-18 07.8	255	13.5	+11 04.4		60 N	15 33	16 22	17 13	** ** *	14 17	**
1	198	54.9	08.5	269	48.9 ¹⁶⁴	+10 51.1 ¹³³		58	44	29	18	** ** *	13	1
2	213	54.8	09.1	284	24.2 ¹⁶³	37.8 ¹³³		56	15 54	36	22	** ** *	09	4
3	228	54.7	09.8	298	59.7 ¹⁶⁵	24.4 ¹³⁴		54	16 03	42	25	** ** *	05	7
4	243	54.6	10.4	313	35.1 ¹⁶⁴	+10 11.0 ¹³⁴		52	10	48	29	0 02	71	14 02 9
5	258	54.5	-18 11.1	328	10.6 ¹⁶⁵	+9 57.6 ¹³⁴		50	16 17	16 53	17 32	0 06	69	13 59 12
6	273	54.4	-18 11.7	342	46.2 ¹⁶⁶	+9 44.1 ¹³⁵		45	16 32	17 04	17 40	0 15	64	13 53 16
7	288	54.3	12.4	357	21.8 ¹⁶⁶	30.7 ¹³⁴		40	45	14	46	23 60	48	19
8	303	54.2	13.0	11	57.5 ¹⁶⁷	17.1 ¹³⁶		35	16 55	22	53	29 57	44	22
9	318	54.1	13.7	26	33.2 ¹⁶⁷	+9 03.6 ¹³⁵		30	17 04	30	17 59	35 53	39	26
10	333	54.0	14.3	41	08.9 ¹⁶⁷	+8 50.0 ¹³⁶		20	21	44	18 10	45 48	32	31
11	348	54.0	-18 15.0	55	44.7 ¹⁶⁸	+8 36.4 ¹³⁶		10 N	17 35	17 57	18 22	0 53	44	13 26 35
12	3	53.9	-18 15.6	70	20.5 ¹⁶⁸	+8 22.8 ¹³⁶		0	17 48	18 10	18 35	1 01	40	13 20 39
13	18	53.8	16.3	84	56.4 ¹⁶⁹	+8 09.2 ¹³⁶		10 S	18 01	24	18 50	09 36	15	43
14	33	53.7	16.9	99	32.3 ¹⁶⁹	+7 55.5 ¹³⁷		20	16	39	19 07	18 31	08	48
15	48	53.6	17.6	114	08.2 ¹⁶⁹	41.8 ¹³⁷		30	33	18 59	30	27 26	13 01	53
16	63	53.5	18.2	128	44.2 ¹⁷⁰	28.1 ¹³⁷		35	43	19 10	19 44	33 23	12 57	56
17	78	53.4	-18 18.9	143	20.2 ¹⁷⁰	+7 14.3 ¹³⁸		40	18 54	19 24	20 02	1 39	20	12 52 59
18	93	53.3	-18 19.5	157	56.3 ¹⁷¹	+7 00.6 ¹³⁷		45	19 07	19 41	20 24	1 46	16	12 46 63
19	108	53.2	20.2	172	32.3 ¹⁷⁰	+6 46.8 ¹³⁸		50	24	20 03	20 54	55 11	39	68
20	123	53.1	20.8	187	08.4 ¹⁷¹	33.0 ¹³⁸		52	31	13	21 10	1 59	9	36 71
21	138	53.0	21.5	201	44.6 ¹⁷²	19.1 ¹³⁹		54	40	25	29	2 03	7	33 73
22	153	52.9	22.1	216	20.7 ¹⁷¹	+6 05.3 ¹³⁸		56	19 50	39	21 53	08 4	29	75
23	168	52.8	22.8	230	56.9 ¹⁷²	+5 51.4 ¹³⁹		58	20 01	20 55	22 28	13 2	25	78
24	183	52.7	-18 23.4	245	33.2 ¹⁷³	+5 37.5 ¹³⁹		60 S	20 13	21 15	** **	2 19	**	12 20 82
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 20 ^h 24 ^m 8		Mag: -3.9 PMG: 12 ^h 03 ^m			Mag: +1.6 PMG: 11 ^h 16 ^m			Mag: -1.7 PMG: 12 ^h 09 ^m			Mag: +0.5 PMG: 6 ^h 16 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	52	57.4	179	22.7	-18 51.0		190 50.6	-16 01.0	177 18.9	-18 56.5		265 41.3	+14 17.9	
1	67	59.9	194	21.9	51.8		205 51.3	01.5	192 20.8	56.6		280 43.6	17.8	
2	83	02.4	209	21.2	52.7		220 52.1	02.1	207 22.7	56.8		295 46.0	17.8	
3	98	04.8	224	20.5	53.5		235 52.9	02.6	222 24.6	56.9		310 48.4	17.8	
4	113	07.3	239	19.7	54.3		250 53.6	03.1	237 26.5	57.0		325 50.7	17.8	
5	128	09.8	254	19.0	-18 55.2		265 54.4	-16 03.7	252 28.4	-18 57.2		340 53.1	+14 17.7	
6	143	12.2	269	18.3	-18 56.0		280 55.1	-16 04.2	267 30.3	-18 57.3		355 55.4	+14 17.7	
7	158	14.7	284	17.5	56.8		295 55.9	04.7	282 32.2	57.4		10 57.8	17.7	
8	173	17.2	299	16.8	57.6		310 56.6	05.2	297 34.1	57.5		26 00.2	17.7	
9	188	19.6	314	16.0	58.5		325 57.4	05.8	312 36.0	57.7		41 02.5	17.6	
10	203	22.1	329	15.3	-18 59.3		340 58.2	06.3	327 37.9	57.8		56 04.9	17.6	
11	218	24.5	344	14.6	-19 00.1		355 58.9	-16 06.8	342 39.8	-18 57.9		71 07.3	+14 17.6	
12	233	27.0	359	13.8	-19 00.9		10 59.7	-16 07.4	357 41.7	-18 58.0		86 09.6	+14 17.6	
13	248	29.5	14	13.1	01.8		26 00.4	07.9	12 43.6	58.2		101 12.0	17.5	
14	263	31.9	29	12.4	02.6		41 01.2	08.4	27 45.5	58.3		116 14.4	17.5	
15	278	34.4	44	11.6	03.4		56 01.9	08.9	42 47.4	58.4		131 16.7	17.5	
16	293	36.9	59	10.9	04.2		71 02.7	09.5	57 49.2	58.6		146 19.1	17.5	
17	308	39.3	74	10.1	-19 05.1		86 03.4	-16 10.0	72 51.1	-18 58.7		161 21.5	+14 17.4	
18	323	41.8	89	09.4	-19 05.9		101 04.2	-16 10.5	87 53.0	-18 58.8		176 23.8	+14 17.4	
19	338	44.3	104	08.6	06.7		116 05.0	11.1	102 54.9	58.9		191 26.2	17.4	
20	353	46.7	119	07.9	07.5		131 05.7	11.6	117 56.8	59.1		206 28.6	17.4	
21	8	49.2	134	07.2	08.3		146 06.5	12.1	132 58.7	59.2		221 30.9	17.3	
22	23	51.6	149	06.4	09.1		161 07.2	12.6	148 00.6	59.3		236 33.3	17.3	
23	38	54.1	164	05.7	09.9		176 08.0	13.2	163 02.5	59.4		251 35.7	17.3	
24	53	56.6	179	04.9	-19 10.8		191 08.7	-16 13.7	178 04.4	-18 59.6		266 38.0	+14 17.3	
Dif	—		-7	-8			+8	-5	+19	-1		+24	0	

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16'2 PMG: 11 ^h 44 ^m 6			Edad: 23 ^d 8 PHE { 4 ^h : 54'2 12 ^h : 54'1 20 ^h : 54'1 SD: 14'8 PMG: 7 ^h 50 ^m R°: 39 ^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	183	52.7	-18	23.4	245	33.2	+5	37.5	60 N	6 17	7 08	7 57	1 03	81	14 15	**
1	198	52.6		24.0	260	09.4 ¹⁷²		23.6 ¹³⁹	58	12	7 01	46	06	77	14	2
2	213	52.5		24.7	274	45.7 ¹⁷³	+5	09.7 ¹³⁹	56	08	6 54	36	08	75	13	4
3	228	52.4		25.3	289	21.9 ¹⁷²	+4	55.8 ¹³⁹	54	04	48	27	11	72	12	
4	243	52.3		26.0	303	58.3 ¹⁷⁴		41.9 ¹³⁹	52	6 01	42	19	13	70	11	9
5	258	52.2	-18	26.6	318	34.6 ¹⁷³	+4	27.9 ¹⁴⁰	50	5 58	6 37	7 12	1 15	67	14 11	10
6	273	52.0	-18	27.3	333	10.9 ¹⁷³	+4	13.9 ¹⁴⁰	45	5 50	6 26	6 57	1 19	63	14 09	15
7	288	51.9		27.9	347	47.3 ¹⁷⁴	+3	59.9 ¹⁴⁰	40	43	16	45	23	59	07	19
8	303	51.8		28.5	2	23.7 ¹⁷⁴		45.9 ¹⁴⁰	35	37	07	34	26	55	06	22
9	318	51.7		29.2	17	00.1 ¹⁷⁴		31.9 ¹⁴⁰	30	31	6 00	25	28	53	05	25
10	333	51.6		29.8	31	36.5 ¹⁷⁴		17.9 ¹⁴⁰	20	19	5 45	6 09	33	47	03	30
11	348	51.5	-18	30.4	46	12.9 ¹⁷⁴	+3	03.9 ¹⁴⁰	10 N	5 07	5 32	5 54	1 37	43	14 01	35
12	3	51.4	-18	31.1	60	49.4 ¹⁷⁵	+2	49.8 ¹⁴¹	0	4 54	5 19	5 41	1 41	39	13 59	39
13	18	51.3		31.7	75	25.8 ¹⁷⁴		35.8 ¹⁴⁰	10 S	39	5 05	27	45	34	58	43
14	33	51.2		32.4	90	02.3 ¹⁷⁵		21.7 ¹⁴¹	20	4 21	4 49	5 13	49	30	56	47
15	48	51.1		33.0	104	38.8 ¹⁷⁵	+2	07.6 ¹⁴¹	30	3 59	30	4 56	53	25	54	52
16	63	51.0		33.6	119	15.2 ¹⁷⁴	+1	53.6 ¹⁴⁰	35	44	18	46	56	22	53	55
17	78	50.9	-18	34.3	133	51.7 ¹⁷⁵	+1	39.5 ¹⁴¹	40	3 27	4 04	4 35	1 59	19	13 51	59
18	93	50.8	-18	34.9	148	28.2 ¹⁷⁵	+1	25.4 ¹⁴¹	45	3 04	3 47	4 21	2 02	16	13 49	63
19	108	50.7		35.5	163	04.7 ¹⁷⁵	+1	11.3 ¹⁴¹	50	2 34	26	4 05	06	11	47	68
20	123	50.6		36.2	177	41.2 ¹⁷⁵	+0	57.2 ¹⁴¹	52	19	15	3 57	08	9	47	69
21	138	50.5		36.8	192	17.7 ¹⁷⁵		43.1 ¹⁴¹	54	2 00	3 04	49	10	7	46	72
22	153	50.3		37.4	206	54.2 ¹⁷⁵		29.0 ¹⁴¹	56	1 35	2 50	39	12	5	44	75
23	168	50.2		38.0	221	30.7 ¹⁷⁵		14.9 ¹⁴¹	58	1 00	33	28	15	1	43	78
24	183	50.1	-18	38.7	236	07.2 ¹⁷⁵	+0	00.8 ¹⁴¹	60 S	** **	2 13	3 15	2 18	**	13 42	81

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 20 ^h 20 ^m 9		Mag: -3.9 PMG: 12 ^h 04 ^m		Mag: +1.6 PMG: 11 ^h 15 ^m		Mag: -1.7 PMG: 12 ^h 06 ^m		Mag: +0.5 PMG: 6 ^h 12 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	53	56.6	179	04.9	-19	10.8	191	08.7	-16	13.7
1	68	59.0	194	04.2		11.6	206	09.5		14.2
2	84	01.5	209	03.4		12.4	221	10.2		14.7
3	99	04.0	224	02.7		13.2	236	11.0		15.3
4	114	06.4	239	01.9		14.0	251	11.7		15.8
5	129	08.9	254	01.2	-19	14.8	266	12.5	-16	16.3
6	144	11.4	269	00.4	-19	15.6	281	13.2	-16	16.8
7	159	13.8	283	59.7		16.4	296	14.0		17.4
8	174	16.3	298	58.9		17.2	311	14.7		17.9
9	189	18.8	313	58.2		18.0	326	15.5		18.4
10	204	21.2	328	57.4		18.8	341	16.2		18.9
11	219	23.7	343	56.7	-19	19.6	356	17.0	-16	19.5
12	234	26.1	358	55.9	-19	20.5	11	17.8	-16	20.0
13	249	28.6	13	55.2		21.3	26	18.5		20.5
14	264	31.1	28	54.4		22.1	41	19.3		21.0
15	279	33.5	43	53.7		22.9	56	20.0		21.6
16	294	36.0	58	52.9		23.7	71	20.8		22.1
17	309	38.5	73	52.2	-19	24.4	86	21.5	-16	22.6
18	324	40.9	88	51.4	-19	25.2	101	22.3	-16	23.1
19	339	43.4	103	50.6		26.0	116	23.0		23.7
20	354	45.9	118	49.9		26.8	131	23.7		24.2
21	9	48.3	133	49.1		27.6	146	24.5		24.7
22	24	50.8	148	48.4		28.4	161	25.2		25.2
23	39	53.3	163	47.6		29.2	176	26.0		25.7
24	54	55.7	178	46.9	-19	30.0	191	26.7	-16	26.3
Dif	—		-8		-8		+8		-5	
							+19		-1	
									+24	

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16:2 PMG: 11 ^h 44 ^m 7			Edad: 24 ^d 8 PHE { SD: 14:7 PMG: 8 ^h 29 ^m					R°: 39 ^m					
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m m	h m m	h m m
0	183	50.1	-18	38.7	236	07.2	+0	00.8	60 N	15 29	16 18	17 10	2 24 81	14 14 **
1	198	50.0		39.3	250	43.7 ¹⁷⁵	-0	13.3 ¹⁴¹	58	41	26	15	23 79	16 2
2	213	49.9		39.9	265	20.2 ¹⁷⁵		27.5 ¹⁴²	56	15 51	33	19	23 75	17 5
3	228	49.8		40.6	279	56.7 ¹⁷⁵		41.6 ¹⁴¹	54	16 00	39	23	23 72	19 7
4	243	49.7		41.2	294	33.2 ¹⁷⁵	-0	55.7 ¹⁴¹	52	08	45	27	23 70	20 10
5	258	49.6	-18	41.8	309	09.7 ¹⁷⁵	-1	09.8 ¹⁴¹	50	16 15	16 51	17 30	2 22 68	14 21 12
6	273	49.5	-18	42.4	323	46.1 ¹⁷⁴	-1	23.9 ¹⁴¹	45	16 30	17 02	17 38	2 22 63	14 24 16
7	288	49.3		43.1	338	22.6 ¹⁷⁵		38.0 ¹⁴¹	40	43	12	45	22 59	26 20
8	303	49.2		43.7	352	59.0 ¹⁷⁴	-1	52.1 ¹⁴¹	35	16 54	21	52	21 56	28 23
9	318	49.1		44.3	7	35.5 ¹⁷⁵	-2	06.2 ¹⁴¹	30	17 04	29	17 58	21 53	30 26
10	333	49.0		44.9	22	11.9 ¹⁷⁴		20.3 ¹⁴¹	20	20	43	18 10	20 48	33 31
11	348	48.9	-18	45.6	36	48.3 ¹⁷⁴	-2	34.4 ¹⁴¹	10 N	17 35	17 57	18 22	2 20 43	14 36 35
12	3	48.8	-18	46.2	51	24.7 ¹⁷⁴	-2	48.4 ¹⁴⁰	0	17 48	18 10	18 36	2 20 38	14 38 40
13	18	48.7		46.8	66	01.1 ¹⁷⁴	-3	02.5 ¹⁴¹	10 S	18 02	24	18 51	19 35	41 43
14	33	48.5		47.4	80	37.4 ¹⁷³		16.6 ¹⁴¹	20	17	18 41	19 09	19 30	43 48
15	48	48.4		48.1	95	13.8 ¹⁷⁴		30.6 ¹⁴⁰	30	34	19 01	32	18 26	46 54
16	63	48.3		48.7	109	50.1 ¹⁷³		44.7 ¹⁴¹	35	45	13	19 47	18 23	48 56
17	78	48.2	-18	49.3	124	26.4 ¹⁷³	-3	58.7 ¹⁴⁰	40	18 56	19 27	20 05	2 18 19	14 50 60
18	93	48.1	-18	49.9	139	02.7 ¹⁷³	-4	12.7 ¹⁴⁰	45	19 10	19 44	20 28	2 18 15	14 52 64
19	108	48.0		50.5	153	39.0 ¹⁷³		26.8 ¹⁴¹	50	27	20 06	20 59	17 11	55 69
20	123	47.8		51.2	168	15.2 ¹⁷²		40.8 ¹⁴⁰	52	35	17	21 15	17 9	56 71
21	138	47.7		51.8	182	51.4 ¹⁷²	-4	54.8 ¹⁴⁰	54	44	29	21 35	17 7	58 73
22	153	47.6		52.4	197	27.6 ¹⁷²	-5	08.7 ¹³⁹	56	19 54	20 44	22 01	17 4	14 59 76
23	168	47.5		53.0	212	03.8 ¹⁷²		22.7 ¹⁴⁰	58	20 05	21 01	22 41	16 2	15 01 79
24	183	47.4	-18	53.6	226	39.9 ¹⁷¹	-5	36.6 ¹³⁹	60 S	20 19	21 22	** **	2 16 **	15 03 83
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 20 ^h 17 ^m 0		Mag: -3.9 PMG: 12 ^h 05 ^m			Mag: +1.6 PMG: 11 ^h 14 ^m			Mag: -1.7 PMG: 12 ^h 03 ^m			Mag: +0.5 PMG: 6 ^h 09 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	54	55.7	178	46.9	-19	30.0	191	26.7	-16	26.3	178	49.8	-19	02.6
1	69	58.2	193	46.1		30.8	206	27.5		26.8	193	51.7		02.7
2	85	00.6	208	45.3		31.6	221	28.2		27.3	208	53.6		02.9
3	100	03.1	223	44.6		32.4	236	29.0		27.8	223	55.5		03.0
4	115	05.6	238	43.8		33.2	251	29.7		28.3	238	57.4		03.1
5	130	08.0	253	43.0	-19	33.9	266	30.5	-16	28.9	253	59.3	-19	03.2
6	145	10.5	268	42.3	-19	34.7	281	31.2	-16	29.4	269	01.2	-19	03.4
7	160	13.0	283	41.5		35.5	296	32.0		29.9	284	03.1		03.5
8	175	15.4	298	40.8		36.3	311	32.7		30.4	299	05.0		03.6
9	190	17.9	313	40.0		37.1	326	33.5		30.9	314	06.9		03.7
10	205	20.4	328	39.2		37.9	341	34.2		31.5	329	08.8		03.9
11	220	22.8	343	38.5	-19	38.6	356	35.0	-16	32.0	344	10.6	-19	04.0
12	235	25.3	358	37.7	-19	39.4	11	35.7	-16	32.5	359	12.5	-19	04.1
13	250	27.7	13	36.9		40.2	26	36.4		33.0	14	14.4		04.2
14	265	30.2	28	36.2		41.0	41	37.2		33.5	29	16.3		04.4
15	280	32.7	43	35.4		41.8	56	37.9		34.1	44	18.2		04.5
16	295	35.1	58	34.6		42.5	71	38.7		34.6	59	20.1		04.6
17	310	37.6	73	33.9	-19	43.3	86	39.4	-16	35.1	74	22.0	-19	04.7
18	325	40.1	88	33.1	-19	44.1	101	40.2	-16	35.6	89	23.9	-19	04.9
19	340	42.5	103	32.3		44.9	116	40.9		36.1	104	25.8		05.0
20	355	45.0	118	31.6		45.6	131	41.7		36.6	119	27.7		05.1
21	10	47.5	133	30.8		46.4	146	42.4		37.2	134	29.6		05.2
22	25	49.9	148	30.0		47.2	161	43.1		37.7	149	31.5		05.4
23	40	52.4	163	29.3		47.9	176	43.9		38.2	164	33.4		05.5
24	55	54.9	178	28.5	-19	48.7	191	44.6	-16	38.7	179	35.2	-19	05.6
Dif	—		-8	-8		+7	-5		+19	-1		+24		0

UT	SOL			 LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 16'2 PMG: 11 ^h 44 ^m 9			Edad: 25 ^d 8 PHE { 4 ^h : 54'2 12 ^h : 54'3 20 ^h : 54'3 SD: 14'8 PMG: 9 ^h 08 ^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	h	m
0	183	47.4	-18	53.6	226	39.9	-5	36.6	60 N	6 21	7 13	8 02	3 45	85	14 13	**		
1	198	47.2		54.2	241	16.0 ¹⁷¹	-5	50.6 ¹⁴⁰	58	16	7 05	7 51	42	80	18	2		
2	213	47.1		54.8	255	52.1 ¹⁷¹	-6	04.5 ¹³⁹	56	12	6 58	40	38	78	22	6		
3	228	47.0		55.5	270	28.1 ¹⁷⁰		18.4 ¹³⁹	54	08	51	31	35	75	26	8		
4	243	46.9		56.1	285	04.1 ¹⁷⁰		32.3 ¹³⁹	52	04	45	23	33	72	30	10		
5	258	46.8	-18	56.7	299	40.1 ¹⁷⁰	-6	46.1 ¹³⁸	50	6 00	6 40	7 16	3 30	70	14 33	13		
6	273	46.6	-18	57.3	314	16.0 ¹⁶⁹	-7	00.0 ¹³⁹	45	5 52	6 28	7 00	3 25	65	14 40	18		
7	288	46.5		57.9	328	51.9 ¹⁶⁹	-7	13.8 ¹³⁸	40	45	18	6 47	21	60	46	22		
8	303	46.4		58.5	343	27.8 ¹⁶⁹		27.6 ¹³⁸	35	38	09	36	17	57	51	25		
9	318	46.3		59.1	358	03.6 ¹⁶⁸		41.4 ¹³⁸	30	32	6 01	27	14	54	14 56	28		
10	333	46.2	-18	59.7	12	39.4 ¹⁶⁸	-7	55.1 ¹³⁷	20	20	5 47	6 10	08	49	15 04	33		
11	348	46.0	-19	00.4	27	15.2 ¹⁶⁸	-8	08.9 ¹³⁸	10 N	5 07	5 33	5 55	3 03	45	15 11	37		
12	3	45.9	-19	01.0	41	50.9 ¹⁶⁷	-8	22.6 ¹³⁷	0	4 54	5 20	5 41	2 58	41	15 18	41		
13	18	45.8		01.6	56	26.5 ¹⁶⁶		36.3 ¹³⁷	10 S	39	5 05	5 27	54	36	24	46		
14	33	45.7		02.2	71	02.1 ¹⁶⁶	-8	49.9 ¹³⁶	20	4 21	4 49	5 12	49	32	31	50		
15	48	45.5		02.8	85	37.7 ¹⁶⁶	-9	03.6 ¹³⁷	30	3 57	29	4 55	44	26	40	55		
16	63	45.4		03.4	100	13.3 ¹⁶⁶		17.2 ¹³⁶	35	43	17	45	41	23	44	58		
17	78	45.3	-19	04.0	114	48.7 ¹⁶⁴	-9	30.7 ¹³⁵	40	3 25	4 02	4 33	2 37	21	15 50	61		
18	93	45.2	-19	04.6	129	24.2 ¹⁶⁵	-9	44.3 ¹³⁶	45	3 02	3 45	4 19	2 33	17	15 56	66		
19	108	45.0		05.2	143	59.6 ¹⁶⁴	-9	57.8 ¹³⁵	50	2 30	23	4 02	28	12	16 04	70		
20	123	44.9		05.8	158	34.9 ¹⁶³	-10	11.3 ¹³⁵	52	2 14	12	3 54	26	10	07	73		
21	138	44.8		06.4	173	10.2 ¹⁶³		24.7 ¹³⁴	54	1 54	3 00	45	24	7	11	76		
22	153	44.6		07.0	187	45.4 ¹⁶²		38.2 ¹³⁵	56	1 28	2 45	35	21	5	15	79		
23	168	44.5		07.6	202	20.6 ¹⁶²	-10	51.6 ¹³⁴	58	0 48	28	24	18	2	20	82		
24	183	44.4	-19	08.2	216	55.8 ¹⁶²	-11	04.9 ¹³³	60 S	** **	2 07	3 10	2 15	**	16 26	86		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 20 ^h 13 ^m 0		Mag: -3.9 PMG: 12 ^h 07 ^m		Mag: +1.6 PMG: 11 ^h 12 ^m		Mag: -1.7 PMG: 12 ^h 00 ^m		Mag: +0.5 PMG: 6 ^h 05 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	55	54.9	178	28.5	-19	48.7	191	44.6	-16	38.7	179	35.2	-19	05.6	268	31.8	+14	16.2
1	70	57.3	193	27.7		49.5	206	45.4		39.2	194	37.1		05.7	283	34.2		16.1
2	85	59.8	208	26.9		50.2	221	46.1		39.7	209	39.0		05.9	298	36.6		16.1
3	101	02.2	223	26.2		51.0	236	46.9		40.3	224	40.9		06.0	313	39.0		16.1
4	116	04.7	238	25.4		51.8	251	47.6		40.8	239	42.8		06.1	328	41.3		16.1
5	131	07.2	253	24.6	-19	52.5	266	48.3	-16	41.3	254	44.7	-19	06.2	343	43.7	+14	16.0
6	146	09.6	268	23.8	-19	53.3	281	49.1	-16	41.8	269	46.6	-19	06.4	358	46.1	+14	16.0
7	161	12.1	283	23.1		54.1	296	49.8		42.3	284	48.5		06.5	13	48.5		16.0
8	176	14.6	298	22.3		54.8	311	50.6		42.8	299	50.4		06.6	28	50.9		16.0
9	191	17.0	313	21.5		55.6	326	51.3		43.3	314	52.3		06.7	43	53.2		16.0
10	206	19.5	328	20.7		56.3	341	52.0		43.9	329	54.2		06.9	58	55.6		15.9
11	221	22.0	343	20.0	-19	57.1	356	52.8	-16	44.4	344	56.1	-19	07.0	73	58.0	+14	15.9
12	236	24.4	358	19.2	-19	57.9	11	53.5	-16	44.9	359	57.9	-19	07.1	89	00.4	+14	15.9
13	251	26.9	13	18.4		58.6	26	54.3		45.4	14	59.8		07.2	104	02.7		15.9
14	266	29.3	28	17.6	-19	59.4	41	55.0		45.9	30	01.7		07.4	119	05.1		15.9
15	281	31.8	43	16.8	-20	00.1	56	55.7		46.4	45	03.6		07.5	134	07.5		15.8
16	296	34.3	58	16.1		00.9	71	56.5		46.9	60	05.5		07.6	149	09.9		15.8
17	311	36.7	73	15.3	-20	01.6	86	57.2	-16	47.5	75	07.4	-19	07.7	164	12.3	+14	15.8
18	326	39.2	88	14.5	-20	02.4	101	58.0	-16	48.0	90	09.3	-19	07.9	179	14.6	+14	15.8
19	341	41.7	103	13.7		03.1	116	58.7		48.5	105	11.2		08.0	194	17.0		15.8
20	356	44.1	118	12.9		03.9	131	59.4		49.0	120	13.1		08.1	209	19.4		15.7
21	11	46.6	133	12.2		04.6	147	00.2		49.5	135	15.0		08.2	224	21.8		15.7
22	26	49.1	148	11.4		05.4	162	00.9		50.0	150	16.9		08.4	239	24.1		15.7
23	41	51.5	163	10.6		06.1	177	01.6		50.5	165	18.7		08.5	254	26.5		15.7
24	56	54.0	178	09.8	-20	06.9	192	02.4	-16	51.0	180	20.6	-19	08.6	269	28.9	+14	15.7
Dif	—		-8		-8		+7		-5		+19		-1		+24			

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16:2 PMG: 11 ^h 45 ^m 1			Edad: 26 ^d 8 PHE { 4 ^h : 54/4 12 ^h : 54/5 20 ^h : 54/6 SD: 14:8 PMG: 9 ^h 49 ^m Rº: 43 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	Rº	Hora	Rº
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m
0	183	44.4	-19 08.2	216	55.8	-11 04.9		60 N	15 25	16 15	17 07	5 10 89	14 12 **		
1	198	44.3	08.8	231	30.8 ¹⁶⁰	18.2 ¹³³		58	37	23	12	5 02 85	20 4		
2	213	44.1	09.4	246	05.9 ¹⁶¹	31.5 ¹³³		56	47	30	16	4 56 81	28 7		
3	228	44.0	10.0	260	40.8 ¹⁵⁹	44.8 ¹³³		54	15 57	37	21	50 77	34 11		
4	243	43.9	10.6	275	15.7 ¹⁵⁹	-11 58.0 ¹³²		52	16 05	43	24	45 74	40 14		
5	258	43.7	-19 11.2	289	50.6 ¹⁵⁹	-12 11.2 ¹³²		50	16 13	16 48	17 28	4 40 72	14 46 16		
6	273	43.6	-19 11.8	304	25.4 ¹⁵⁸	-12 24.3 ¹³¹		45	16 28	17 01	17 36	4 30 67	14 58 21		
7	288	43.5	12.4	319	00.1 ¹⁵⁷	37.4 ¹³¹		40	42	11	44	21 63	15 08 25		
8	303	43.4	13.0	333	34.8 ¹⁵⁷	-12 50.4 ¹³⁰		35	16 53	20	51	14 59	16 29		
9	318	43.2	13.6	348	09.4 ¹⁵⁶	-13 03.4 ¹³⁰		30	17 03	28	17 57	4 08 56	24 31		
10	333	43.1	14.2	2	43.9 ¹⁵⁵	16.4 ¹³⁰		20	20	43	18 10	3 57 51	37 36		
11	348	43.0	-19 14.8	17	18.4 ¹⁵⁵	-13 29.3 ¹²⁹		10 N	17 35	17 57	18 22	3 48 46	15 48 40		
12	3	42.8	-19 15.4	31	52.8 ¹⁵⁴	-13 42.2 ¹²⁹		0	17 49	18 11	18 36	3 39 42	15 59 44		
13	18	42.7	16.0	46	27.1 ¹⁵³	-13 55.0 ¹²⁸		10 S	18 03	25	18 52	30 39	16 10 48		
14	33	42.6	16.6	61	01.4 ¹⁵³	-14 07.8 ¹²⁸		20	18	18 42	19 10	21 34	21 53		
15	48	42.4	17.2	75	35.6 ¹⁵²	20.5 ¹²⁷		30	36	19 02	34	10 30	35 57		
16	63	42.3	17.8	90	09.8 ¹⁵²	33.2 ¹²⁷		35	47	15	19 49	3 04 27	42 61		
17	78	42.2	-19 18.4	104	43.8 ¹⁵⁰	-14 45.9 ¹²⁷		40	18 59	19 29	20 08	2 58 23	16 51 64		
18	93	42.0	-19 19.0	119	17.8 ¹⁵⁰	-14 58.4 ¹²⁵		45	19 13	19 47	20 31	2 50 19	17 02 68		
19	108	41.9	19.5	133	51.7 ¹⁴⁹	-15 11.0 ¹²⁶		50	30	20 10	21 04	40 15	14 74		
20	123	41.8	20.1	148	25.6 ¹⁴⁹	23.4 ¹²⁴		52	38	21	21	36 12	20 76		
21	138	41.6	20.7	162	59.4 ¹⁴⁸	35.9 ¹²⁵		54	48	34	21 42	31 10	27 79		
22	153	41.5	21.3	177	33.1 ¹⁴⁷	-15 48.2 ¹²³		56	19 58	20 49	22 10	26 7	34 82		
23	168	41.3	21.9	192	06.7 ¹⁴⁶	-16 00.5 ¹²³		58	20 10	21 07	22 57	20 4	42 87		
24	183	41.2	-19 22.5	206	40.3 ¹⁴⁶	-16 12.8 ¹²³		60 S	20 24	21 30	** **	2 14 **	17 52 91		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 20 ^h 09 ^m 1		Mag: -3.9 PMG: 12 ^h 08 ^m			Mag: +1.6 PMG: 11 ^h 11 ^m			Mag: -1.7 PMG: 11 ^h 57 ^m			Mag: +0.5 PMG: 6 ^h 01 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	'	°	°	'	°	°	'	°	°	'	°	'
0	56	54.0	178	09.8	-20 06.9	192	02.4	-16 51.0	180	20.6	-19 08.6	269	28.9	+14 15.7	
1	71	56.5	193	09.0	07.6	207	03.1	51.6	195	22.5	08.7	284	31.3	15.6	
2	86	58.9	208	08.2	08.3	222	03.9	52.1	210	24.4	08.9	299	33.7	15.6	
3	102	01.4	223	07.4	09.1	237	04.6	52.6	225	26.3	09.0	314	36.0	15.6	
4	117	03.8	238	06.7	09.8	252	05.3	53.1	240	28.2	09.1	329	38.4	15.6	
5	132	06.3	253	05.9	-20 10.6	267	06.1	-16 53.6	255	30.1	-19 09.2	344	40.8	+14 15.6	
6	147	08.8	268	05.1	-20 11.3	282	06.8	-16 54.1	270	32.0	-19 09.4	359	43.2	+14 15.5	
7	162	11.2	283	04.3	12.0	297	07.5	54.6	285	33.9	09.5	14	45.6	15.5	
8	177	13.7	298	03.5	12.8	312	08.3	55.1	300	35.8	09.6	29	48.0	15.5	
9	192	16.2	313	02.7	13.5	327	09.0	55.6	315	37.7	09.7	44	50.3	15.5	
10	207	18.6	328	01.9	14.3	342	09.7	56.1	330	39.5	09.9	59	52.7	15.5	
11	222	21.1	343	01.1	-20 15.0	357	10.5	-16 56.6	345	41.4	-19 10.0	74	55.1	+14 15.4	
12	237	23.6	358	00.4	-20 15.7	12	11.2	-16 57.2	0	43.3	-19 10.1	89	57.5	+14 15.4	
13	252	26.0	12	59.6	16.5	27	11.9	57.7	15	45.2	10.2	104	59.9	15.4	
14	267	28.5	27	58.8	17.2	42	12.7	58.2	30	47.1	10.4	120	02.2	15.4	
15	282	31.0	42	58.0	17.9	57	13.4	58.7	45	49.0	10.5	135	04.6	15.4	
16	297	33.4	57	57.2	18.6	72	14.1	59.2	60	50.9	10.6	150	07.0	15.3	
17	312	35.9	72	56.4	-20 19.4	87	14.9	-16 59.7	75	52.8	-19 10.7	165	09.4	+14 15.3	
18	327	38.3	87	55.6	-20 20.1	102	15.6	-17 00.2	90	54.7	-19 10.9	180	11.8	+14 15.3	
19	342	40.8	102	54.8	20.8	117	16.3	00.7	105	56.6	11.0	195	14.2	15.3	
20	357	43.3	117	54.0	21.6	132	17.1	01.2	120	58.5	11.1	210	16.5	15.3	
21	12	45.7	132	53.2	22.3	147	17.8	01.7	136	00.3	11.2	225	18.9	15.2	
22	27	48.2	147	52.4	23.0	162	18.5	02.2	151	02.2	11.4	240	21.3	15.2	
23	42	50.7	162	51.6	23.7	177	19.3	02.7	166	04.1	11.5	255	23.7	15.2	
24	57	53.1	177	50.8	-20 24.4	192	20.0	-17 03.2	181	06.0	-19 11.6	270	26.1	+14 15.2	
Dif	—		-8	-7		+7	-5		+19		-1		+24		

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16'2 PMG: 11 ^h 45 ^m 4			Edad: 27 ^d 8 PHE { 4 ^h : 54'7 12 ^h : 54'9 20 ^h : 55'0 R°: 47 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m
0	183	41.2	-19	22.5	206	40.3	-16	12.8	60 N	6 25	7 17	8 07	6 39	95	14 11	2
1	198	41.1		23.1	221	13.7 ¹⁴⁴		25.0 ¹²²	58	20	09	7 55	27	89	24	8
2	213	40.9		23.7	235	47.1 ¹⁴⁴		37.1 ¹²¹	56	15	7 01	44	17	84	35	12
3	228	40.8		24.2	250	20.5 ¹⁴⁴	-16	49.2 ¹²¹	54	11	6 54	35	6 07	81	45	16
4	243	40.7		24.8	264	53.7 ¹⁴²	-17	01.2 ¹²⁰	52	07	48	26	5 59	78	14 54	19
5	258	40.5	-19	25.4	279	26.9 ¹⁴²	-17	13.2 ¹²⁰	50	6 03	6 43	7 19	5 52	75	15 02	21
6	273	40.4	-19	26.0	293	59.9 ¹⁴⁰	-17	25.0 ¹¹⁸	45	5 55	6 31	7 03	5 37	69	15 19	26
7	288	40.2		26.6	308	32.9 ¹⁴⁰		36.9 ¹¹⁹	40	47	20	6 49	24	65	33	30
8	303	40.1		27.2	323	05.9 ¹⁴⁰	-17	48.6 ¹¹⁷	35	40	11	38	13	62	45	33
9	318	40.0		27.7	337	38.7 ¹³⁸	-18	00.3 ¹¹⁷	30	34	6 03	28	5 04	59	15 55	36
10	333	39.8		28.3	352	11.4 ¹³⁷		11.9 ¹¹⁶	20	21	5 48	6 11	4 48	54	16 13	40
11	348	39.7	-19	28.9	6	44.1 ¹³⁷	-18	23.5 ¹¹⁶	10 N	5 08	5 34	5 56	4 34	50	16 28	45
12	3	39.5	-19	29.5	21	16.7 ¹³⁶	-18	34.9 ¹¹⁴	0	4 54	5 20	5 42	4 21	47	16 43	48
13	18	39.4		30.1	35	49.2 ¹³⁵		46.3 ¹¹⁴	10 S	39	5 05	27	4 09	42	16 58	51
14	33	39.3		30.6	50	21.6 ¹³⁴	-18	57.7 ¹¹⁴	20	4 20	4 48	5 12	3 55	38	17 14	55
15	48	39.1		31.2	64	53.9 ¹³³	-19	08.9 ¹¹²	30	3 56	28	4 54	40	33	32	60
16	63	39.0		31.8	79	26.1 ¹³²		20.1 ¹¹²	35	41	15	44	31	31	43	62
17	78	38.8	-19	32.4	93	58.3 ¹³²	-19	31.2 ¹¹¹	40	3 23	4 01	4 32	3 21	27	17 55	66
18	93	38.7	-19	33.0	108	30.3 ¹³⁰	-19	42.3 ¹¹¹	45	2 59	3 43	4 17	3 09	23	18 10	70
19	108	38.5		33.5	123	02.3 ¹³⁰	-19	53.2 ¹⁰⁹	50	27	20	4 00	2 55	18	28	75
20	123	38.4		34.1	137	34.2 ¹²⁹	-20	04.1 ¹⁰⁹	52	2 09	3 09	3 52	48	16	36	78
21	138	38.3		34.7	152	06.0 ¹²⁸		14.9 ¹⁰⁸	54	1 48	2 56	42	41	13	46	81
22	153	38.1		35.3	166	37.7 ¹²⁷		25.6 ¹⁰⁷	56	1 20	41	32	33	10	18 56	86
23	168	38.0		35.8	181	09.3 ¹²⁶		36.2 ¹⁰⁶	58	0 32	23	20	24	5	19 09	90
24	183	37.8	-19	36.4	195	40.8 ¹²⁵	-20	46.7 ¹⁰⁵	60 S	** **	2 00	3 06	2 13	1	19 23	97
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 20 ^h 05 ^m 2			Mag: -3.9 PMG: 12 ^h 09 ^m			Mag: +1.6 PMG: 11 ^h 10 ^m			Mag: -1.7 PMG: 11 ^h 54 ^m			Mag: +0.5 PMG: 5 ^h 57 ^m			
	hG ♈		Dec	hG ♀		Dec	hG ♂		Dec	hG ♃		Dec	hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	57	53.1	177	50.8	-20	24.4	192	20.0	-17	03.2	181	06.0	-19	11.6	270	26.1
1	72	55.6	192	50.0		25.2	207	20.7		03.7	196	07.9		11.7	285	28.5
2	87	58.1	207	49.2		25.9	222	21.5		04.3	211	09.8		11.9	300	30.8
3	103	00.5	222	48.4		26.6	237	22.2		04.8	226	11.7		12.0	315	33.2
4	118	03.0	237	47.6		27.3	252	22.9		05.3	241	13.6		12.1	330	35.6
5	133	05.4	252	46.8	-20	28.0	267	23.6	-17	05.8	256	15.5	-19	12.2	345	38.0
6	148	07.9	267	46.0	-20	28.8	282	24.4	-17	06.3	271	17.4	-19	12.3	0	40.4
7	163	10.4	282	45.2		29.5	297	25.1		06.8	286	19.3		12.5	15	42.8
8	178	12.8	297	44.4		30.2	312	25.8		07.3	301	21.1		12.6	30	45.2
9	193	15.3	312	43.6		30.9	327	26.6		07.8	316	23.0		12.7	45	47.5
10	208	17.8	327	42.8		31.6	342	27.3		08.3	331	24.9		12.8	60	49.9
11	223	20.2	342	42.0	-20	32.3	357	28.0	-17	08.8	346	26.8	-19	13.0	75	52.3
12	238	22.7	357	41.2	-20	33.0	12	28.8	-17	09.3	1	28.7	-19	13.1	90	54.7
13	253	25.2	12	40.4		33.7	27	29.5		09.8	16	30.6		13.2	105	57.1
14	268	27.6	27	39.6		34.4	42	30.2		10.3	31	32.5		13.3	120	59.5
15	283	30.1	42	38.8		35.1	57	30.9		10.8	46	34.4		13.5	136	01.9
16	298	32.6	57	38.0		35.9	72	31.7		11.3	61	36.3		13.6	151	04.2
17	313	35.0	72	37.2	-20	36.6	87	32.4	-17	11.8	76	38.2	-19	13.7	166	06.6
18	328	37.5	87	36.4	-20	37.3	102	33.1	-17	12.3	91	40.0	-19	13.8	181	09.0
19	343	39.9	102	35.6		38.0	117	33.8		12.8	106	41.9		14.0	196	11.4
20	358	42.4	117	34.8		38.7	132	34.6		13.3	121	43.8		14.1	211	13.8
21	13	44.9	132	34.0		39.4	147	35.3		13.8	136	45.7		14.2	226	16.2
22	28	47.3	147	33.2		40.1	162	36.0		14.3	151	47.6		14.3	241	18.6
23	43	49.8	162	32.4		40.8	177	36.8		14.8	166	49.5		14.4	256	21.0
24	58	52.3	177	31.6	-20	41.5	192	37.5	-17	15.3	181	51.4	-19	14.6	271	23.3
Dif	—		-8		-7		+7		-5		+19		-1		+24	

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 16:2 PMG: 11 ^h 45 ^m 6			Edad: 28 ^d 8 PHE { SD: 15:0 PMG: 11 ^h 19 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	Rº	Hora	Rº
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m m	h m m	h m m	
0	183	37.8	-19	36.4	195	40.8	-20	46.7	60 N	15 21	16 11	17 04	8 14 100	14 13 6	
1	198	37.7		37.0	210	12.2 ¹²⁴	-20	57.2 ¹⁰⁵	58	33	20	09	7 56 91	32 13	
2	213	37.5		37.5	224	43.5 ¹²³	-21	07.5 ¹⁰³	56	44	28	14	41 86	14 47 20	
3	228	37.4		38.1	239	14.8 ¹²³		17.8 ¹⁰³	54	15 54	34	18	28 81	15 01 23	
4	243	37.2		38.7	253	45.9 ¹²¹		28.0 ¹⁰²	52	16 03	41	22	17 78	13 26	
5	258	37.1	-19	39.3	268	17.0 ¹²¹	-21	38.1 ¹⁰¹	50	16 10	16 46	17 26	7 07 75	15 23 29	
6	273	36.9	-19	39.8	282	47.9 ¹¹⁹	-21	48.1 ¹⁰⁰	45	16 27	16 59	17 35	6 46 70	15 45 34	
7	288	36.8		40.4	297	18.8 ¹¹⁹	-21	58.0 ⁹⁹	40	40	17 10	43	29 66	16 03 37	
8	303	36.6		41.0	311	49.5 ¹¹⁷	-22	07.8 ⁹⁸	35	16 52	19	50	15 63	18 40	
9	318	36.5		41.5	326	20.2 ¹¹⁷		17.5 ⁹⁷	30	17 02	27	17 57	6 03 61	31 42	
10	333	36.4		42.1	340	50.8 ¹¹⁶		27.1 ⁹⁶	20	19	43	18 10	5 42 57	16 53 46	
11	348	36.2	-19	42.7	355	21.3 ¹¹⁵	-22	36.6 ⁹⁵	10 N	17 35	17 57	18 23	5 24 53	17 13 49	
12	3	36.1	-19	43.2	9	51.7 ¹¹⁴	-22	46.1 ⁹⁵	0	17 49	18 11	18 37	5 08 50	17 31 52	
13	18	35.9		43.8	24	22.0 ¹¹³	-22	55.4 ⁹³	10 S	18 04	26	18 53	4 51 47	17 49 55	
14	33	35.8		44.4	38	52.2 ¹¹²	-23	04.6 ⁹²	20	20	18 43	19 12	33 44	18 09 58	
15	48	35.6		44.9	53	22.3 ¹¹¹		13.7 ⁹¹	30	38	19 04	36	13 39	32 61	
16	63	35.4		45.5	67	52.3 ¹¹⁰		22.7 ⁹⁰	35	18 49	17	19 51	4 02 36	18 45 64	
17	78	35.3	-19	46.0	82	22.2 ¹⁰⁹	-23	31.6 ⁸⁹	40	19 01	19 32	20 10	3 48 34	19 01 66	
18	93	35.1	-19	46.6	96	52.0 ¹⁰⁸	-23	40.4 ⁸⁸	45	19 15	19 50	20 35	3 32 30	19 20 69	
19	108	35.0		47.2	111	21.7 ¹⁰⁷		49.1 ⁸⁷	50	33	20 14	21 08	13 25	43 74	
20	123	34.8		47.7	125	51.4 ¹⁰⁷	-23	57.6 ⁸⁵	52	42	25	26	3 04 22	19 54 76	
21	138	34.7		48.3	140	20.9 ¹⁰⁵	-24	06.1 ⁸⁵	54	19 51	38	21 48	2 54 19	20 07 79	
22	153	34.5		48.8	154	50.3 ¹⁰⁴		14.5 ⁸⁴	56	20 02	20 54	22 19	43 15	22 83	
23	168	34.4		49.4	169	19.7 ¹⁰⁴		22.7 ⁸²	58	15	21 13	23 21	29 11	20 39 89	
24	183	34.2	-19	50.0	183	48.9 ¹⁰²	-24	30.8 ⁸¹	60 S	20 29	21 37	** **	2 14 4	21 00 99	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 20 ^h 01 ^m 2		Mag: -3.9 PMG: 12 ^h 11 ^m			Mag: +1.6 PMG: 11 ^h 09 ^m			Mag: -1.7 PMG: 11 ^h 51 ^m			Mag: +0.5 PMG: 5 ^h 54 ^m			
	hG ♈		hG ♀		Dec	hG ♂		Dec	hG ♃		Dec	hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	58	52.3	177	31.6	-20	41.5	192	37.5	-17	15.3	181	51.4	-19	14.6	
1	73	54.7	192	30.7		42.2	207	38.2		15.8	196	53.3		14.7	
2	88	57.2	207	29.9		42.8	222	38.9		16.3	211	55.2		14.8	
3	103	59.7	222	29.1		43.5	237	39.7		16.8	226	57.0		14.9	
4	119	02.1	237	28.3		44.2	252	40.4		17.3	241	58.9		15.1	
5	134	04.6	252	27.5	-20	44.9	267	41.1	-17	17.8	257	00.8	-19	15.2	
6	149	07.1	267	26.7	-20	45.6	282	41.8	-17	18.3	272	02.7	-19	15.3	
7	164	09.5	282	25.9		46.3	297	42.6		18.8	287	04.6		15.4	
8	179	12.0	297	25.1		47.0	312	43.3		19.3	302	06.5		15.6	
9	194	14.4	312	24.3		47.7	327	44.0		19.8	317	08.4		15.7	
10	209	16.9	327	23.4		48.4	342	44.7		20.3	332	10.3		15.8	
11	224	19.4	342	22.6	-20	49.1	357	45.4	-17	20.8	347	12.2	-19	15.9	
12	239	21.8	357	21.8	-20	49.7	12	46.2	-17	21.3	2	14.1	-19	16.0	
13	254	24.3	12	21.0		50.4	27	46.9		21.8	17	15.9		16.2	
14	269	26.8	27	20.2		51.1	42	47.6		22.3	32	17.8		16.3	
15	284	29.2	42	19.4		51.8	57	48.3		22.8	47	19.7		16.4	
16	299	31.7	57	18.5		52.5	72	49.1		23.3	62	21.6		16.5	
17	314	34.2	72	17.7	-20	53.2	87	49.8	-17	23.8	77	23.5	-19	16.7	
18	329	36.6	87	16.9	-20	53.8	102	50.5	-17	24.3	92	25.4	-19	16.8	
19	344	39.1	102	16.1		54.5	117	51.2		24.8	107	27.3		16.9	
20	359	41.6	117	15.3		55.2	132	51.9		25.3	122	29.2		17.0	
21	14	44.0	132	14.5		55.9	147	52.7		25.8	137	31.1		17.1	
22	29	46.5	147	13.6		56.5	162	53.4		26.3	152	32.9		17.3	
23	44	48.9	162	12.8		57.2	177	54.1		26.8	167	34.8		17.4	
24	59	51.4	177	12.0	-20	57.9	192	54.8	-17	27.3	182	36.7	-19	17.5	
Dif	—		-8		-7	+7		-5	+19		-1		+24		0

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16:2 PMG: 11 ^h 45 ^m 8			Edad: 0 ^d 1	PHE { 4 ^h : 55:6 12 ^h : 55:7 20 ^h : 55:9 R°: 55 ^m											
	hG ☉	Dec		hG ☾		Dif		Dec	Dif		Náutico	Civil	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m
0	183	34.2	-19	50.0	183	48.9	-24	30.8	60 N	6 28	7 21	8 12	9 54	96	14 19	17
1	198	34.1		50.5	198	18.1		38.8	58	23	13	7 59	27	86	14 45	28
2	213	33.9		51.1	212	47.2		46.7	56	18	7 05	48	9 07	80	15 07	33
3	228	33.8		51.6	227	16.1		54.5	54	14	6 58	38	8 49	77	24	37
4	243	33.6		52.2	241	45.0		02.1	52	10	51	30	35	73	39	39
5	258	33.5	-19	52.7	256	13.8		09.6	50	6 06	6 46	7 22	8 22	72	15 52	41
6	273	33.3	-19	53.3	270	42.5		17.0	45	5 57	6 33	7 05	7 56	68	16 19	44
7	288	33.1		53.9	285	11.1		24.3	40	49	22	6 52	35	65	40	47
8	303	33.0		54.4	299	39.6		31.5	35	42	13	40	18	63	16 58	48
9	318	32.8		55.0	314	08.1		38.5	30	35	6 04	30	7 04	61	17 13	50
10	333	32.7		55.5	328	36.4		45.4	20	22	5 49	6 12	6 39	58	17 39	52
11	348	32.5	-19	56.1	343	04.6		52.2	10 N	5 09	5 35	5 57	6 17	56	18 02	54
12	3	32.4	-19	56.6	357	32.8		58.8	0	4 55	5 20	5 42	5 58	53	18 23	55
13	18	32.2		57.2	12	00.9		05.3	10 S	39	5 05	28	38	51	18 44	57
14	33	32.0		57.7	26	28.9		11.7	20	4 20	4 48	5 12	5 17	49	19 07	58
15	48	31.9		58.3	40	56.8		17.9	30	3 55	27	4 53	4 52	47	33	60
16	63	31.7		58.8	55	24.6		24.0	35	40	4 14	43	38	45	19 49	61
17	78	31.6	-19	59.4	69	52.3		30.0	40	3 21	3 59	4 30	4 22	42	20 07	63
18	93	31.4	-19	59.9	84	20.0		35.8	45	2 56	3 41	4 16	4 02	39	20 29	64
19	108	31.2	-20	00.4	98	47.5		41.5	50	23	17	3 58	3 38	35	20 57	67
20	123	31.1		01.0	113	15.0		47.1	52	2 05	3 06	49	26	33	21 10	69
21	138	30.9		01.5	127	42.4		52.5	54	1 43	2 52	39	3 13	30	26	71
22	153	30.8		02.1	142	09.8		57.8	56	1 12	37	29	2 58	26	21 45	73
23	168	30.6		02.6	156	37.0		02.9	58	0 10	2 18	16	40	20	22 08	77
24	183	30.4	-20	03.2	171	04.2		07.9	60 S	** **	1 54	3 02	2 18	11	22 39	85

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 19 ^h 57 ^m 3		Mag: -3.9 PMG: 12 ^h 12 ^m		Mag: +1.6 PMG: 11 ^h 08 ^m		Mag: -1.7 PMG: 11 ^h 48 ^m		Mag: +0.5 PMG: 5 ^h 50 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	59	51.4	177	12.0	-20	57.9	192	54.8	-17	27.3
1	74	53.9	192	11.2		58.6	207	55.5		27.8
2	89	56.3	207	10.4		59.2	222	56.3		28.2
3	104	58.8	222	09.5	-20	59.9	237	57.0		28.7
4	120	01.3	237	08.7	-21	00.6	252	57.7		29.2
5	135	03.7	252	07.9	-21	01.2	267	58.4	-17	29.7
6	150	06.2	267	07.1	-21	01.9	282	59.1	-17	30.2
7	165	08.7	282	06.2		02.6	297	59.9		30.7
8	180	11.1	297	05.4		03.2	313	00.6		31.2
9	195	13.6	312	04.6		03.9	328	01.3		31.7
10	210	16.0	327	03.8		04.5	343	02.0		32.2
11	225	18.5	342	02.9	-21	05.2	358	02.7	-17	32.7
12	240	21.0	357	02.1	-21	05.9	13	03.5	-17	33.2
13	255	23.4	12	01.3		06.5	28	04.2		33.7
14	270	25.9	27	00.4		07.2	43	04.9		34.2
15	285	28.4	41	59.6		07.8	58	05.6		34.7
16	300	30.8	56	58.8		08.5	73	06.3		35.1
17	315	33.3	71	58.0	-21	09.2	88	07.0	-17	35.6
18	330	35.8	86	57.1	-21	09.8	103	07.8	-17	36.1
19	345	38.2	101	56.3		10.5	118	08.5		36.6
20	0	40.7	116	55.5		11.1	133	09.2		37.1
21	15	43.2	131	54.6		11.8	148	09.9		37.6
22	30	45.6	146	53.8		12.4	163	10.6		38.1
23	45	48.1	161	53.0		13.1	178	11.3		38.6
24	60	50.5	176	52.1	-21	13.7	193	12.0	-17	39.1
Dif	—		-8		-7		+7		-5	

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna				
	SD: 16°2			Edad: 1 ^d 1	PHE { 4 ^h : 56°0 12 ^h : 56°2 20 ^h : 56°4	PMG: 11 ^h 46 ^m 1			R°: 57 ^m								
	hG ☉	Dec				hG ☾				Dif	Dec	Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	m
0	183	30.4	-20	03.2	171	04.2	-27	07.9	60 N	15 17	16 08	17 01	11 30	70	14 36	49	
1	198	30.3		03.7	185	31.3	81	12.7	58	30	17	07	10 53	66	15 13	53	
2	213	30.1		04.2	199	58.3	80	17.4	56	41	25	12	27	64	15 40	54	
3	228	29.9		04.8	214	25.3	80	22.0	54	15 51	32	16	10 06	63	16 01	55	
4	243	29.8		05.3	228	52.1	78	26.4	52	16 00	39	21	9 48	63	18	56	
5	258	29.6	-20	05.9	243	18.9	78	-27 30.7	50	16 08	16 45	17 25	9 34	62	16 33	56	
6	273	29.5	-20	06.4	257	45.7	78	-27 34.8	45	16 25	16 58	17 34	9 04	61	17 03	57	
7	288	29.3		06.9	272	12.4	77	38.7	40	39	17 09	42	8 40	61	27	57	
8	303	29.1		07.5	286	39.0	76	42.5	35	16 51	18	49	21	60	17 46	57	
9	318	29.0		08.0	301	05.5	75	46.2	30	17 01	27	17 56	8 05	59	18 03	57	
10	333	28.8		08.6	315	32.0	75	49.7	20	19	43	18 10	7 37	58	31	58	
11	348	28.6	-20	09.1	329	58.4	74	-27 53.0	10 N	17 35	17 57	18 23	7 13	58	18 56	57	
12	3	28.5	-20	09.6	344	24.8	74	-27 56.2	0	17 50	18 12	18 37	6 51	57	19 18	58	
13	18	28.3		10.2	358	51.1	73	-27 59.3	10 S	18 05	27	18 54	29	56	19 41	57	
14	33	28.1		10.7	13	17.3	72	-28 02.1	20	21	18 45	19 13	6 06	55	20 05	57	
15	48	28.0		11.2	27	43.5	72	04.9	30	39	19 06	38	5 39	53	33	57	
16	63	27.8		11.8	42	09.6	71	07.4	35	18 50	19	19 54	23	52	20 50	57	
17	78	27.6	-20	12.3	56	35.7	71	-28 09.8	40	19 03	19 34	20 13	5 04	52	21 10	56	
18	93	27.5	-20	12.8	71	01.7	70	-28 12.1	45	19 18	19 53	20 38	4 41	51	21 33	57	
19	108	27.3		13.4	85	27.7	70	14.2	50	37	20 17	21 13	4 13	48	22 04	55	
20	123	27.1		13.9	99	53.7	70	16.1	52	45	29	31	3 59	47	19	55	
21	138	26.9		14.4	114	19.6	69	17.9	54	19 55	43	21 55	43	45	37	54	
22	153	26.8		14.9	128	45.4	68	19.5	56	20 06	20 59	22 29	24	43	22 58	54	
23	168	26.6		15.5	143	11.2	68	20.9	58	19	21 19	** **	3 00	40	23 25	52	
24	183	26.4	-20	16.0	157	37.0	68	-28 22.2	60 S	20 34	21 44	** **	2 29	32	** **	** **	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 19 ^h 53 ^m 4		Mag: -3.9 PMG: 12 ^h 13 ^m		Mag: +1.6 PMG: 11 ^h 07 ^m		Mag: -1.7 PMG: 11 ^h 45 ^m		Mag: +0.5 PMG: 5 ^h 46 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	60	50.5	176	52.1	-21	13.7	193	12.0	-17	39.1	183	22.1	-19	20.4	273	18.2	+14	14.0
1	75	53.0	191	51.3		14.4	208	12.8		39.6	198	24.0		20.6	288	20.6		14.0
2	90	55.5	206	50.5		15.0	223	13.5		40.0	213	25.8		20.7	303	23.0		14.0
3	105	57.9	221	49.6		15.6	238	14.2		40.5	228	27.7		20.8	318	25.4		14.0
4	121	00.4	236	48.8		16.3	253	14.9		41.0	243	29.6		20.9	333	27.8		14.0
5	136	02.9	251	48.0	-21	16.9	268	15.6	-17	41.5	258	31.5	-19	21.0	348	30.2	+14	13.9
6	151	05.3	266	47.1	-21	17.6	283	16.3	-17	42.0	273	33.4	-19	21.2	3	32.6	+14	13.9
7	166	07.8	281	46.3		18.2	298	17.0		42.5	288	35.3		21.3	18	35.0		13.9
8	181	10.3	296	45.5		18.8	313	17.8		43.0	303	37.2		21.4	33	37.4		13.9
9	196	12.7	311	44.6		19.5	328	18.5		43.5	318	39.1		21.5	48	39.8		13.9
10	211	15.2	326	43.8		20.1	343	19.2		43.9	333	41.0		21.7	63	42.2		13.9
11	226	17.7	341	43.0	-21	20.8	358	19.9	-17	44.4	348	42.9	-19	21.8	78	44.6	+14	13.9
12	241	20.1	356	42.1	-21	21.4	13	20.6	-17	44.9	3	44.7	-19	21.9	93	47.0	+14	13.9
13	256	22.6	11	41.3		22.0	28	21.3		45.4	18	46.6		22.0	108	49.4		13.8
14	271	25.0	26	40.4		22.7	43	22.0		45.9	33	48.5		22.1	123	51.8		13.8
15	286	27.5	41	39.6		23.3	58	22.7		46.4	48	50.4		22.3	138	54.2		13.8
16	301	30.0	56	38.8		23.9	73	23.4		46.9	63	52.3		22.4	153	56.6		13.8
17	316	32.4	71	37.9	-21	24.5	88	24.2	-17	47.3	78	54.2	-19	22.5	168	59.0	+14	13.8
18	331	34.9	86	37.1	-21	25.2	103	24.9	-17	47.8	93	56.1	-19	22.6	184	01.4	+14	13.8
19	346	37.4	101	36.2		25.8	118	25.6		48.3	108	58.0		22.7	199	03.8		13.8
20	1	39.8	116	35.4		26.4	133	26.3		48.8	123	59.9		22.9	214	06.2		13.7
21	16	42.3	131	34.6		27.1	148	27.0		49.3	139	01.7		23.0	229	08.6		13.7
22	31	44.8	146	33.7		27.7	163	27.7		49.8	154	03.6		23.1	244	11.0		13.7
23	46	47.2	161	32.9		28.3	178	28.4		50.3	169	05.5		23.2	259	13.4		13.7
24	61	49.7	176	32.0	-21	28.9	193	29.1	-17	50.7	184	07.4	-19	23.4	274	15.8	+14	13.7
Dif	—		-8		-6		+7		-5		+19		-1		+24		0	

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16'2			Edad: 2 ^d 1 PHE { 4 ^h : 56'5 12 ^h : 56'7 20 ^h : 56'8 R°: 57 ^m												
	PMG: 11 ^h 46 ^m 4				SD: 15'4	PMG: 14 ^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	183	26.4	-20	157	37.0	-28	22.2	60 N	6	32	7	25	8	17	12	40
1	198	26.3		172	02.7		23.3	58							29	15
2	213	26.1		186	28.4		24.3	56	26	16	8	04	11	59	39	29
3	228	25.9		200	54.1		25.0	54	21	08	7	52		31	43	34
4	243	25.8		215	19.7		25.7	52	17	7	01	42	11	09	46	16
5	258	25.6	-20	229	45.3	-28	26.1	50	12	6	54	33	10	51	47	17
6	273	25.4	-20	244	10.9	-28	26.4	45	12	6	49	7	25	10	36	48
7	288	25.2		258	36.4		26.5	40	6	08	6	49	7	25	10	36
8	303	25.1		273	01.9		26.5	35	5	59	6	35	7	08	10	05
9	318	24.9		287	27.4		26.3	30	51	24	6	54	9	41	52	24
10	333	24.7		301	52.9		25.9	20	44	15		42	21	53	18	43
11	348	24.5	-20	316	18.4	-28	25.4	10 N	37	6	06	32	9	04	54	19
12	3	24.4	-20	330	43.8	-28	24.6	0	23	5	50	6	13	8	35	56
13	18	24.2		345	09.2		23.8	10 S	23	5	50	6	13	8	35	56
14	33	24.0		359	34.6		22.7	20	5	10	5	58	8	11	56	19
15	48	23.8		14	00.1		21.5	8	5	10	5	58	8	11	56	19
16	63	23.7		28	25.5		20.1	11	4	19	4	48	5	12	7	01
17	78	23.5	-20	42	50.8	-28	18.6	12	4	19	4	48	5	12	7	01
18	93	23.3	-20	57	16.2	-28	16.8	13	3	54	26	4	53	6	32	60
19	108	23.1		71	41.6		14.9	14	38	4	13	42	6	15	61	21
20	123	23.0		86	07.0		12.9	15	3	19	3	58	4	29	5	56
21	138	22.8		100	32.4		10.7	18	2	54	3	39	4	14	5	32
22	153	22.6		114	57.8		08.3	19	2	54	3	39	4	14	5	32
23	168	22.4		129	23.2		05.7	20	19	15	3	55	5	01	64	22
24	183	22.2	-20	143	48.6	-28	03.0	21	2	01	3	03	4	46	64	23
								22	2	01	3	03	4	46	64	23
								23	1	37	2	49	37	28	65	31
								24	1	37	2	49	37	28	65	31
								25	1	03	33	26	4	07	66	23
								26	**	**	2	13	3	40	68	**
								27	**	**	1	48	2	58	3	01

UT	SOL				● LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna				
	SD: 16 ^h 2 PMG: 11 ^h 46 ^m 7				Edad: 3 ^d 1 PHE { 4 ^h : 57 ⁰ 12 ^h : 57 ² 20 ^h : 57 ³ 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	h m m	h m m	h m m			
0	183	22.2	-20	28.5	143	48.6	-28	03.0	60 N	15 13	16 05	16 59	13 09 10	16 56 107						
1	198	22.1		29.0	158	14.0	-28	00.1	58	27	15	17 05	12 38 19	17 27 97						
2	213	21.9		29.5	172	39.4	-27	57.0	56	39	23	10	12 14 25	17 51 90						
3	228	21.7		30.0	187	04.8		53.8	54	49	30	15	11 55 29	18 09 86						
4	243	21.5		30.5	201	30.3		50.4	52	15 58	37	19	38 33	25 83						
5	258	21.3	-20	31.0	215	55.7	-27	46.8	50	16 06	16 43	17 23	11 24 36	18 39 80						
6	273	21.2	-20	31.5	230	21.2	-27	43.1	45	16 24	16 56	17 32	10 56 40	19 07 75						
7	288	21.0		32.0	244	46.7		39.2	40	38	17 08	41	33 44	29 71						
8	303	20.8		32.5	259	12.2		35.1	35	16 50	18	48	10 14 46	19 47 68						
9	318	20.6		33.0	273	37.8		30.9	30	17 01	26	17 56	9 58 48	20 03 66						
10	333	20.4		33.5	288	03.4		26.5	20	19	43	18 10	31 51	29 62						
11	348	20.3	-20	34.0	302	29.0	-27	21.9	10 N	17 35	17 58	18 23	9 07 55	20 52 58						
12	3	20.1	-20	34.5	316	54.6	-27	17.2	0	17 50	18 12	18 38	8 45 57	21 13 55						
13	18	19.9		35.0	331	20.3		12.3	10 S	18 06	28	18 55	24 58	34 52						
14	33	19.7		35.5	345	45.9		07.2	20	22	18 46	19 14	8 00 61	21 56 49						
15	48	19.5		36.1	0	11.7	-27	02.0	30	41	19 08	40	7 32 65	22 22 45						
16	63	19.3		36.6	14	37.4	-26	56.6	35	18 52	21	19 56	7 16 67	37 42						
17	78	19.2	-20	37.1	29	03.2	-26	51.1	40	19 05	19 37	20 16	6 57 69	22 54 40						
18	93	19.0	-20	37.6	43	29.1	-26	45.4	45	19 21	19 56	20 42	6 34 72	23 15 36						
19	108	18.8		38.1	57	54.9		39.5	50	40	20 21	21 17	6 05 76	41 31						
20	123	18.6		38.5	72	20.8		33.5	52	49	33	21 37	5 50 78	23 54 28						
21	138	18.4		39.0	86	46.8		27.3	54	19 59	20 47	22 02	33 81	** ** *						
22	153	18.2		39.5	101	12.8		21.0	56	20 10	21 04	22 39	5 13 85	** ** *						
23	168	18.1		40.0	115	38.8		14.5	58	24	25	** ** *	4 48 90	0 17 28						
24	183	17.9	-20	40.5	130	04.9	-26	07.8	60 S	20 39	21 52	** ** *	4 13 100	0 52 19						
UT	ARIES				VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 19 ^h 45 ^m 5				Mag: -3.9 PMG: 12 ^h 16 ^m				Mag: +1.6 PMG: 11 ^h 04 ^m				Mag: -1.7 PMG: 11 ^h 39 ^m				Mag: +0.5 PMG: 5 ^h 38 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	62	48.8	176	11.6	-21	43.5	193	46.1	-18	02.3	184	52.7	-19	26.3	275	13.5	+14	13.4		
1	77	51.3	191	10.8		44.1	208	46.8		02.8	199	54.6		26.4	290	15.9		13.4		
2	92	53.8	206	09.9		44.7	223	47.5		03.2	214	56.5		26.5	305	18.3		13.4		
3	107	56.2	221	09.1		45.3	238	48.2		03.7	229	58.4		26.6	320	20.7		13.4		
4	122	58.7	236	08.2		45.9	253	48.9		04.2	245	00.3		26.7	335	23.1		13.4		
5	138	01.2	251	07.3	-21	46.5	268	49.6	-18	04.7	260	02.2	-19	26.9	350	25.5	+14	13.4		
6	153	03.6	266	06.5	-21	47.1	283	50.3	-18	05.1	275	04.1	-19	27.0	5	27.9	+14	13.4		
7	168	06.1	281	05.6		47.7	298	51.0		05.6	290	05.9		27.1	20	30.4		13.3		
8	183	08.5	296	04.8		48.2	313	51.7		06.1	305	07.8		27.2	35	32.8		13.3		
9	198	11.0	311	03.9		48.8	328	52.4		06.6	320	09.7		27.3	50	35.2		13.3		
10	213	13.5	326	03.0		49.4	343	53.1		07.0	335	11.6		27.5	65	37.6		13.3		
11	228	15.9	341	02.2	-21	50.0	358	53.8	-18	07.5	350	13.5	-19	27.6	80	40.0	+14	13.3		
12	243	18.4	356	01.3	-21	50.6	13	54.5	-18	08.0	5	15.4	-19	27.7	95	42.4	+14	13.3		
13	258	20.9	11	00.5		51.2	28	55.2		08.5	20	17.3		27.8	110	44.8		13.3		
14	273	23.3	25	59.6		51.7	43	55.9		08.9	35	19.2		27.9	125	47.2		13.3		
15	288	25.8	40	58.7		52.3	58	56.6		09.4	50	21.0		28.0	140	49.6		13.3		
16	303	28.3	55	57.9		52.9	73	57.3		09.9	65	22.9		28.2	155	52.0		13.2		
17	318	30.7	70	57.0	-21	53.5	88	58.0	-18	10.4	80	24.8	-19	28.3	170	54.4	+14	13.2		
18	333	33.2	85	56.2	-21	54.0	103	58.7	-18	10.8	95	26.7	-19	28.4	185	56.8	+14	13.2		
19	348	35.6	100	55.3		54.6	118	59.4		11.3	110	28.6		28.5	200	59.3		13.2		
20	3	38.1	115	54.4		55.2	134	00.1		11.8	125	30.5		28.6	216	01.7		13.2		
21	18	40.6	130	53.6		55.8	149	00.8		12.3	140	32.4		28.8	231	04.1		13.2		
22	33	43.0	145	52.7		56.3	164	01.5		12.7	155	34.3		28.9	246	06.5		13.2		
23	48	45.5	160	51.8		56.9	179	02.2		13.2	170	36.1		29.0	261	08.9		13.2		
24	63	48.0	175	51.0	-21	57.5	194	02.9	-18	13.7	185	38.0	-19	29.1	276	11.3	+14	13.2		
Dif	—		-9		-6		+7		-5		+19		-1		+24		0			

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 16:2 PMG: 11 ^h 47 ^m 0			Edad: 4 ^d 1 PHE { 4 ^h : 57/5 12 ^h : 57/6 20 ^h : 57/8 PMG: 15 ^h 55 ^m R°: 54 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	m	
0	183	17.9	-20	40.5	130	04.9	-26	07.8	60 N	6 36	7 29	8 22	13 19	3	18 43	108		
1	198	17.7		41.0	144	31.1 72	-26	01.0 68	58	30	20	8 08	12 57	10	19 04	100		
2	213	17.5		41.5	158	57.2 71	-25	54.0 70	56	25	12	7 56	39 16		21 95			
3	228	17.3		42.0	173	23.5 73		46.9 71	54	20	7 04	46	24 20		35 9			
4	243	17.1		42.5	187	49.8 73		39.6 73	52	15	6 57	36	11 24		48 87			
5	258	16.9	-20	43.0	202	16.1 73	-25	32.2 74	50	6 11	6 51	7 28	12 00	26	19 59	84		
6	273	16.7	-20	43.5	216	42.5 74	-25	24.6 76	45	6 02	6 38	7 10	11 36	31	20 22	77		
7	288	16.6		44.0	231	08.9 74		16.9 77	40	5 53	26	6 56	17 35		40 73			
8	303	16.4		44.5	245	35.4 75		09.0 79	35	45	16	44	11 00	40	20 55	70		
9	318	16.2		45.0	260	02.0 76	-25	00.9 81	30	38	6 07	33	10 46	42	21 09	66		
10	333	16.0		45.5	274	28.6 76	-24	52.8 81	20	24	5 51	6 15	22 47		31 61			
11	348	15.8	-20	45.9	288	55.3 77	-24	44.4 84	10 N	5 10	5 36	5 59	10 02	50	21 50	57		
12	3	15.6	-20	46.4	303	22.0 77	-24	35.9 85	0	4 55	5 21	5 43	9 42	54	22 08	53		
13	18	15.4		46.9	317	48.8 78		27.3 86	10 S	39	5 05	28	22 58		26 49			
14	33	15.2		47.4	332	15.6 78		18.5 88	20	4 19	4 47	5 11	9 01	62	22 45	44		
15	48	15.0		47.9	346	42.5 79		09.6 89	30	3 53	26	4 52	8 37	66	23 07	39		
16	63	14.8		48.4	1	09.5 80	-24	00.6 90	35	37	4 12	41	23 69		19 36			
17	78	14.7	-20	48.9	15	36.5 80	-23	51.4 92	40	3 17	3 57	4 28	8 06	72	23 34	32		
18	93	14.5	-20	49.3	30	03.6 81	-23	42.0 94	45	2 52	3 37	4 13	7 46	76	23 51	28		
19	108	14.3		49.8	44	30.8 82		32.5 95	50	2 16	12	3 53	21 82		*** **	**		
20	123	14.1		50.3	58	58.0 82		22.9 96	52	1 56	3 00	44	7 08	85	*** **	***		
21	138	13.9		50.8	73	25.3 83		13.2 97	54	1 31	2 46	34	6 54	89	0 08	25		
22	153	13.7		51.3	87	52.6 83	-23	03.3 99	56	0 54	29	23	38 93		25 20			
23	168	13.5		51.7	102	20.0 84	-22	53.2 101	58	** ** *	2 08	3 09	6 18	99	0 45	15		
24	183	13.3	-20	52.2	116	47.5 85	-22	43.1 101	60 S	** ** *	1 41	2 54	5 53	108	1 11	6		
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO					
	PMG: 19 ^h 41 ^m 6			Mag: -3.9 PMG: 12 ^h 17 ^m			Mag: +1.6 PMG: 11 ^h 03 ^m			Mag: -1.7 PMG: 11 ^h 36 ^m			Mag: +0.5 PMG: 5 ^h 34 ^m					
	hG ♈		Dec	hG ♀		Dec	hG ♂		Dec	hG ♃		Dec	hG ♄		Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	63	48.0	175	51.0	-21	57.5	194	02.9	-18	13.7	185	38.0	-19	29.1	276	11.3		
1	78	50.4	190	50.1		58.0	209	03.6		14.1	200	39.9		29.2	291	13.7		
2	93	52.9	205	49.2		58.6	224	04.3		14.6	215	41.8		29.4	306	16.1		
3	108	55.4	220	48.4		59.2	239	05.0		15.1	230	43.7		29.5	321	18.5		
4	123	57.8	235	47.5	-21	59.7	254	05.7		15.6	245	45.6		29.6	336	21.0		
5	139	00.3	250	46.6	-22	00.3	269	06.4	-18	16.0	260	47.5	-19	29.7	351	23.4		
6	154	02.8	265	45.8	-22	00.9	284	07.1	-18	16.5	275	49.4	-19	29.8	6	25.8		
7	169	05.2	280	44.9		01.4	299	07.8		17.0	290	51.2		30.0	21	28.2		
8	184	07.7	295	44.0		02.0	314	08.5		17.4	305	53.1		30.1	36	30.6		
9	199	10.1	310	43.1		02.5	329	09.1		17.9	320	55.0		30.2	51	33.0		
10	214	12.6	325	42.3		03.1	344	09.8		18.4	335	56.9		30.3	66	35.4		
11	229	15.1	340	41.4	-22	03.7	359	10.5	-18	18.8	350	58.8	-19	30.4	81	37.8		
12	244	17.5	355	40.5	-22	04.2	14	11.2	-18	19.3	6	00.7	-19	30.6	96	40.3		
13	259	20.0	10	39.7		04.8	29	11.9		19.8	21	02.6		30.7	111	42.7		
14	274	22.5	25	38.8		05.3	44	12.6		20.2	36	04.5		30.8	126	45.1		
15	289	24.9	40	37.9		05.9	59	13.3		20.7	51	06.3		30.9	141	47.5		
16	304	27.4	55	37.0		06.4	74	14.0		21.2	66	08.2		31.0	156	49.9		
17	319	29.9	70	36.2	-22	07.0	89	14.7	-18	21.7	81	10.1	-19	31.1	171	52.3		
18	334	32.3	85	35.3	-22	07.5	104	15.4	-18	22.1	96	12.0	-19	31.3	186	54.7		
19	349	34.8	100	34.4		08.1	119	16.1		22.6	111	13.9		31.4	201	57.1		
20	4	37.3	115	33.6		08.6	134	16.8		23.1	126	15.8		31.5	216	59.6		
21	19	39.7	130	32.7		09.2	149	17.5		23.5	141	17.7		31.6	232	02.0		
22	34	42.2	145	31.8		09.7	164	18.2		24.0	156	19.6		31.7	247	04.4		
23	49	44.6	160	30.9		10.3	179	18.9		24.5	171	21.4		31.9	262	06.8		
24	64	47.1	175	30.0	-22	10.8	194	19.6	-18	24.9	186	23.3	-19	32.0	277	09.2		
Dif	—			-9	-6		+7			-5		+19		-1		+24		0

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 16 ^h 2 PMG: 11 ^h 47 ^m 3			Edad: 5 ^d 1 PHE { 4 ^h : 58 ⁰ 12 ^h : 58 ¹ 20 ^h : 58 ³ 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	13.3	-20	52.2	116	47.5	-22	43.1	60 N	15 10	16 03	16 57	13 22	0	20 31 104
1	198	13.1		52.7	131	15.1	86	32.8	58	24	12	17 03	13 07	6	44 99
2	213	12.9		53.2	145	42.7	86	22.4	56	36	21	08	12 55	10	20 56 94
3	228	12.7		53.7	160	10.4	87	11.8	54	47	28	13	44	14	21 06 90
4	243	12.5		54.1	174	38.1	87	-22 01.1	52	15 56	35	18	35	17	15 86
5	258	12.3	-20	54.6	189	05.9	88	-21 50.3	50	16 05	16 41	17 22	12 26	20	21 23 83
6	273	12.1	-20	55.1	203	33.8	89	-21 39.3	45	16 22	16 55	17 32	12 07	26	21 39 78
7	288	11.9		55.6	218	01.7	89	28.3	40	37	17 07	40	11 52	30	21 53 73
8	303	11.7		56.0	232	29.7	90	17.1	35	16 49	17	48	40	33	22 05 69
9	318	11.5		56.5	246	57.8	91	-21 05.7	30	17 00	26	17 55	28	37	15 65
10	333	11.3		57.0	261	25.9	91	-20 54.3	20	19	43	18 10	11 09	42	32 60
11	348	11.1	-20	57.5	275	54.1	92	-20 42.7	10 N	17 35	17 58	18 24	10 52	47	22 47 55
12	3	10.9	-20	57.9	290	22.4	93	-20 31.1	0	17 51	18 13	18 39	10 36	52	23 01 50
13	18	10.7		58.4	304	50.7	93	19.2	10 S	18 07	29	18 56	20	56	15 45
14	33	10.6		58.9	319	19.1	94	-20 07.3	20	23	18 47	19 16	10 03	61	29 41
15	48	10.4		59.3	333	47.6	95	-19 55.3	30	43	19 10	42	9 43	66	46 35
16	63	10.2	-20	59.8	348	16.1	95	43.1	35	18 54	23	19 58	32	69	23 55 32
17	78	10.0	-21	00.3	2	44.7	96	-19 30.9	40	19 08	19 39	20 19	9 18	73	** ** *
18	93	09.8	-21	00.7	17	13.4	97	-19 18.5	45	19 23	19 59	20 45	9 02	78	** ** *
19	108	09.6		01.2	31	42.1	97	-19 06.0	50	43	20 24	21 22	8 43	84	0 12 22
20	123	09.4		01.7	46	10.9	98	-18 53.4	52	19 52	37	21 42	33	87	22 19
21	138	09.2		02.1	60	39.8	99	40.7	54	20 02	20 52	22 09	23	90	33 16
22	153	09.0		02.6	75	08.7	99	27.9	56	14	21 09	22 50	8 11	94	0 45 13
23	168	08.8		03.1	89	37.7	100	14.9	58	28	31	** ** *	7 57	99	1 00 8
24	183	08.6	-21	03.5	104	06.7	100	-18 01.9	60 S	20 44	21 59	** ** *	7 41	105	1 17 2
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG: 19 ^h 37 ^m 6		Mag: -3.9 PMG: 12 ^h 19 ^m		Mag: +1.6 PMG: 11 ^h 02 ^m		Mag: -1.7 PMG: 11 ^h 33 ^m		Mag: +0.5 PMG: 5 ^h 30 ^m						
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄						
h	°	'	°	'	°	'	°	'	°	'					
0	64	47.1	175	30.0	-22	10.8	194	19.6	-19	32.0					
1	79	49.6	190	29.2		11.3	209	20.2		32.1					
2	94	52.0	205	28.3		11.9	224	20.9		32.2					
3	109	54.5	220	27.4		12.4	239	21.6		32.3					
4	124	57.0	235	26.5		13.0	254	22.3		32.5					
5	139	59.4	250	25.7	-22	13.5	269	23.0	-18	32.6					
6	155	01.9	265	24.8	-22	14.0	284	23.7	-18	32.7					
7	170	04.4	280	23.9		14.6	299	24.4		32.8					
8	185	06.8	295	23.0		15.1	314	25.1		32.9					
9	200	09.3	310	22.1		15.6	329	25.8		33.0					
10	215	11.8	325	21.3		16.2	344	26.5		33.2					
11	230	14.2	340	20.4	-22	16.7	359	27.2	-18	33.3					
12	245	16.7	355	19.5	-22	17.2	14	27.8	-18	33.4					
13	260	19.1	10	18.6		17.7	29	28.5		33.5					
14	275	21.6	25	17.7		18.3	44	29.2		33.6					
15	290	24.1	40	16.9		18.8	59	29.9		33.8					
16	305	26.5	55	16.0		19.3	74	30.6		33.9					
17	320	29.0	70	15.1	-22	19.8	89	31.3	-18	34.0					
18	335	31.5	85	14.2	-22	20.4	104	32.0	-18	34.1					
19	350	33.9	100	13.3		20.9	119	32.7		34.2					
20	5	36.4	115	12.4		21.4	134	33.4		34.3					
21	20	38.9	130	11.5		21.9	149	34.0		34.5					
22	35	41.3	145	10.7		22.4	164	34.7		34.6					
23	50	43.8	160	09.8		22.9	179	35.4		34.7					
24	65	46.3	175	08.9	-22	23.5	194	36.1	-18	34.8					
Dif	—		-9		-5		+7		-5						
							+19		-1						
									+24						
									0						

UT	SOL			 LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'2			Edad: 6 ^d 1	PHE {	4 ^h : 58'4		12 ^h : 58'6	20 ^h : 58'8		R°: 49 ^m				
	PMG: 11 ^h 47 ^m 6														
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	m
0	183	08.6	-21 03.5	104	06.7	-18 01.9	131	60 N	6 39	7 33	8 26	13 22	0	22 15	100
1	198	08.3	04.0	118	35.8	-17 48.8	101	58	33	23	12	13	4	23	96
2	213	08.1	04.5	133	05.0	35.5	102	56	28	15	8 00	13 05	8	30	92
3	228	07.9	04.9	147	34.2	22.2	102	54	23	07	7 49	12 58	11	36	89
4	243	07.7	05.4	162	03.5	-17 08.8	103	52	18	7 00	39	52	13	41	86
5	258	07.5	-21 05.8	176	32.8	-16 55.2	103	50	6 14	6 54	7 31	12 46	16	22 46	84
6	273	07.3	-21 06.3	191	02.2	-16 41.6	104	45	6 04	6 40	7 13	12 33	22	22 57	78
7	288	07.1	06.8	205	31.7	27.9	105	40	5 55	28	6 58	22 26		23 06	73
8	303	06.9	07.2	220	01.2	14.0	105	35	47	18	46	13 30		14	68
9	318	06.7	07.7	234	30.8	-16 00.1	106	30	40	6 09	35	12 05	34	20	65
10	333	06.5	08.1	249	00.4	-15 46.1	106	20	25	5 52	6 16	11 51	39	32	59
11	348	06.3	-21 08.6	263	30.1	-15 32.0	107	10 N	5 11	5 37	5 59	11 39	44	23 42	53
12	3	06.1	-21 09.0	277	59.9	-15 17.8	108	0	4 56	5 22	5 44	11 28	49	23 51	48
13	18	05.9	09.5	292	29.7	-15 03.5	108	10 S	39	5 06	28	16 54		***	***
14	33	05.7	09.9	306	59.5	-14 49.2	108	20	4 19	4 47	5 11	11 04	59	***	***
15	48	05.5	10.4	321	29.4	34.7	109	30	3 53	25	4 52	10 49	65	***	***
16	63	05.3	10.8	335	59.4	20.2	110	35	36	4 11	40	41 69		***	***
17	78	05.1	-21 11.3	350	29.4	-14 05.6	110	40	3 16	3 55	4 27	10 31	73	0 06	28
18	93	04.9	-21 11.7	4	59.4	-13 50.9	110	45	2 50	3 36	4 11	10 20	78	0 19	23
19	108	04.7	12.2	19	29.5	36.1	111	50	2 13	3 10	3 52	07 83		34	18
20	123	04.5	12.6	33	59.7	21.2	112	52	1 52	2 58	42	10 00	87	41	16
21	138	04.3	13.1	48	29.9	-13 06.3	112	54	1 26	43	32	9 53	90	49	12
22	153	04.0	13.5	63	00.1	-12 51.3	112	56	0 44	25	20	45 93		0 58	9
23	168	03.8	14.0	77	30.4	36.2	113	58	** ** *	2 04	3 06	36 97		1 08	5
24	183	03.6	-21 14.4	92	00.7	-12 21.0	113	60 S	** ** *	1 35	2 50	9 26	102	1 19	1

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG: 19 ^h 33 ^m 7		Mag: -3.9 PMG: 12 ^h 20 ^m		Mag: +1.6 PMG: 11 ^h 01 ^m		Mag: -1.7 PMG: 11 ^h 30 ^m		Mag: +0.5 PMG: 5 ^h 27 ^m						
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'					
0	65	46.3	175	08.9	-22 23.5	194	36.1	-18 36.0	187	08.6	-19 34.8	278	07.2	+14 12.8	
1	80	48.7	190	08.0	24.0	209	36.8	36.5	202	10.5	34.9	293	09.7	12.8	
2	95	51.2	205	07.1	24.5	224	37.5	36.9	217	12.4	35.0	308	12.1	12.8	
3	110	53.6	220	06.2	25.0	239	38.2	37.4	232	14.3	35.2	323	14.5	12.8	
4	125	56.1	235	05.3	25.5	254	38.8	37.9	247	16.2	35.3	338	16.9	12.8	
5	140	58.6	250	04.4	-22 26.0	269	39.5	-18 38.3	262	18.1	-19 35.4	353	19.3	+14 12.8	
6	156	01.0	265	03.6	-22 26.5	284	40.2	-18 38.8	277	20.0	-19 35.5	8	21.8	+14 12.8	
7	171	03.5	280	02.7	27.0	299	40.9	39.2	292	21.9	35.6	23	24.2	12.8	
8	186	06.0	295	01.8	27.5	314	41.6	39.7	307	23.7	35.7	38	26.6	12.8	
9	201	08.4	310	00.9	28.0	329	42.3	40.1	322	25.6	35.9	53	29.0	12.7	
10	216	10.9	325	00.0	28.5	344	43.0	40.6	337	27.5	36.0	68	31.4	12.7	
11	231	13.4	339	59.1	-22 29.0	359	43.6	-18 41.1	352	29.4	-19 36.1	83	33.9	+14 12.7	
12	246	15.8	354	58.2	-22 29.6	14	44.3	-18 41.5	7	31.3	-19 36.2	98	36.3	+14 12.7	
13	261	18.3	9	57.3	30.1	29	45.0	42.0	22	33.2	36.3	113	38.7	12.7	
14	276	20.7	24	56.4	30.5	44	45.7	42.4	37	35.1	36.5	128	41.1	12.7	
15	291	23.2	39	55.5	31.0	59	46.4	42.9	52	36.9	36.6	143	43.6	12.7	
16	306	25.7	54	54.6	31.5	74	47.1	43.3	67	38.8	36.7	158	46.0	12.7	
17	321	28.1	69	53.8	-22 32.0	89	47.7	-18 43.8	82	40.7	-19 36.8	173	48.4	+14 12.7	
18	336	30.6	84	52.9	-22 32.5	104	48.4	-18 44.3	97	42.6	-19 36.9	188	50.8	+14 12.7	
19	351	33.1	99	52.0	33.0	119	49.1	44.7	112	44.5	37.0	203	53.3	12.7	
20	6	35.5	114	51.1	33.5	134	49.8	45.2	127	46.4	37.2	218	55.7	12.7	
21	21	38.0	129	50.2	34.0	149	50.5	45.6	142	48.3	37.3	233	58.1	12.7	
22	36	40.5	144	49.3	34.5	164	51.1	46.1	157	50.2	37.4	249	00.5	12.7	
23	51	42.9	159	48.4	35.0	179	51.8	46.5	172	52.0	37.5	264	02.9	12.7	
24	66	45.4	174	47.5	-22 35.5	194	52.5	-18 47.0	187	53.9	-19 37.6	279	05.4	+14 12.7	
Dif	—		-9	-5		+7	-5		+19	-1		+24	0		

UT	SOL			☾ LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 16/2 PMG: 11 ^h 47 ^m 9			Edad: 7 ^d 1 PHE { 4 ^h : 58/9 12 ^h : 59/0 20 ^h : 59/2 PMG: 18 ^h 28 ^m R°: 48 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m	m	h m	m	
0	183	03.6	-21	14.4	92	00.7	-12	21.0	60 N	15 07	16 00	16 55	13 22	**	23 55	100	
1	198	03.4		14.9	106	31.1 ¹¹⁴	-12	05.8 ¹⁵²	58	22	10	17 01	17	3	23 59	96	
2	213	03.2		15.3	121	01.5 ¹¹⁴	-11	50.5 ¹⁵³	56	34	19	06	13	6	**	**	
3	228	03.0		15.8	135	31.9 ¹¹⁴		35.1 ¹⁵⁴	54	45	27	11	09	9	**	**	
4	243	02.8		16.2	150	02.4 ¹¹⁵		19.7 ¹⁵⁴	52	15 55	34	16	05	12	**	**	
5	258	02.6	-21	16.7	164	32.9 ¹¹⁵	-11	04.2 ¹⁵⁵	50	16 03	16 40	17 21	13 02	14	**	**	
6	273	02.4	-21	17.1	179	03.5 ¹¹⁶	-10	48.6 ¹⁵⁶	45	16 21	16 54	17 31	12 55	19	**	**	
7	288	02.2		17.5	193	34.1 ¹¹⁶		33.0 ¹⁵⁶	40	36	17 06	40	48	25	**	**	
8	303	01.9		18.0	208	04.7 ¹¹⁶		17.3 ¹⁵⁷	35	16 49	17	48	43	28	**	**	
9	318	01.7		18.4	222	35.4 ¹¹⁷	-10	01.5 ¹⁵⁸	30	17 00	26	17 55	39	31	**	**	
10	333	01.5		18.9	237	06.1 ¹¹⁷	-9	45.7 ¹⁵⁸	20	19	43	18 10	30	38	**	**	
11	348	01.3	-21	19.3	251	36.8 ¹¹⁷	-9	29.8 ¹⁵⁹	10 N	17 36	17 58	18 24	12 23	43	**	**	
12	3	01.1	-21	19.7	266	07.6 ¹¹⁸	-9	13.9 ¹⁵⁹	0	17 52	18 14	18 40	12 17	48	**	**	
13	18	00.9		20.2	280	38.4 ¹¹⁸	-8	57.9 ¹⁶⁰	10 S	18 07	30	18 57	10	53	0	00	
14	33	00.7		20.6	295	09.2 ¹¹⁸		41.8 ¹⁶¹	20	25	18 49	19 17	12 03	58	10	38	
15	48	00.5		21.1	309	40.1 ¹¹⁹		25.7 ¹⁶¹	30	45	19 11	19 44	11 54	65	21	32	
16	63	00.2		21.5	324	10.9 ¹¹⁸	-8	09.6 ¹⁶¹	35	18 56	25	20 01	50	68	27	29	
17	78	00.0	-21	21.9	338	41.8 ¹¹⁹	-7	53.4 ¹⁶²	40	19 10	19 42	20 21	11 44	73	0	34	
18	92	59.8	-21	22.4	353	12.7 ¹¹⁹	-7	37.1 ¹⁶³	45	19 26	20 02	20 48	11 38	77	0	42	
19	107	59.6		22.8	7	43.7 ¹²⁰		20.8 ¹⁶³	50	46	28	21 26	30	83	52	15	
20	122	59.4		23.2	22	14.6 ¹¹⁹	-7	04.5 ¹⁶³	52	19 55	41	21 47	27	85	0	57	
21	137	59.2		23.7	36	45.6 ¹²⁰	-6	48.1 ¹⁶⁴	54	20 06	20 56	22 15	23	88	1	01	
22	152	59.0		24.1	51	16.6 ¹²⁰		31.7 ¹⁶⁴	56	18	21 14	23 03	18	92	07	7	
23	167	58.7		24.5	65	47.6 ¹²⁰	-6	15.2 ¹⁶⁵	58	32	21 36	**	**	13	96	13	
24	182	58.5	-21	24.9	80	18.6 ¹²⁰	-5	58.7 ¹⁶⁵	60 S	20 49	22 07	**	**	11 08	100	1	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO					
	PMG: 19 ^h 29 ^m 8		Mag: -3.9 PMG: 12 ^h 22 ^m			Mag: +1.6 PMG: 11 ^h 00 ^m			Mag: -1.7 PMG: 11 ^h 27 ^m			Mag: +0.5 PMG: 5 ^h 23 ^m					
	hG ♂		hG ♀ Dec			hG ♂ Dec			hG ♃ Dec			hG ♄ Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	66	45.4	174	47.5	-22	35.5	194	52.5	-18	47.0	187	53.9	-19	37.6	279	05.4	
1	81	47.9	189	46.6		36.0	209	53.2		47.4	202	55.8		37.7	294	07.8	
2	96	50.3	204	45.7		36.4	224	53.9		47.9	217	57.7		37.9	309	10.2	
3	111	52.8	219	44.8		36.9	239	54.5		48.3	232	59.6		38.0	324	12.6	
4	126	55.2	234	43.9		37.4	254	55.2		48.8	248	01.5		38.1	339	15.1	
5	141	57.7	249	43.0	-22	37.9	269	55.9	-18	49.2	263	03.4	-19	38.2	354	17.5	
6	157	00.2	264	42.1	-22	38.4	284	56.6	-18	49.7	278	05.3	-19	38.3	9	19.9	
7	172	02.6	279	41.2		38.8	299	57.3		50.1	293	07.1		38.4	24	22.3	
8	187	05.1	294	40.3		39.3	314	57.9		50.6	308	09.0		38.6	39	24.8	
9	202	07.6	309	39.4		39.8	329	58.6		51.0	323	10.9		38.7	54	27.2	
10	217	10.0	324	38.5		40.3	344	59.3		51.5	338	12.8		38.8	69	29.6	
11	232	12.5	339	37.6	-22	40.8	360	00.0	-18	51.9	353	14.7	-19	38.9	84	32.0	
12	247	15.0	354	36.7	-22	41.2	15	00.7	-18	52.4	8	16.6	-19	39.0	99	34.5	
13	262	17.4	9	35.8		41.7	30	01.3		52.8	23	18.5		39.1	114	36.9	
14	277	19.9	24	34.9		42.2	45	02.0		53.3	38	20.4		39.3	129	39.3	
15	292	22.4	39	34.0		42.6	60	02.7		53.7	53	22.2		39.4	144	41.8	
16	307	24.8	54	33.1		43.1	75	03.4		54.2	68	24.1		39.5	159	44.2	
17	322	27.3	69	32.2	-22	43.6	90	04.0	-18	54.6	83	26.0	-19	39.6	174	46.6	
18	337	29.7	84	31.3	-22	44.0	105	04.7	-18	55.1	98	27.9	-19	39.7	189	49.0	
19	352	32.2	99	30.4		44.5	120	05.4		55.5	113	29.8		39.8	204	51.5	
20	7	34.7	114	29.5		45.0	135	06.1		56.0	128	31.7		39.9	219	53.9	
21	22	37.1	129	28.6		45.4	150	06.8		56.4	143	33.6		40.1	234	56.3	
22	37	39.6	144	27.7		45.9	165	07.4		56.9	158	35.5		40.2	249	58.7	
23	52	42.1	159	26.8		46.3	180	08.1		57.3	173	37.3		40.3	265	01.2	
24	67	44.5	174	25.9	-22	46.8	195	08.8	-18	57.8	188	39.2	-19	40.4	280	03.6	
Dif	—		-9		-5	+7		-5		+19		-1		+24		0	

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 16:2 PMG: 11 ^h 48 ^m 3			Edad: 8 ^d 1 PHE { SD: 16:1 PMG: 19 ^h 16 ^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	182	58.5	-21	24.9	80	18.6	-5 58.7	60 N	6 42	7 37	8 30	13 21	0			***	***	
1	197	58.3		25.4	94	49.7 ¹²¹	42.1 ¹⁶⁶	58	36	27	16	20	3			***	***	
2	212	58.1		25.8	109	20.7 ¹²⁰	25.5 ¹⁶⁶	56	30	18	8 03	19	6			0 02	92	
3	227	57.9		26.2	123	51.8 ¹²¹	-5 08.9 ¹⁶⁶	54	25	10	7 52	18	9			05	89	
4	242	57.7		26.7	138	22.8 ¹²⁰	-4 52.2 ¹⁶⁷	52	20	7 03	42	17	12			07	86	
5	257	57.4	-21	27.1	152	53.9 ¹²¹	-4 35.5 ¹⁶⁷	50	6 16	6 57	7 34	13 16	14			0 10	83	
6	272	57.2	-21	27.5	167	25.0 ¹²¹	-4 18.8 ¹⁶⁷	45	6 06	6 42	7 15	13 14	20			0 15	77	
7	287	57.0		27.9	181	56.1 ¹²¹	-4 02.1 ¹⁶⁷	40	5 57	30	7 00	13 24				19	72	
8	302	56.8		28.4	196	27.2 ¹²¹	-3 45.3 ¹⁶⁸	35	49	20	6 48	11 28				22	69	
9	317	56.6		28.8	210	58.3 ¹²¹	28.5 ¹⁶⁸	30	41	6 11	36	10 32				25	65	
10	332	56.4		29.2	225	29.4 ¹²¹	-3 11.6 ¹⁶⁹	20	26	5 54	17	08 38				31	58	
11	347	56.1	-21	29.6	240	00.5 ¹²¹	-2 54.7 ¹⁶⁹	10 N	5 12	5 38	6 00	13 06	43			0 35	53	
12	2	55.9	-21	30.0	254	31.6 ¹²¹	-2 37.8 ¹⁶⁹	0	4 57	5 22	5 45	13 05	48			0 39	48	
13	17	55.7		30.5	269	02.7 ¹²¹	20.9 ¹⁶⁹	10 S	39	5 06	29	03 53				44	42	
14	32	55.5		30.9	283	33.8 ¹²¹	-2 04.0 ¹⁶⁹	20	4 19	4 47	5 11	13 01	59			48	37	
15	47	55.3		31.3	298	04.8 ¹²⁰	-1 47.0 ¹⁷⁰	30	3 52	25	4 51	12 59	65			53	31	
16	62	55.0		31.7	312	35.9 ¹²¹	30.1 ¹⁶⁹	35	35	4 11	40	58 69				56	28	
17	77	54.8	-21	32.1	327	07.0 ¹²¹	-1 13.1 ¹⁷⁰	40	3 15	3 54	4 26	12 57	73			0 59	24	
18	92	54.6	-21	32.6	341	38.1 ¹²¹	-0 56.1 ¹⁷⁰	45	2 48	3 34	4 10	12 55	78			1 03	19	
19	107	54.4		33.0	356	09.1 ¹²⁰	39.1 ¹⁷⁰	50	2 10	3 08	3 50	53 84				07	14	
20	122	54.2		33.4	10	40.1 ¹²⁰	22.0 ¹⁷¹	52	1 49	2 55	41	52 87				09	12	
21	137	53.9		33.8	25	11.2 ¹²¹	-0 05.0 ¹⁷⁰	54	1 20	40	30	51 90				11	9	
22	152	53.7		34.2	39	42.2 ¹²⁰	+0 12.0 ¹⁷⁰	56	0 33	22	18	50 93				14	6	
23	167	53.5		34.6	54	13.2 ¹²⁰	29.1 ¹⁷¹	58	***	2 00	3 04	49 97				16	3	
24	182	53.3	-21	35.0	68	44.1 ¹¹⁹	+0 46.2 ¹⁷¹	60 S	***	1 29	2 47	12 48	101			1 19	**	
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO					
	PMG: 19 ^h 25 ^m 8			Mag: -3.9 PMG: 12 ^h 23 ^m			Mag: +1.6 PMG: 10 ^h 59 ^m			Mag: -1.7 PMG: 11 ^h 24 ^m			Mag: +0.5 PMG: 5 ^h 19 ^m					
	hG ♈		Dec	hG ♀		Dec	hG ♂		Dec	hG ♃		Dec	hG ♄		Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	67	44.5	174	25.9	-22	46.8	195	08.8	-18	57.8	188	39.2	-19	40.4	280	03.6	+14	12.6
1	82	47.0	189	25.0		47.3	210	09.5		58.2	203	41.1		40.5	295	06.0		12.6
2	97	49.5	204	24.1		47.7	225	10.1		58.7	218	43.0		40.6	310	08.5		12.6
3	112	51.9	219	23.2		48.2	240	10.8		59.1	233	44.9		40.8	325	10.9		12.6
4	127	54.4	234	22.2		48.6	255	11.5	-18	59.6	248	46.8		40.9	340	13.3		12.6
5	142	56.8	249	21.3	-22	49.1	270	12.2	-19	00.0	263	48.7	-19	41.0	355	15.8	+14	12.6
6	157	59.3	264	20.4	-22	49.5	285	12.8	-19	00.5	278	50.6	-19	41.1	10	18.2	+14	12.6
7	173	01.8	279	19.5		50.0	300	13.5		00.9	293	52.4		41.2	25	20.6		12.6
8	188	04.2	294	18.6		50.4	315	14.2		01.3	308	54.3		41.3	40	23.0		12.6
9	203	06.7	309	17.7		50.9	330	14.8		01.8	323	56.2		41.5	55	25.5		12.6
10	218	09.2	324	16.8		51.3	345	15.5		02.2	338	58.1		41.6	70	27.9		12.6
11	233	11.6	339	15.9	-22	51.8	0	16.2	-19	02.7	354	00.0	-19	41.7	85	30.3	+14	12.6
12	248	14.1	354	15.0	-22	52.2	15	16.9	-19	03.1	9	01.9	-19	41.8	100	32.8	+14	12.6
13	263	16.6	9	14.1		52.7	30	17.5		03.6	24	03.8		41.9	115	35.2		12.5
14	278	19.0	24	13.2		53.1	45	18.2		04.0	39	05.7		42.0	130	37.6		12.5
15	293	21.5	39	12.3		53.5	60	18.9		04.5	54	07.5		42.1	145	40.1		12.5
16	308	24.0	54	11.3		54.0	75	19.6		04.9	69	09.4		42.3	160	42.5		12.5
17	323	26.4	69	10.4	-22	54.4	90	20.2	-19	05.3	84	11.3	-19	42.4	175	44.9	+14	12.5
18	338	28.9	84	09.5	-22	54.9	105	20.9	-19	05.8	99	13.2	-19	42.5	190	47.4	+14	12.5
19	353	31.3	99	08.6		55.3	120	21.6		06.2	114	15.1		42.6	205	49.8		12.5
20	8	33.8	114	07.7		55.7	135	22.2		06.7	129	17.0		42.7	220	52.2		12.5
21	23	36.3	129	06.8		56.2	150	22.9		07.1	144	18.9		42.8	235	54.7		12.5
22	38	38.7	144	05.9		56.6	165	23.6		07.5	159	20.8		42.9	250	57.1		12.5
23	53	41.2	159	05.0		57.0	180	24.2		08.0	174	22.6		43.1	265	59.5		12.5
24	68	43.7	174	04.0	-22	57.5	195	24.9	-19	08.4	189	24.5	-19	43.2	281	02.0	+14	12.5
Dif	—		-9		-4		+7		-4		+19		-1		+24			

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna			Puesta de Luna			
	SD: 16'2 PMG: 11 ^h 48 ^m 6			Edad: 9 ^d 1 PHE { 4 ^h : 59'6 12 ^h : 59'7 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 m	h m m	h m m	h m m	h m m	h m m		
0	182	53.3	-21	35.0	68	44.1	+0 46.2	60 N	15 04	15 58	16 53	13 21 **		1 35	102			
1	197	53.0		35.5	83	15.1 ¹²⁰	+1 03.2 ¹⁷⁰	58	19	16 08	16 59	23 3		35	97			
2	212	52.8		35.9	97	46.0 ¹¹⁹	20.3 ¹⁷¹	56	32	17	17 05	25 7		34	94			
3	227	52.6		36.3	112	17.0 ¹²⁰	37.3 ¹⁷⁰	54	43	25	10	27 10		34	90			
4	242	52.4		36.7	126	47.8 ¹¹⁸	+1 54.4 ¹⁷¹	52	15 53	32	15	29 13		33	88			
5	257	52.1	-21	37.1	141	18.7 ¹¹⁹	+2 11.5 ¹⁷¹	50	16 02	16 39	17 20	13 30 16		1 33	84			
6	272	51.9	-21	37.5	155	49.5 ¹¹⁸	+2 28.5 ¹⁷⁰	45	16 20	16 53	17 30	13 34 21		1 32	79			
7	287	51.7		37.9	170	20.4 ¹¹⁹	+2 45.6 ¹⁷¹	40	36	17 06	39	37 25		31	74			
8	302	51.5		38.3	184	51.1 ¹¹⁷	+3 02.6 ¹⁷⁰	35	16 49	16	47	39 30		31	69			
9	317	51.2		38.7	199	21.9 ¹¹⁸	19.7 ¹⁷¹	30	17 00	26	17 55	42 33		30	66			
10	332	51.0		39.1	213	52.6 ¹¹⁷	36.7 ¹⁷⁰	20	19	43	18 10	46 39		29	59			
11	347	50.8	-21	39.5	228	23.3 ¹¹⁷	+3 53.7 ¹⁷⁰	10 N	17 36	17 59	18 25	13 49 45		1 28	54			
12	2	50.6	-21	39.9	242	53.9 ¹¹⁶	+4 10.7 ¹⁷⁰	0	17 52	18 15	18 40	13 53 49		1 27	49			
13	17	50.3		40.3	257	24.6 ¹¹⁷	27.7 ¹⁷⁰	10 S	18 08	31	18 58	13 56 55		26	44			
14	32	50.1		40.7	271	55.1 ¹¹⁵	+4 44.7 ¹⁷⁰	20	26	18 50	19 19	14 00 60		25	39			
15	47	49.9		41.1	286	25.7 ¹¹⁶	+5 01.6 ¹⁶⁹	30	46	19 13	19 46	04 67		24	32			
16	62	49.7		41.5	300	56.2 ¹¹⁵	18.6 ¹⁷⁰	35	18 58	27	20 03	07 70		24	28			
17	77	49.4	-21	41.9	315	26.6 ¹¹⁴	+5 35.5 ¹⁶⁹	40	19 12	19 44	20 24	14 10 74		1 23	25			
18	92	49.2	-21	42.3	329	57.1 ¹¹⁵	+5 52.4 ¹⁶⁹	45	19 28	20 04	20 51	14 13 80		1 22	20			
19	107	49.0		42.7	344	27.4 ¹¹³	+6 09.3 ¹⁶⁹	50	48	31	21 30	17 86		21	15			
20	122	48.7		43.1	358	57.8 ¹¹⁴	26.1 ¹⁶⁸	52	19 58	20 44	21 52	19 89		21	12			
21	137	48.5		43.5	13	28.0 ¹¹²	42.9 ¹⁶⁸	54	20 09	21 00	22 22	21 92		20	10			
22	152	48.3		43.9	27	58.3 ¹¹³	+6 59.7 ¹⁶⁸	56	22	18	23 19	23 96		20	6			
23	167	48.1		44.3	42	28.4 ¹¹¹	+7 16.4 ¹⁶⁷	58	36	21 42	** **	26 99		19	3			
24	182	47.8	-21	44.7	56	58.6 ¹¹²	+7 33.2 ¹⁶⁸	60 S	20 53	22 14	** **	14 29 103		1 18	0			
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO					
	PMG: 19 ^h 21 ^m 9			Mag: -3.9 PMG: 12 ^h 24 ^m			Mag: +1.6 PMG: 10 ^h 58 ^m			Mag: -1.7 PMG: 11 ^h 21 ^m			Mag: +0.4 PMG: 5 ^h 15 ^m					
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec							
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	68	43.7	174	04.0	-22	57.5	195	24.9	-19	08.4	189	24.5	-19	43.2	281	02.0	+14	12.5
1	83	46.1	189	03.1		57.9	210	25.6		08.9	204	26.4		43.3	296	04.4		12.5
2	98	48.6	204	02.2		58.3	225	26.3		09.3	219	28.3		43.4	311	06.8		12.5
3	113	51.1	219	01.3		58.7	240	26.9		09.7	234	30.2		43.5	326	09.3		12.5
4	128	53.5	234	00.4		59.2	255	27.6		10.2	249	32.1		43.6	341	11.7		12.5
5	143	56.0	248	59.5	-22	59.6	270	28.3	-19	10.6	264	34.0	-19	43.8	356	14.1	+14	12.5
6	158	58.5	263	58.5	-23	00.0	285	28.9	-19	11.1	279	35.9	-19	43.9	11	16.6	+14	12.5
7	174	00.9	278	57.6	-23	00.4	300	29.6		11.5	294	37.7		44.0	26	19.0		12.5
8	189	03.4	293	56.7		00.9	315	30.3		11.9	309	39.6		44.1	41	21.4		12.5
9	204	05.8	308	55.8		01.3	330	30.9		12.4	324	41.5		44.2	56	23.9		12.5
10	219	08.3	323	54.9		01.7	345	31.6		12.8	339	43.4		44.3	71	26.3		12.5
11	234	10.8	338	54.0	-23	02.1	0	32.3	-19	13.3	354	45.3	-19	44.4	86	28.7	+14	12.5
12	249	13.2	353	53.0	-23	02.5	15	32.9	-19	13.7	9	47.2	-19	44.6	101	31.2	+14	12.5
13	264	15.7	8	52.1		02.9	30	33.6		14.1	24	49.1		44.7	116	33.6		12.5
14	279	18.2	23	51.2		03.4	45	34.3		14.6	39	51.0		44.8	131	36.0		12.5
15	294	20.6	38	50.3		03.8	60	34.9		15.0	54	52.8		44.9	146	38.5		12.5
16	309	23.1	53	49.4		04.2	75	35.6		15.4	69	54.7		45.0	161	40.9		12.5
17	324	25.6	68	48.5	-23	04.6	90	36.3	-19	15.9	84	56.6	-19	45.1	176	43.3	+14	12.5
18	339	28.0	83	47.5	-23	05.0	105	36.9	-19	16.3	99	58.5	-19	45.2	191	45.8	+14	12.5
19	354	30.5	98	46.6		05.4	120	37.6		16.7	115	00.4		45.4	206	48.2		12.5
20	9	32.9	113	45.7		05.8	135	38.3		17.2	130	02.3		45.5	221	50.7		12.5
21	24	35.4	128	44.8		06.2	150	38.9		17.6	145	04.2		45.6	236	53.1		12.5
22	39	37.9	143	43.8		06.6	165	39.6		18.1	160	06.1		45.7	251	55.5		12.5
23	54	40.3	158	42.9		07.0	180	40.3		18.5	175	07.9		45.8	266	58.0		12.5
24	69	42.8	173	42.0	-23	07.4	195	40.9	-19	18.9	190	09.8	-19	45.9	282	00.4	+14	12.5
Dif	—		-9		-4		+7		-4		+19		-1		+24		0	

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna							
	SD: 16'2 PMG: 11 ^h 49 ^m 0			Edad: 10 ^d 1 PHE { 4 ^h : 59'9 12 ^h : 59'9 20 ^h : 59'9 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	182	47.8	-21	44.7	56	58.6	+7	33.2	60 N	6 46	7 40	8 35	13 20	1	3 17	106				
1	197	47.6		45.1	71	28.7 ¹¹¹	+7	49.8 ¹⁶⁶	58	39	30	19	26	6	12	101				
2	212	47.4		45.5	85	58.7 ¹¹⁰	+8	06.5 ¹⁶⁷	56	33	21	8 07	32	9	08	97				
3	227	47.1		45.9	100	28.7 ¹¹⁰		23.1 ¹⁶⁶	54	28	13	7 55	37	13	04	93				
4	242	46.9		46.3	114	58.6 ¹⁰⁹		39.7 ¹⁶⁶	52	23	7 06	45	42	15	3	01				
5	257	46.7	-21	46.7	129	28.4 ¹⁰⁸	+8	56.2 ¹⁶⁵	50	6 18	6 59	7 36	13 46	18	2 57	87				
6	272	46.5	-21	47.1	143	58.2 ¹⁰⁸	+9	12.7 ¹⁶⁵	45	6 08	6 45	7 18	13 55	24	2 51	80				
7	287	46.2		47.5	158	28.0 ¹⁰⁸		29.1 ¹⁶⁴	40	5 59	32	7 02	14 02	29	45	76				
8	302	46.0		47.9	172	57.7 ¹⁰⁷	+9	45.5 ¹⁶⁴	35	50	22	6 49	09	33	40	72				
9	317	45.8		48.3	187	27.3 ¹⁰⁶	+10	01.9 ¹⁶⁴	30	43	6 12	38	15	36	36	68				
10	332	45.5		48.6	201	56.8 ¹⁰⁵		18.2 ¹⁶³	20	28	5 55	19	25	42	28	62				
11	347	45.3	-21	49.0	216	26.3 ¹⁰⁵	+10	34.4 ¹⁶²	10 N	5 13	5 39	6 01	14 34	48	2 22	56				
12	2	45.1	-21	49.4	230	55.8 ¹⁰⁵	+10	50.6 ¹⁶²	0	4 57	5 23	5 45	14 42	53	2 16	51				
13	17	44.8		49.8	245	25.1 ¹⁰³	+11	06.7 ¹⁶¹	10 S	40	5 06	29	14 51	58	10	46				
14	32	44.6		50.2	259	54.4 ¹⁰³		22.8 ¹⁶¹	20	4 19	4 47	5 12	15 00	63	2 04	40				
15	47	44.4		50.6	274	23.7 ¹⁰³		38.8 ¹⁶⁰	30	3 52	24	4 51	11	69	1 56	35				
16	62	44.1		51.0	288	52.8 ¹⁰¹	+11	54.8 ¹⁶⁰	35	35	4 10	39	17	73	52	31				
17	77	43.9	-21	51.3	303	21.9 ¹⁰¹	+12	10.6 ¹⁵⁸	40	3 13	3 54	4 26	15 24	77	1 48	27				
18	92	43.7	-21	51.7	317	50.9 ¹⁰⁰	+12	26.5 ¹⁵⁹	45	2 46	3 33	4 09	15 33	82	1 42	22				
19	107	43.4		52.1	332	19.9 ¹⁰⁰		42.2 ¹⁵⁷	50	2 07	3 06	3 49	43	88	36	16				
20	122	43.2		52.5	346	48.7 ⁹⁸	+12	57.9 ¹⁵⁷	52	1 45	2 53	39	48	91	33	14				
21	137	43.0		52.9	1	17.5 ⁹⁸	+13	13.5 ¹⁵⁶	54	1 15	38	28	53	95	30	10				
22	152	42.7		53.2	15	46.2 ⁹⁷		29.1 ¹⁵⁶	56	0 18	2 19	16	15 59	99	26	8				
23	167	42.5		53.6	30	14.9 ⁹⁷		44.6 ¹⁵⁵	58	** **	1 56	3 01	16 05	104	22	4				
24	182	42.2	-21	54.0	44	43.4 ⁹⁵	+13	59.9 ¹⁵³	60 S	** **	1 23	2 44	16 12	110	1 18	**				
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO							
	PMG: 19 ^h 18 ^m 0			Mag: -3.9 PMG: 12 ^h 26 ^m			Mag: +1.6 PMG: 10 ^h 57 ^m			Mag: -1.7 PMG: 11 ^h 18 ^m			Mag: +0.4 PMG: 5 ^h 11 ^m							
	hG ♈		Dec	hG ♀		Dec	hG ♂		Dec	hG ♃		Dec	hG ♄		Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	69	42.8	173	42.0	-23	07.4	195	40.9	-19	18.9	190	09.8	-19	45.9	282	00.4	+14	12.5		
1	84	45.3	188	41.1		07.8	210	41.6		19.4	205	11.7		46.0	297	02.8		12.5		
2	99	47.7	203	40.2		08.2	225	42.3		19.8	220	13.6		46.2	312	05.3		12.5		
3	114	50.2	218	39.2		08.6	240	42.9		20.2	235	15.5		46.3	327	07.7		12.5		
4	129	52.7	233	38.3		09.0	255	43.6		20.7	250	17.4		46.4	342	10.2		12.5		
5	144	55.1	248	37.4	-23	09.4	270	44.2	-19	21.1	265	19.3	-19	46.5	357	12.6	+14	12.5		
6	159	57.6	263	36.5	-23	09.8	285	44.9	-19	21.5	280	21.2	-19	46.6	12	15.0	+14	12.5		
7	175	00.1	278	35.5		10.2	300	45.6		22.0	295	23.0		46.7	27	17.5		12.5		
8	190	02.5	293	34.6		10.6	315	46.2		22.4	310	24.9		46.8	42	19.9		12.5		
9	205	05.0	308	33.7		11.0	330	46.9		22.8	325	26.8		46.9	57	22.4		12.5		
10	220	07.4	323	32.8		11.4	345	47.6		23.2	340	28.7		47.1	72	24.8		12.5		
11	235	09.9	338	31.8	-23	11.8	0	48.2	-19	23.7	355	30.6	-19	47.2	87	27.2	+14	12.5		
12	250	12.4	353	30.9	-23	12.2	15	48.9	-19	24.1	10	32.5	-19	47.3	102	29.7	+14	12.5		
13	265	14.8	8	30.0		12.5	30	49.5		24.5	25	34.4		47.4	117	32.1		12.5		
14	280	17.3	23	29.1		12.9	45	50.2		25.0	40	36.3		47.5	132	34.6		12.5		
15	295	19.8	38	28.1		13.3	60	50.9		25.4	55	38.1		47.6	147	37.0		12.5		
16	310	22.2	53	27.2		13.7	75	51.5		25.8	70	40.0		47.7	162	39.4		12.5		
17	325	24.7	68	26.3	-23	14.1	90	52.2	-19	26.3	85	41.9	-19	47.9	177	41.9	+14	12.5		
18	340	27.2	83	25.4	-23	14.5	105	52.8	-19	26.7	100	43.8	-19	48.0	192	44.3	+14	12.5		
19	355	29.6	98	24.4		14.8	120	53.5		27.1	115	45.7		48.1	207	46.8		12.5		
20	10	32.1	113	23.5		15.2	135	54.2		27.5	130	47.6		48.2	222	49.2		12.5		
21	25	34.6	128	22.6		15.6	150	54.8		28.0	145	49.5		48.3	237	51.6		12.5		
22	40	37.0	143	21.6		16.0	165	55.5		28.4	160	51.4		48.4	252	54.1		12.5		
23	55	39.5	158	20.7		16.3	180	56.1		28.8	175	53.2		48.5	267	56.5		12.5		
24	70	41.9	173	19.8	-23	16.7	195	56.8	-19	29.3	190	55.1	-19	48.6	282	59.0	+14	12.5		
Dif	—			-9			+7			+19			-1			+24			0	

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna				
	SD: 16/2 PMG: 11 ^h 49 ^m 4			Edad: 11 ^d 1 PHE SD: 16/3 PMG: 21 ^h 48 ^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	h m m			
0	182	42.2	-21	54.0	44	43.4	+13	59.9	60 N	15 02	15 56	16 51	13 21 2	5 03	112			
1	197	42.0		54.4	59	11.9	+14	15.3 ¹⁵⁴	58	17	16 07	16 58	32 8	4 53	106			
2	212	41.8		54.7	73	40.3		30.5 ¹⁵²	56	30	16	17 04	41 14	45	100			
3	227	41.5		55.1	88	08.7	+14	45.7 ¹⁵²	54	42	24	09	50 17	37	96			
4	242	41.3		55.5	102	36.9	+15	00.7 ¹⁵⁰	52	15 52	31	14	13 57 21	31	92			
5	257	41.1	-21	55.9	117	05.1	+15	15.7 ¹⁵⁰	50	16 01	16 38	17 19	14 04 24	4 24	90			
6	272	40.8	-21	56.2	131	33.2	+15	30.6 ¹⁴⁹	45	16 20	16 53	17 29	14 19 30	4 11	83			
7	287	40.6		56.6	146	01.2	+15	45.4 ¹⁴⁸	40	35	17 05	39	31 35	4 01	77			
8	302	40.3		57.0	160	29.1	+16	00.2 ¹⁴⁸	35	16 48	16	47	42 39	3 52	73			
9	317	40.1		57.4	174	56.9		14.8 ¹⁴⁶	30	17 00	26	17 55	14 51 42	44	70			
10	332	39.9		57.7	189	24.6		29.3 ¹⁴⁵	20	19	43	18 10	15 07 48	30	64			
11	347	39.6	-21	58.1	203	52.3	+16	43.8 ¹⁴⁵	10 N	17 37	17 59	18 25	15 22 52	3 18	59			
12	2	39.4	-21	58.5	218	19.9	+16	58.1 ¹⁴³	0	17 53	18 15	18 41	15 35 56	3 07	54			
13	17	39.2		58.8	232	47.4	+17	12.3 ¹⁴²	10 S	18 09	32	18 59	15 49 60	2 56	50			
14	32	38.9		59.2	247	14.8		26.5 ¹⁴²	20	27	18 51	19 20	16 03 66	44	45			
15	47	38.7		59.6	261	42.1		40.5 ¹⁴⁰	30	18 48	19 15	19 48	20 71	31	39			
16	62	38.4	-21	59.9	276	09.3	+17	54.4 ¹³⁹	35	19 00	29	20 05	30 74	23	36			
17	77	38.2	-22	00.3	290	36.4	+18	08.3 ¹³⁹	40	19 14	19 46	20 26	16 41 79	2 15	31			
18	92	38.0	-22	00.7	305	03.5	+18	22.0 ¹³⁷	45	19 31	20 07	20 54	16 55 83	2 04	27			
19	107	37.7		01.0	319	30.5		35.6 ¹³⁶	50	19 51	34	21 34	17 11 90	1 52	21			
20	122	37.5		01.4	333	57.3	+18	49.0 ¹³⁴	52	20 01	20 48	21 57	19 93	47	17			
21	137	37.2		01.8	348	24.1	+19	02.4 ¹³⁴	54	12	21 03	22 29	28 97	40	15			
22	152	37.0		02.1	2	50.8		15.7 ¹³³	56	25	23	** **	38 101	34	10			
23	167	36.7		02.5	17	17.4		28.8 ¹³¹	58	40	21 47	** **	17 49 107	26	6			
24	182	36.5	-22	02.8	31	43.9	+19	41.8 ¹³⁰	60 S	20 58	22 21	** **	18 02 115	1 17	1			
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO					
	PMG: 19 ^h 14 ^m 0			Mag: -3.9 PMG: 12 ^h 27 ^m			Mag: +1.6 PMG: 10 ^h 56 ^m			Mag: -1.7 PMG: 11 ^h 15 ^m			Mag: +0.4 PMG: 5 ^h 07 ^m					
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	70	41.9	173	19.8	-23	16.7	195	56.8	-19	29.3	190	55.1	-19	48.6	282	59.0	+14	12.5
1	85	44.4	188	18.8		17.1	210	57.5		29.7	205	57.0		48.8	298	01.4		12.5
2	100	46.9	203	17.9		17.4	225	58.1		30.1	220	58.9		48.9	313	03.9		12.5
3	115	49.3	218	17.0		17.8	240	58.8		30.5	236	00.8		49.0	328	06.3		12.5
4	130	51.8	233	16.1		18.2	255	59.4		31.0	251	02.7		49.1	343	08.7		12.5
5	145	54.3	248	15.1	-23	18.5	271	00.1	-19	31.4	266	04.6	-19	49.2	358	11.2	+14	12.5
6	160	56.7	263	14.2	-23	18.9	286	00.7	-19	31.8	281	06.5	-19	49.3	13	13.6	+14	12.5
7	175	59.2	278	13.3		19.3	301	01.4		32.2	296	08.3		49.4	28	16.1		12.5
8	191	01.7	293	12.3		19.6	316	02.1		32.7	311	10.2		49.6	43	18.5		12.6
9	206	04.1	308	11.4		20.0	331	02.7		33.1	326	12.1		49.7	58	21.0		12.6
10	221	06.6	323	10.5		20.4	346	03.4		33.5	341	14.0		49.8	73	23.4		12.6
11	236	09.0	338	09.5	-23	20.7	1	04.0	-19	33.9	356	15.9	-19	49.9	88	25.8	+14	12.6
12	251	11.5	353	08.6	-23	21.1	16	04.7	-19	34.4	11	17.8	-19	50.0	103	28.3	+14	12.6
13	266	14.0	8	07.7		21.4	31	05.3		34.8	26	19.7		50.1	118	30.7		12.6
14	281	16.4	23	06.7		21.8	46	06.0		35.2	41	21.6		50.2	133	33.2		12.6
15	296	18.9	38	05.8		22.1	61	06.6		35.6	56	23.4		50.3	148	35.6		12.6
16	311	21.4	53	04.9		22.5	76	07.3		36.1	71	25.3		50.5	163	38.1		12.6
17	326	23.8	68	03.9	-23	22.9	91	08.0	-19	36.5	86	27.2	-19	50.6	178	40.5	+14	12.6
18	341	26.3	83	03.0	-23	23.2	106	08.6	-19	36.9	101	29.1	-19	50.7	193	43.0	+14	12.6
19	356	28.8	98	02.1		23.6	121	09.3		37.3	116	31.0		50.8	208	45.4		12.6
20	11	31.2	113	01.1		23.9	136	09.9		37.7	131	32.9		50.9	223	47.9		12.6
21	26	33.7	128	00.2		24.2	151	10.6		38.2	146	34.8		51.0	238	50.3		12.6
22	41	36.2	142	59.2		24.6	166	11.2		38.6	161	36.7		51.1	253	52.7		12.6
23	56	38.6	157	58.3		24.9	181	11.9		39.0	176	38.5		51.2	268	55.2		12.6
24	71	41.1	172	57.4	-23	25.3	196	12.5	-19	39.4	191	40.4	-19	51.4	283	57.6	+14	12.6
Dif	—		-9		-4		+7		-4		+19		-1		+24		0	

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16:2 PMG: 11 ^h 49 ^m 8			Edad: 12 ^d 1 PHE { 4 ^h : 59/8 12 ^h : 59/7 20 ^h : 59/6 PMG: 22 ^h 45 ^m R°: 61 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico		Civil	Hora		R°	Hora	R°	
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m
0	182	36.5	-22 02.8	31	43.9	+19 41.8	129	60 N	6 49	7 44	8 39	13 23	8	6 55	115	
1	197	36.3	03.2	46	10.3	+19 54.7	129	58	42	33	23	40	17	39	106	
2	212	36.0	03.6	60	36.7	+20 07.5	128	56	36	24	8 10	13 55	22	25	100	
3	227	35.8	03.9	75	02.9	72	20.1	54	30	16	7 58	14 07	27	13	96	
4	242	35.5	04.3	89	29.1	72	32.6	52	25	08	48	18	31	6	03	91
5	257	35.3	-22 04.6	103	55.1	70	+20 45.0	50	6 21	7 01	7 39	14 28	34	5 54	88	
6	272	35.0	-22 05.0	118	21.1	70	+20 57.2	45	6 10	6 47	7 20	14 49	39	5 34	82	
7	287	34.8	05.3	132	47.0	69	+21 09.4	40	6 01	34	7 04	15 06	43	18	78	
8	302	34.6	05.7	147	12.8	68	21.3	35	5 52	23	6 51	21	46	5	05	74
9	317	34.3	06.1	161	38.5	67	33.2	30	44	6 14	40	33	49	4	54	71
10	332	34.1	06.4	176	04.1	66	44.9	20	29	5 56	20	15 55	53	34	66	
11	347	33.8	-22 06.8	190	29.7	66	+21 56.4	10 N	5 14	5 40	6 02	16 14	56	4 17	62	
12	2	33.6	-22 07.1	204	55.1	64	+22 07.9	0	4 58	5 24	5 46	16 31	60	4 01	59	
13	17	33.3	07.5	219	20.5	64	19.1	10 S	40	5 07	30	16 49	63	3 46	54	
14	32	33.1	07.8	233	45.7	62	30.3	20	4 19	4 48	5 12	17 09	66	29	50	
15	47	32.8	08.2	248	10.9	62	41.2	30	3 51	24	4 51	31	71	3	10	45
16	62	32.6	08.5	262	36.0	61	+22 52.1	35	34	4 10	39	17 44	74	2	59	42
17	77	32.3	-22 08.9	277	01.1	61	+23 02.8	40	3 13	3 53	4 25	18 00	76	2	46	39
18	92	32.1	-22 09.2	291	26.0	59	+23 13.3	45	2 45	3 32	4 08	18 18	80	2	31	34
19	107	31.9	09.6	305	50.9	59	23.7	50	2 04	3 05	3 48	41	86	13	28	
20	122	31.6	09.9	320	15.7	58	33.9	52	1 42	2 51	38	18 52	89	2	04	25
21	137	31.4	10.2	334	40.4	57	44.0	54	1 10	35	26	19 05	92	1	55	21
22	152	31.1	10.6	349	05.0	56	+23 53.9	56	** ** *	2 16	3 14	19	97	44	17	
23	167	30.9	10.9	3	29.5	55	+24 03.6	58	** ** *	1 52	2 59	36	104	32	11	
24	182	30.6	-22 11.3	17	54.0	55	+24 13.2	60 S	** ** *	1 18	2 41	19 57	115	1	18	4

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 19 ^h 10 ^m 1		Mag: -3.9 PMG: 12 ^h 29 ^m		Mag: +1.6 PMG: 10 ^h 55 ^m		Mag: -1.7 PMG: 11 ^h 12 ^m		Mag: +0.4 PMG: 5 ^h 03 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	71	41.1	172	57.4	-23 25.3	196	12.5	-19 39.4	191	40.4	-19 51.4	283	57.6	+14 12.6
1	86	43.5	187	56.4	25.6	211	13.2	39.9	206	42.3	51.5	299	00.1	12.6
2	101	46.0	202	55.5	26.0	226	13.8	40.3	221	44.2	51.6	314	02.5	12.6
3	116	48.5	217	54.6	26.3	241	14.5	40.7	236	46.1	51.7	329	05.0	12.6
4	131	50.9	232	53.6	26.6	256	15.1	41.1	251	48.0	51.8	344	07.4	12.6
5	146	53.4	247	52.7	-23 27.0	271	15.8	-19 41.5	266	49.9	-19 51.9	359	09.9	+14 12.6
6	161	55.9	262	51.7	-23 27.3	286	16.4	-19 41.9	281	51.8	-19 52.0	14	12.3	+14 12.6
7	176	58.3	277	50.8	27.6	301	17.1	42.4	296	53.7	52.1	29	14.8	12.6
8	192	00.8	292	49.9	28.0	316	17.7	42.8	311	55.5	52.2	44	17.2	12.6
9	207	03.3	307	48.9	28.3	331	18.4	43.2	326	57.4	52.4	59	19.7	12.6
10	222	05.7	322	48.0	28.6	346	19.0	43.6	341	59.3	52.5	74	22.1	12.6
11	237	08.2	337	47.0	-23 29.0	1	19.7	-19 44.0	357	01.2	-19 52.6	89	24.6	+14 12.6
12	252	10.7	352	46.1	-23 29.3	16	20.3	-19 44.5	12	03.1	-19 52.7	104	27.0	+14 12.6
13	267	13.1	7	45.2	29.6	31	21.0	44.9	27	05.0	52.8	119	29.5	12.6
14	282	15.6	22	44.2	30.0	46	21.6	45.3	42	06.9	52.9	134	31.9	12.6
15	297	18.0	37	43.3	30.3	61	22.3	45.7	57	08.8	53.0	149	34.4	12.7
16	312	20.5	52	42.3	30.6	76	22.9	46.1	72	10.6	53.1	164	36.8	12.7
17	327	23.0	67	41.4	-23 30.9	91	23.6	-19 46.5	87	12.5	-19 53.3	179	39.3	+14 12.7
18	342	25.4	82	40.5	-23 31.2	106	24.2	-19 47.0	102	14.4	-19 53.4	194	41.7	+14 12.7
19	357	27.9	97	39.5	31.6	121	24.9	47.4	117	16.3	53.5	209	44.2	12.7
20	12	30.4	112	38.6	31.9	136	25.5	47.8	132	18.2	53.6	224	46.6	12.7
21	27	32.8	127	37.6	32.2	151	26.2	48.2	147	20.1	53.7	239	49.1	12.7
22	42	35.3	142	36.7	32.5	166	26.8	48.6	162	22.0	53.8	254	51.5	12.7
23	57	37.8	157	35.7	32.8	181	27.5	49.0	177	23.9	53.9	269	54.0	12.7
24	72	40.2	172	34.8	-23 33.1	196	28.1	-19 49.4	192	25.7	-19 54.0	284	56.4	+14 12.7
Dif	—		-9 -3		+6 -4		+19 -1		+24 0					

UT	SOL			☉ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna			Puesta de Luna					
	SD: 16'2 PMG: 11 ^h 50 ^m 2			Edad: 13 ^d 1 PHE { 4 ^h : 59'5 12 ^h : 59'3 20 ^h : 59'1 R°: 62 ^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	182	30.6	-22	11.3	17	54.0	+24	13.2	60 N	14 59	15 55	16 50	13 31	23	8 50	106				
1	197	30.4		11.6	32	18.4		22.6	58	15 15	16 05	16 57	13 57	32	25	96				
2	212	30.1		12.0	46	42.7		31.9	56	29	15	17 03	14 17	38	8 05	90				
3	227	29.9		12.3	61	06.9		41.0	54	40	23	08	34	42	7 49	85				
4	242	29.6		12.6	75	31.1		49.9	52	15 51	30	14	14 49	44	34	83				
5	257	29.4	-22	13.0	89	55.2	+24	58.7	50	16 00	16 37	17 18	15 02	46	7 22	81				
6	272	29.1	-22	13.3	104	19.3	+25	07.3	45	16 19	16 52	17 29	15 28	50	6 56	77				
7	287	28.9		13.6	118	43.2		15.7	40	35	17 05	39	15 49	53	36	74				
8	302	28.6		14.0	133	07.1		23.9	35	16 48	16	47	16 07	54	19	72				
9	317	28.4		14.3	147	31.0		32.0	30	17 00	26	17 55	22	56	6 05	69				
10	332	28.1		14.7	161	54.8		39.9	20	20	17 44	18 11	16 48	58	5 40	67				
11	347	27.9	-22	15.0	176	18.5	+25	47.6	10 N	17 37	18 00	18 26	17 10	60	5 19	64				
12	2	27.6	-22	15.3	190	42.2	+25	55.2	0	17 54	18 16	18 42	17 31	62	5 00	61				
13	17	27.4		15.7	205	05.8	+26	02.5	10 S	18 11	33	19 00	17 52	64	4 40	59				
14	32	27.1		16.0	219	29.3		09.7	20	28	18 53	22	18 15	65	4 19	56				
15	47	26.9		16.3	233	52.8		16.7	30	18 49	19 16	19 49	42	67	3 55	52				
16	62	26.6		16.7	248	16.3		23.5	35	19 02	31	20 07	18 58	68	41	50				
17	77	26.3	-22	17.0	262	39.7	+26	30.2	40	19 16	19 48	20 29	19 16	69	3 25	47				
18	92	26.1	-22	17.3	277	03.0	+26	36.7	45	19 33	20 09	20 57	19 38	71	3 05	44				
19	107	25.8		17.6	291	26.3		42.9	50	19 54	37	21 38	20 07	73	2 41	39				
20	122	25.6		18.0	305	49.6		49.0	52	20 04	20 51	22 02	21	75	29	37				
21	137	25.3		18.3	320	12.9	+26	54.9	54	15	21 07	22 36	37	77	16	33				
22	152	25.1		18.6	334	36.0	+27	00.7	56	28	27	** **	20 56	80	2 01	29				
23	167	24.8		18.9	348	59.2		06.2	58	20 44	21 52	** **	21 20	84	1 43	23				
24	182	24.6	-22	19.3	3	22.3	+27	11.6	60 S	21 02	22 28	** **	21 52	93	1 22	11				
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO								
	PMG: 19 ^h 06 ^m 2		Mag: -3.9 PMG: 12 ^h 30 ^m			Mag: +1.5 PMG: 10 ^h 54 ^m			Mag: -1.7 PMG: 11 ^h 09 ^m			Mag: +0.4 PMG: 4 ^h 59 ^m								
	hG ♈		hG ♀			hG ♂			hG ♃			hG ♄								
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	72	40.2	172	34.8	-23	33.1	196	28.1	-19	49.4	192	25.7	-19	54.0	284	56.4	+14	12.7		
1	87	42.7	187	33.9		33.5	211	28.8		49.9	207	27.6		54.1	299	58.9		12.7		
2	102	45.2	202	32.9		33.8	226	29.4		50.3	222	29.5		54.3	315	01.3		12.7		
3	117	47.6	217	32.0		34.1	241	30.1		50.7	237	31.4		54.4	330	03.8		12.7		
4	132	50.1	232	31.0		34.4	256	30.7		51.1	252	33.3		54.5	345	06.2		12.7		
5	147	52.5	247	30.1	-23	34.7	271	31.4	-19	51.5	267	35.2	-19	54.6	0	08.7	+14	12.7		
6	162	55.0	262	29.1	-23	35.0	286	32.0	-19	51.9	282	37.1	-19	54.7	15	11.1	+14	12.7		
7	177	57.5	277	28.2		35.3	301	32.7		52.3	297	39.0		54.8	30	13.6		12.7		
8	192	59.9	292	27.2		35.6	316	33.3		52.7	312	40.9		54.9	45	16.0		12.7		
9	208	02.4	307	26.3		35.9	331	33.9		53.2	327	42.7		55.0	60	18.5		12.7		
10	223	04.9	322	25.3		36.2	346	34.6		53.6	342	44.6		55.1	75	20.9		12.7		
11	238	07.3	337	24.4	-23	36.5	1	35.2	-19	54.0	357	46.5	-19	55.3	90	23.4	+14	12.7		
12	253	09.8	352	23.5	-23	36.8	16	35.9	-19	54.4	12	48.4	-19	55.4	105	25.8	+14	12.8		
13	268	12.3	7	22.5		37.1	31	36.5		54.8	27	50.3		55.5	120	28.3		12.8		
14	283	14.7	22	21.6		37.4	46	37.2		55.2	42	52.2		55.6	135	30.8		12.8		
15	298	17.2	37	20.6		37.7	61	37.8		55.6	57	54.1		55.7	150	33.2		12.8		
16	313	19.6	52	19.7		38.0	76	38.5		56.0	72	56.0		55.8	165	35.7		12.8		
17	328	22.1	67	18.7	-23	38.3	91	39.1	-19	56.4	87	57.8	-19	55.9	180	38.1	+14	12.8		
18	343	24.6	82	17.8	-23	38.6	106	39.7	-19	56.8	102	59.7	-19	56.0	195	40.6	+14	12.8		
19	358	27.0	97	16.8		38.9	121	40.4		57.3	118	01.6		56.1	210	43.0		12.8		
20	13	29.5	112	15.9		39.1	136	41.0		57.7	133	03.5		56.2	225	45.5		12.8		
21	28	32.0	127	14.9		39.4	151	41.7		58.1	148	05.4		56.4	240	47.9		12.8		
22	43	34.4	142	14.0		39.7	166	42.3		58.5	163	07.3		56.5	255	50.4		12.8		
23	58	36.9	157	13.0		40.0	181	43.0		58.9	178	09.2		56.6	270	52.8		12.8		
24	73	39.4	172	12.1	-23	40.3	196	43.6	-19	59.3	193	11.1	-19	56.7	285	55.3	+14	12.8		
Dif	—		-9			-3	+6			-4	+19			-1			+25			0

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna						
	SD: 16:2			Edad: 14 ^d 1	PHE {	SD: 16:1	4 ^h : 58'9 12 ^h : 58'7 20 ^h : 58'5	R°: ***													
	PMG: 11 ^h 50 ^m 6									PMG: ***h ***m											
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°						
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m					
0	182	24.6	-22	19.3	3	22.3	+27	11.6	60 N	6	51	7	47	8	42	13	54				
1	197	24.3		19.6	17	45.4		16.7	51	45	36	26	14	29	61	10	01				
2	212	24.1		19.9	32	08.5		21.7	50	38	27	13	14	55	61	9	35				
3	227	23.8		20.2	46	31.5		26.5	48	33	18	8	01	15	61	9	14				
4	242	23.6		20.6	60	54.6		31.1	46	28	11	7	51	33	62	8	57				
5	257	23.3	-22	20.9	75	17.6	+27	35.5	44	50	6	23	7	04	7	42	15	48			
6	272	23.0	-22	21.2	89	40.5	+27	39.7	42	45	6	12	6	49	7	22	16	18			
7	287	22.8		21.5	104	03.5		43.7	40	40	6	02	36	7	06	16	42				
8	302	22.5		21.8	118	26.5		47.6	39	35	5	54	25	6	53	17	01				
9	317	22.3		22.2	132	49.4		51.2	36	30	45	6	15	41	18	61	7	14			
10	332	22.0		22.5	147	12.4		54.7	35	20	30	5	57	21	17	46	61	6	47		
11	347	21.8	-22	22.8	161	35.3	+27	57.9	32	10 N	5	15	5	41	6	03	18	10			
12	2	21.5	-22	23.1	175	58.2	+28	01.0	31	0	4	58	5	24	5	47	18	33			
13	17	21.2		23.4	190	21.1		03.9	29	10 S	40	5	07	30	18	56	60	5	39		
14	32	21.0		23.7	204	44.1		06.6	27	20	4	19	4	48	5	12	19	20			
15	47	20.7		24.0	219	07.0		09.0	24	30	3	51	24	4	51	19	49	59	4	47	
16	62	20.5		24.4	233	30.0		11.3	23	35	34	4	10	39	20	06	59		31	58	
17	77	20.2	-22	24.7	247	52.9	+28	13.5	22	40	3	12	3	52	4	25	20	25	59	4	12
18	92	20.0	-22	25.0	262	15.9	+28	15.4	19	45	2	43	3	31	4	08	20	49	58	3	49
19	107	19.7		25.3	276	38.9		17.1	17	50	2	02	3	04	3	47	21	20	57	20	56
20	122	19.4		25.6	291	01.9		18.6	15	52	1	38	2	50	37	36	56	3	06	53	
21	137	19.2		25.9	305	24.9		20.0	14	54	1	05	33	25	21	54	55	2	49	52	
22	152	18.9		26.2	319	48.0		21.1	11	56	** ** *	2	14	3	12	22	16	53	30	49	
23	167	18.7		26.5	334	11.0		22.1	10	58	** ** *	1	48	2	57	22	44	51	2	06	
24	182	18.4	-22	26.8	348	34.2	+28	22.9	8	60 S	** ** *	1	12	2	38	23	25	**	1	33	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 19 ^h 02 ^m 2		Mag: -3.9 PMG: 12 ^h 32 ^m		Mag: +1.5 PMG: 10 ^h 53 ^m		Mag: -1.7 PMG: 11 ^h 06 ^m		Mag: +0.4 PMG: 4 ^h 56 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	73	39.4	172	12.1	-23	40.3	196	43.6	-19	59.3
1	88	41.8	187	11.1		40.6	211	44.2	-19	59.7
2	103	44.3	202	10.2		40.9	226	44.9	-20	00.1
3	118	46.8	217	09.2		41.1	241	45.5		00.5
4	133	49.2	232	08.3		41.4	256	46.2		00.9
5	148	51.7	247	07.3	-23	41.7	271	46.8	-20	01.3
6	163	54.1	262	06.4	-23	42.0	286	47.4	-20	01.7
7	178	56.6	277	05.4		42.2	301	48.1		02.1
8	193	59.1	292	04.5		42.5	316	48.7		02.5
9	209	01.5	307	03.5		42.8	331	49.4		02.9
10	224	04.0	322	02.6		43.1	346	50.0		03.3
11	239	06.5	337	01.6	-23	43.3	1	50.6	-20	03.7
12	254	08.9	352	00.7	-23	43.6	16	51.3	-20	04.2
13	269	11.4	6	59.7		43.9	31	51.9		04.6
14	284	13.9	21	58.8		44.1	46	52.5		05.0
15	299	16.3	36	57.8		44.4	61	53.2		05.4
16	314	18.8	51	56.8		44.7	76	53.8		05.8
17	329	21.3	66	55.9	-23	44.9	91	54.5	-20	06.2
18	344	23.7	81	54.9	-23	45.2	106	55.1	-20	06.6
19	359	26.2	96	54.0		45.4	121	55.7		07.0
20	14	28.6	111	53.0		45.7	136	56.4		07.4
21	29	31.1	126	52.1		46.0	151	57.0		07.8
22	44	33.6	141	51.1		46.2	166	57.6		08.2
23	59	36.0	156	50.2		46.5	181	58.3		08.6
24	74	38.5	171	49.2	-23	46.7	196	58.9	-20	09.0
Dif	—		-10		-3		+6		-4	
							+19		-1	
									+25	
									0	

UT	SOL			☉ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 16/2 PMG: 11 ^h 51 ^m 0			Edad: 15 ^d 1 PHE { 4 ^h : 58/3 12 ^h : 58/0 20 ^h : 57/8 SD: 15/9 PMG: 0 ^h 48 ^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	182	18.4	-22	26.8	348	34.2	+28	22.9	60 N	14 58	15 53	16 49	14 52 95	11 46 28		
1	197	18.1		27.1	2	57.3		23.5	58	15 14	16 04	16 56	15 30 85	11 09 37		
2	212	17.9		27.4	17	20.5		23.9	56	27	14	17 02	15 56 80	10 42 42		
3	227	17.6		27.8	31	43.7		24.1	54	39	22	08	16 17 77	21 45		
4	242	17.4		28.1	46	06.9		24.1	52	50	30	13	35 74	10 04 46		
5	257	17.1	-22	28.4	60	30.2	+28	23.9	50	15 59	16 37	17 18	16 50 72	9 48 49		
6	272	16.8	-22	28.7	74	53.6	+28	23.6	45	16 19	16 52	17 29	17 20 69	9 18 51		
7	287	16.6		29.0	89	17.0		23.0	40	35	17 05	39	17 43 68	8 54 53		
8	302	16.3		29.3	103	40.4		22.3	35	16 48	16	47	18 03 65	35 54		
9	317	16.0		29.6	118	03.9		21.4	30	17 00	26	17 56	19 64	8 18 55		
10	332	15.8		29.9	132	27.5		20.3	20	20	17 44	18 11	18 47 62	7 50 57		
11	347	15.5	-22	30.2	146	51.1	+28	19.0	10 N	17 38	18 01	18 27	19 11 60	7 25 58		
12	2	15.3	-22	30.5	161	14.7	+28	17.6	0	17 55	18 17	18 43	19 34 57	7 02 60		
13	17	15.0		30.8	175	38.5		15.9	10 S	18 12	34	19 01	19 56 56	6 40 60		
14	32	14.7		31.0	190	02.3		14.1	20	30	18 54	23	20 20 54	6 15 62		
15	47	14.5		31.3	204	26.1		12.1	30	18 51	19 18	19 51	20 48 51	5 46 64		
16	62	14.2		31.6	218	50.1		09.9	35	19 03	33	20 09	21 05 49	29 65		
17	77	13.9	-22	31.9	233	14.1	+28	07.6	40	19 18	19 50	20 31	21 24 47	5 10 65		
18	92	13.7	-22	32.2	247	38.1	+28	05.0	45	19 35	20 12	21 00	21 47 44	4 45 67		
19	107	13.4		32.5	262	02.3	+28	02.3	50	19 56	40	21 42	22 17 40	4 14 69		
20	122	13.1		32.8	276	26.5	+27	59.5	52	20 07	20 54	22 06	32 38	3 59 69		
21	137	12.9		33.1	290	50.8		56.4	54	18	21 10	22 42	22 49 35	41 70		
22	152	12.6		33.4	305	15.2		53.2	56	31	31	** ** *	23 09 31	3 19 72		
23	167	12.3		33.7	319	39.7		49.8	58	20 47	21 57	** ** *	23 35 25	2 51 75		
24	182	12.1	-22	34.0	334	04.2	+27	46.2	60 S	21 06	22 35	** ** *	0 01 9	2 09 82		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO				
	PMG: 18 ^h 58 ^m 3		Mag: -3.9 PMG: 12 ^h 34 ^m			Mag: +1.5 PMG: 10 ^h 52 ^m			Mag: -1.7 PMG: 11 ^h 03 ^m			Mag: +0.4 PMG: 4 ^h 52 ^m				
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	74	38.5	171	49.2	-23	46.7	196	58.9	-20	09.0	193	56.4	-19	59.3	286	54.3
1	89	41.0	186	48.3		47.0	211	59.6		09.4	208	58.3		59.4	301	56.8
2	104	43.4	201	47.3		47.2	227	00.2		09.8	224	00.2		59.5	316	59.2
3	119	45.9	216	46.3		47.5	242	00.8		10.2	239	02.1		59.7	332	01.7
4	134	48.4	231	45.4		47.7	257	01.5		10.6	254	03.9		59.8	347	04.1
5	149	50.8	246	44.4	-23	48.0	272	02.1	-20	11.0	269	05.8	-19	59.9	2	06.6
6	164	53.3	261	43.5	-23	48.2	287	02.7	-20	11.4	284	07.7	-20	00.0	17	09.1
7	179	55.8	276	42.5		48.5	302	03.4		11.8	299	09.6	-20	00.1	32	11.5
8	194	58.2	291	41.6		48.7	317	04.0		12.2	314	11.5		00.2	47	14.0
9	210	00.7	306	40.6		48.9	332	04.6		12.6	329	13.4		00.3	62	16.5
10	225	03.1	321	39.6		49.2	347	05.3		13.0	344	15.3		00.4	77	18.9
11	240	05.6	336	38.7	-23	49.4	2	05.9	-20	13.4	359	17.2	-20	00.5	92	21.4
12	255	08.1	351	37.7	-23	49.7	17	06.5	-20	13.7	14	19.1	-20	00.6	107	23.8
13	270	10.5	6	36.8		49.9	32	07.2		14.1	29	20.9		00.7	122	26.3
14	285	13.0	21	35.8		50.1	47	07.8		14.5	44	22.8		00.9	137	28.8
15	300	15.5	36	34.9		50.4	62	08.4		14.9	59	24.7		01.0	152	31.2
16	315	17.9	51	33.9		50.6	77	09.1		15.3	74	26.6		01.1	167	33.7
17	330	20.4	66	32.9	-23	50.8	92	09.7	-20	15.7	89	28.5	-20	01.2	182	36.2
18	345	22.9	81	32.0	-23	51.1	107	10.3	-20	16.1	104	30.4	-20	01.3	197	38.6
19	0	25.3	96	31.0		51.3	122	11.0		16.5	119	32.3		01.4	212	41.1
20	15	27.8	111	30.1		51.5	137	11.6		16.9	134	34.2		01.5	227	43.5
21	30	30.3	126	29.1		51.7	152	12.2		17.3	149	36.1		01.6	242	46.0
22	45	32.7	141	28.1		52.0	167	12.9		17.7	164	37.9		01.7	257	48.5
23	60	35.2	156	27.2		52.2	182	13.5		18.1	179	39.8		01.8	272	50.9
24	75	37.6	171	26.2	-23	52.4	197	14.1	-20	18.5	194	41.7	-20	01.9	287	53.4
Dif	—		-10		-2		+6		-4		+19		-1		+25	

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 16:2 PMG: 11 ^h 51 ^m 4			Edad: 16 ^d 1 PHE { SD: 15:7 PMG: 1 ^h 48 ^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	182	12.1	-22	34.0	334	04.2	+27	46.2	60 N	6 54	7 50	8 46	16 27	102	12 14	10		
1	197	11.8		34.3	348	28.9	57	42.5	58	47	39	30	16 55	93	11 46	18		
2	212	11.5		34.5	2	53.6	57	38.6	56	41	29	16	17 16	88	24	24		
3	227	11.3		34.8	17	18.4	58	34.5	54	35	21	8 04	34 84	11 06	27			
4	242	11.0		35.1	31	43.3	59	30.3	52	30	13	7 53	17 49	80	10 50	31		
5	257	10.7	-22	35.4	46	08.3	60	+27	50	6 25	7 06	7 44	18 02	78	10 37	33		
6	272	10.5	-22	35.7	60	33.5	62	+27	45	6 14	6 51	7 24	18 29	73	10 09	38		
7	287	10.2		36.0	74	58.7	62		48	6 04	38	7 08	18 51	68	9 47	42		
8	302	09.9		36.2	89	24.0	63		48	5 55	27	6 55	19 08	66	29	44		
9	317	09.7		36.5	103	49.4	64		51	47	6 16	43	23 64	9 13	47			
10	332	09.4		36.8	118	14.9	65	+27	51	31	5 58	22	19 49	59	8 47	49		
11	347	09.1	-22	37.1	132	40.5	66	+26	54	10 N	5 16	5 42	6 04	20 11	56	8 23		
12	2	08.9	-22	37.4	147	06.2	67	+26	55	0	4 59	5 25	5 48	20 31	53	8 02		
13	17	08.6		37.6	161	32.0	68		56	10 S	41	5 08	31	20 52	49	7 40		
14	32	08.3		37.9	175	57.9	69		58	20	4 19	4 48	5 13	21 14	46	7 17		
15	47	08.1		38.2	190	23.9	70		60	30	3 51	24	4 51	39 42	6 50	64		
16	62	07.8		38.5	204	50.0	71		61	35	33	4 10	39	21 54	39	34 66		
17	77	07.5	-22	38.7	219	16.3	73	+26	62	40	3 11	3 52	4 25	22 11	37	6 15		
18	92	07.3	-22	39.0	233	42.6	73	+26	64	45	2 42	3 31	4 07	22 31	33	5 52		
19	107	07.0		39.3	248	09.1	75		65	50	2 00	3 02	3 46	22 57	28	23 76		
20	122	06.7		39.6	262	35.7	76	+26	67	52	1 36	2 48	36	23 10	24	5 08		
21	137	06.5		39.8	277	02.4	77	+25	68	54	1 00	32	24	24 21	4 51	82		
22	152	06.2		40.1	291	29.2	78		69	56	** ** *	2 11	3 11	23 40	18	31 86		
23	167	05.9		40.4	305	56.1	79		71	58	** ** *	1 45	2 55	** ** *	4 06	92		
24	182	05.6	-22	40.7	320	23.1	80	+25	72	60 S	** ** *	1 07	2 36	0 10	14	3 31		
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO					
	PMG: 18 ^h 54 ^m 4			Mag: -3.9 PMG: 12 ^h 35 ^m			Mag: +1.5 PMG: 10 ^h 51 ^m			Mag: -1.7 PMG: 11 ^h 00 ^m			Mag: +0.4 PMG: 4 ^h 48 ^m					
	hG ♈		Dec	hG ♀		Dec	hG ♂		Dec	hG ♃		Dec	hG ♄		Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	75	37.6	171	26.2	-23	52.4	197	14.1	-20	18.5	194	41.7	-20	01.9	287	53.4		
1	90	40.1	186	25.3		52.6	212	14.7		18.9	209	43.6		02.0	302	55.9		
2	105	42.6	201	24.3		52.9	227	15.4		19.3	224	45.5		02.2	317	58.3		
3	120	45.0	216	23.3		53.1	242	16.0		19.7	239	47.4		02.3	333	00.8		
4	135	47.5	231	22.4		53.3	257	16.6		20.1	254	49.3		02.4	348	03.3		
5	150	50.0	246	21.4	-23	53.5	272	17.3	-20	20.4	269	51.2	-20	02.5	3	05.7		
6	165	52.4	261	20.5	-23	53.7	287	17.9	-20	20.8	284	53.1	-20	02.6	18	08.2		
7	180	54.9	276	19.5		53.9	302	18.5		21.2	299	55.0		02.7	33	10.7		
8	195	57.4	291	18.5		54.2	317	19.1		21.6	314	56.8		02.8	48	13.1		
9	210	59.8	306	17.6		54.4	332	19.8		22.0	329	58.7		02.9	63	15.6		
10	226	02.3	321	16.6		54.6	347	20.4		22.4	345	00.6		03.0	78	18.1		
11	241	04.8	336	15.6	-23	54.8	2	21.0	-20	22.8	0	02.5	-20	03.1	93	20.5		
12	256	07.2	351	14.7	-23	55.0	17	21.7	-20	23.2	15	04.4	-20	03.2	108	23.0		
13	271	09.7	6	13.7		55.2	32	22.3		23.6	30	06.3		03.3	123	25.5		
14	286	12.1	21	12.8		55.4	47	22.9		24.0	45	08.2		03.5	138	27.9		
15	301	14.6	36	11.8		55.6	62	23.5		24.3	60	10.1		03.6	153	30.4		
16	316	17.1	51	10.8		55.8	77	24.2		24.7	75	12.0		03.7	168	32.9		
17	331	19.5	66	09.9	-23	56.0	92	24.8	-20	25.1	90	13.8	-20	03.8	183	35.3		
18	346	22.0	81	08.9	-23	56.2	107	25.4	-20	25.5	105	15.7	-20	03.9	198	37.8		
19	1	24.5	96	07.9		56.4	122	26.0		25.9	120	17.6		04.0	213	40.3		
20	16	26.9	111	07.0		56.6	137	26.7		26.3	135	19.5		04.1	228	42.7		
21	31	29.4	126	06.0		56.8	152	27.3		26.7	150	21.4		04.2	243	45.2		
22	46	31.9	141	05.0		57.0	167	27.9		27.1	165	23.3		04.3	258	47.7		
23	61	34.3	156	04.1		57.2	182	28.5		27.4	180	25.2		04.4	273	50.2		
24	76	36.8	171	03.1	-23	57.4	197	29.2	-20	27.8	195	27.1	-20	04.5	288	52.6		
Dif	—			-10			+6			-4			+19			-1		

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16 ^h 2			Edad: 17 ^d 1 PHE { 4 ^h : 56 ^m 8 12 ^h : 56 ^m 5 20 ^h : 56 ^m 2					Civil			R°		R°	
	PMG: 11 ^h 51 ^m 8			SD: 15 ^h 5	PMG: 2 ^h 44 ^m	R°: 52 ^m									
	hG ☉	Dec		hG ☾	Dif	Dec	Dif					Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m		h m m	
0	182	05.6	-22 40.7	320	23.1	+25 33.4	73	60 N	14 56	15 52	16 48	18 09 98		12 24 3	
1	197	05.4	40.9	334	50.2	26.1	81	58	15 12	16 03	16 55	28 92		12 04 9	
2	212	05.1	41.2	349	17.5	18.6	83	56	26	13	17 01	44 87		11 48 14	
3	227	04.8	41.5	3	44.9	11.0	84	54	38	22	07	18 58 82		33 18	
4	242	04.6	41.7	18	12.4	+25 03.3	85	52	49	29	13	19 09 80		21 21	
5	257	04.3	-22 42.0	32	40.0	+24 55.4	86	50	15 58	16 36	17 18	19 20 76		11 10 24	
6	272	04.0	-22 42.3	47	07.7	+24 47.4	87	45	16 18	16 52	17 29	19 42 71		10 47 29	
7	287	03.7	42.5	61	35.5	39.3	88	40	35	17 05	39	19 59 67		29 33	
8	302	03.5	42.8	76	03.5	31.1	89	35	16 48	16	48	20 14 63		13 36	
9	317	03.2	43.1	90	31.6	22.7	90	30	17 00	26	17 56	27 60		10 00 38	
10	332	02.9	43.3	104	59.8	14.2	91	20	21	17 45	18 12	20 48 56		9 36 44	
11	347	02.6	-22 43.6	119	28.1	+24 05.6	92	10 N	17 39	18 01	18 28	21 07 51		9 16 47	
12	2	02.4	-22 43.8	133	56.5	+23 56.9	93	0	17 56	18 18	18 44	21 24 48		8 57 51	
13	17	02.1	44.1	148	25.1	48.1	94	10 S	18 13	36	19 03	21 41 45		38 54	
14	32	01.8	44.4	162	53.7	39.2	95	20	31	18 55	24	22 00 40		8 18 57	
15	47	01.5	44.6	177	22.5	30.1	96	30	18 52	19 20	19 53	21 35		7 54 62	
16	62	01.3	44.9	191	51.4	21.0	97	35	19 05	34	20 11	33 33		40 65	
17	77	01.0	-22 45.1	206	20.4	+23 11.7	98	40	19 19	19 52	20 33	22 48 29		7 23 69	
18	92	00.7	-22 45.4	220	49.6	+23 02.4	99	45	19 37	20 14	21 02	23 04 25		7 04 72	
19	107	00.4	45.6	235	18.8	+22 52.9	100	50	19 59	42	21 45	25 20		6 39 78	
20	122	00.2	45.9	249	48.2	43.3	101	52	20 09	20 57	22 11	34 18		27 81	
21	136	59.9	46.1	264	17.7	33.6	102	54	21	21 14	22 48	45 15		6 13 84	
22	151	59.6	46.4	278	47.3	23.8	103	56	34	21 34	** **	23 58 10		5 57 89	
23	166	59.3	46.7	293	17.0	14.0	104	58	20 50	22 01	** **	0 00 12		38 94	
24	181	59.1	-22 46.9	307	46.8	+22 04.0	105	60 S	21 09	22 42	** **	0 24 5		5 14 102	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 18 ^h 50 ^m 5		Mag: -3.9 PMG: 12 ^h 37 ^m			Mag: +1.5 PMG: 10 ^h 50 ^m			Mag: -1.7 PMG: 10 ^h 57 ^m			Mag: +0.4 PMG: 4 ^h 44 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°
0	76	36.8	171	03.1	-23 57.4	197	29.2	-20 27.8	195	27.1	-20 04.5	288	52.6	+14 13.5	
1	91	39.3	186	02.2	57.6	212	29.8	28.2	210	29.0	04.6	303	55.1	13.5	
2	106	41.7	201	01.2	57.8	227	30.4	28.6	225	30.9	04.7	318	57.6	13.5	
3	121	44.2	216	00.2	58.0	242	31.0	29.0	240	32.7	04.9	334	00.0	13.5	
4	136	46.6	230	59.3	58.2	257	31.7	29.4	255	34.6	05.0	349	02.5	13.5	
5	151	49.1	245	58.3	-23 58.3	272	32.3	-20 29.7	270	36.5	-20 05.1	4	05.0	+14 13.5	
6	166	51.6	260	57.3	-23 58.5	287	32.9	-20 30.1	285	38.4	-20 05.2	19	07.4	+14 13.5	
7	181	54.0	275	56.4	58.7	302	33.5	30.5	300	40.3	05.3	34	09.9	13.5	
8	196	56.5	290	55.4	58.9	317	34.2	30.9	315	42.2	05.4	49	12.4	13.5	
9	211	59.0	305	54.4	59.1	332	34.8	31.3	330	44.1	05.5	64	14.9	13.6	
10	227	01.4	320	53.5	59.3	347	35.4	31.7	345	46.0	05.6	79	17.3	13.6	
11	242	03.9	335	52.5	-23 59.4	2	36.0	-20 32.0	0	47.9	-20 05.7	94	19.8	+14 13.6	
12	257	06.4	350	51.5	-23 59.6	17	36.6	-20 32.4	15	49.8	-20 05.8	109	22.3	+14 13.6	
13	272	08.8	5	50.6	-23 59.8	32	37.3	32.8	30	51.6	05.9	124	24.7	13.6	
14	287	11.3	20	49.6	-24 00.0	47	37.9	33.2	45	53.5	06.0	139	27.2	13.6	
15	302	13.8	35	48.6	-24 00.1	62	38.5	33.6	60	55.4	06.1	154	29.7	13.6	
16	317	16.2	50	47.7	00.3	77	39.1	34.0	75	57.3	06.2	169	32.2	13.6	
17	332	18.7	65	46.7	-24 00.5	92	39.8	-20 34.3	90	59.2	-20 06.3	184	34.6	+14 13.7	
18	347	21.1	80	45.7	-24 00.6	107	40.4	-20 34.7	106	01.1	-20 06.5	199	37.1	+14 13.7	
19	2	23.6	95	44.8	00.8	122	41.0	35.1	121	03.0	06.6	214	39.6	13.7	
20	17	26.1	110	43.8	01.0	137	41.6	35.5	136	04.9	06.7	229	42.0	13.7	
21	32	28.5	125	42.8	01.1	152	42.2	35.9	151	06.8	06.8	244	44.5	13.7	
22	47	31.0	140	41.9	01.3	167	42.9	36.2	166	08.7	06.9	259	47.0	13.7	
23	62	33.5	155	40.9	01.5	182	43.5	36.6	181	10.5	07.0	274	49.5	13.7	
24	77	35.9	170	39.9	-24 01.6	197	44.1	-20 37.0	196	12.4	-20 07.1	289	51.9	+14 13.7	
Dif	—		-10		-2	+6		-4	+19		-1	+25		0	

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16/2 PMG: 11 ^h 52 ^m 3			Edad: 18 ^d 1 PHE { 4 ^h : 56/0 12 ^h : 55/8 20 ^h : 55/6 PMG: 3 ^h 36 ^m R°: 47 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico		Civil	Hora		R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	181	59.1	-22	46.9	307	46.8	+22	04.0	60 N	6 57	7 53	8 49	19 47	91	12 27	1	
1	196	58.8		47.2	322	16.8 ¹¹⁰	+21	53.9 ¹⁰¹	58	49	42	32	20 00	86	13	6	
2	211	58.5		47.4	336	46.8 ¹¹⁰		43.8 ¹⁰¹	56	43	32	18	11 82	12 02	9		
3	226	58.2		47.7	351	17.0 ¹¹²		33.5 ¹⁰³	54	37	23	8 06	20 79	11 51	15		
4	241	58.0		47.9	5	47.3 ¹¹³		23.1 ¹⁰⁴	52	32	15	7 56	29 76	42	15		
5	256	57.7	-22	48.1	20	17.7 ¹¹⁴	+21	12.7 ¹⁰⁴	50	6 27	7 08	7 46	20 36	74	11 34	17	
6	271	57.4	-22	48.4	34	48.2 ¹¹⁵	+21	02.2 ¹⁰⁵	45	6 15	6 53	7 26	20 53	68	11 16	23	
7	286	57.1		48.6	49	18.9 ¹¹⁷	+20	51.5 ¹⁰⁷	40	6 06	39	7 10	21 06	64	11 02	26	
8	301	56.9		48.9	63	49.6 ¹¹⁷		40.8 ¹⁰⁷	35	5 57	28	6 56	17 61	10 49	30		
9	316	56.6		49.1	78	20.4 ¹¹⁸		30.0 ¹⁰⁸	30	48	18	44	27 58	38	33		
10	331	56.3		49.4	92	51.4 ¹²⁰		19.2 ¹⁰⁸	20	32	6 00	24	44 52	20	37		
11	346	56.0	-22	49.6	107	22.5 ¹²¹	+20	08.2 ¹¹⁰	10 N	5 17	5 43	6 06	21 58	48	10 03	42	
12	1	55.7	-22	49.9	121	53.6 ¹²¹	+19	57.2 ¹¹⁰	0	5 00	5 26	5 49	22 12	44	9 48	46	
13	16	55.5		50.1	136	24.9 ¹²³		46.1 ¹¹¹	10 S	4 42	5 09	31	26 39	32	50		
14	31	55.2		50.3	150	56.3 ¹²⁴		34.9 ¹¹²	20	4 20	4 49	5 13	40 35	9 15	55		
15	46	54.9		50.6	165	27.8 ¹²⁵		23.6 ¹¹³	30	3 51	24	4 52	22 56	31	8 56	59	
16	61	54.6		50.8	179	59.4 ¹²⁶		12.3 ¹¹³	35	33	4 10	39	23 06	27	45	62	
17	76	54.3	-22	51.1	194	31.1 ¹²⁷	+19	00.8 ¹¹⁵	40	3 11	3 52	4 24	23 17	24	8 32	65	
18	91	54.1	-22	51.3	209	02.9 ¹²⁸	+18	49.4 ¹¹⁴	45	2 41	3 30	4 07	23 29	21	8 16	70	
19	106	53.8		51.5	223	34.8 ¹²⁹		37.8 ¹¹⁶	50	1 59	3 02	3 45	45 15	7 57	75		
20	121	53.5		51.8	238	06.8 ¹³⁰		26.2 ¹¹⁶	52	1 33	2 47	35	23 52	13	48	78	
21	136	53.2		52.0	252	38.9 ¹³¹		14.5 ¹¹⁷	54	0 56	30	23	** ** *	**	37	82	
22	151	52.9		52.2	267	11.2 ¹³³	+18	02.7 ¹¹⁸	56	** ** *	2 09	3 10	** ** *	**	26	85	
23	166	52.7		52.5	281	43.5 ¹³³	+17	50.9 ¹¹⁸	58	** ** *	1 42	2 54	0 12	6	7 12	89	
24	181	52.4	-22	52.7	296	15.9 ¹³⁴	+17	39.0 ¹¹⁹	60 S	** ** *	1 02	2 34	0 29	1	6 56	95	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 18 ^h 46 ^m 5		Mag: -3.9 PMG: 12 ^h 38 ^m		Mag: +1.5 PMG: 10 ^h 49 ^m		Mag: -1.7 PMG: 10 ^h 54 ^m		Mag: +0.4 PMG: 4 ^h 40 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	77	35.9	170	39.9	-24	01.6	197	44.1	-20	37.0
1	92	38.4	185	39.0		01.8	212	44.7		37.4
2	107	40.9	200	38.0		02.0	227	45.3		37.7
3	122	43.3	215	37.0		02.1	242	45.9		38.1
4	137	45.8	230	36.0		02.3	257	46.6		38.5
5	152	48.2	245	35.1	-24	02.4	272	47.2	-20	38.9
6	167	50.7	260	34.1	-24	02.6	287	47.8	-20	39.3
7	182	53.2	275	33.1		02.7	302	48.4		39.6
8	197	55.6	290	32.2		02.9	317	49.0		40.0
9	212	58.1	305	31.2		03.0	332	49.6		40.4
10	228	00.6	320	30.2		03.2	347	50.3		40.8
11	243	03.0	335	29.3	-24	03.3	2	50.9	-20	41.1
12	258	05.5	350	28.3	-24	03.5	17	51.5	-20	41.5
13	273	08.0	5	27.3		03.6	32	52.1		41.9
14	288	10.4	20	26.4		03.8	47	52.7		42.3
15	303	12.9	35	25.4		03.9	62	53.3		42.6
16	318	15.4	50	24.4		04.0	77	54.0		43.0
17	333	17.8	65	23.4	-24	04.2	92	54.6	-20	43.4
18	348	20.3	80	22.5	-24	04.3	107	55.2	-20	43.7
19	3	22.7	95	21.5		04.5	122	55.8		44.1
20	18	25.2	110	20.5		04.6	137	56.4		44.5
21	33	27.7	125	19.6		04.7	152	57.0		44.9
22	48	30.1	140	18.6		04.9	167	57.6		45.2
23	63	32.6	155	17.6		05.0	182	58.3		45.6
24	78	35.1	170	16.6	-24	05.1	197	58.9	-20	46.0
Dif	—		-10		-1		+6		-4	
							+19		-1	
									+25	

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16:2 PMG: 11 ^h 52 ^m 7			Edad: 19 ^d 1 PHE { SD: 15:1 PMG: 4 ^h 23 ^m R°: 43 ^m 4 ^h : 55/3 12 ^h : 55/2 20 ^h : 55/0										
	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	52.4	-22 52.7	296	15.9	+17 39.0	60 N	14 55	15 51	16 47	21 18 85	12 28	**	
1	196	52.1	52.9	310	48.4 ¹³⁵	27.0 ¹²⁰	58	15 11	16 02	16 55	26 81	19	3	
2	211	51.8	53.2	325	21.0 ¹³⁶	15.0 ¹²⁰	56	26	12	17 01	33 78	11	6	
3	226	51.5	53.4	339	53.7 ¹³⁷	+17 02.9 ¹²¹	54	38	21	07	39 75	12	04 9	
4	241	51.3	53.6	354	26.5 ¹³⁸	+16 50.7 ¹²²	52	49	29	12	45 72	11 57	12	
5	256	51.0	-22 53.9	8	59.3 ¹³⁸	+16 38.5 ¹²²	50	15 58	16 36	17 18	21 50 70	11 51	14	
6	271	50.7	-22 54.1	23	32.3 ¹⁴⁰	+16 26.3 ¹²²	45	16 18	16 52	17 29	22 01 65	11 39	18	
7	286	50.4	54.3	38	05.4 ¹⁴¹	13.9 ¹²⁴	40	35	17 05	39	10 61	28	23	
8	301	50.1	54.5	52	38.5 ¹⁴¹	+16 01.6 ¹²³	35	16 48	17	48	18 58	19	26	
9	316	49.9	54.8	67	11.8 ¹⁴³	+15 49.1 ¹²⁵	30	17 01	27	17 57	25 54	11 11	29	
10	331	49.6	55.0	81	45.1 ¹⁴³	36.6 ¹²⁵	20	21	17 45	18 13	36 50	10 57	34	
11	346	49.3	-22 55.2	96	18.5 ¹⁴⁴	+15 24.1 ¹²⁵	10 N	17 39	18 02	18 28	22 46 45	10 45	38	
12	1	49.0	-22 55.4	110	52.0 ¹⁴⁵	+15 11.5 ¹²⁶	0	17 56	18 19	18 45	22 56 41	10 34	42	
13	16	48.7	55.7	125	25.6 ¹⁴⁶	+14 58.9 ¹²⁶	10 S	18 14	37	19 04	23 05 37	22	46	
14	31	48.4	55.9	139	59.2 ¹⁴⁶	46.2 ¹²⁷	20	32	18 57	26	15 33	10	50	
15	46	48.2	56.1	154	33.0 ¹⁴⁸	33.4 ¹²⁸	30	18 54	19 21	19 54	27 27	9 55	56	
16	61	47.9	56.3	169	06.8 ¹⁴⁸	20.7 ¹²⁷	35	19 07	36	20 13	33 25	47	59	
17	76	47.6	-22 56.5	183	40.7 ¹⁴⁹	+14 07.8 ¹²⁹	40	19 21	19 54	20 35	23 41 21	9 37	63	
18	91	47.3	-22 56.8	198	14.7 ¹⁵⁰	+13 54.9 ¹²⁹	45	19 39	20 16	21 05	23 50 17	9 26	67	
19	106	47.0	57.0	212	48.7 ¹⁵⁰	42.0 ¹²⁹	50	20 01	45	21 48	** ** *	12	72	
20	121	46.7	57.2	227	22.9 ¹⁵²	29.1 ¹²⁹	52	11	20 59	22 14	** ** *	9 06	74	
21	136	46.4	57.4	241	57.1 ¹⁵²	16.0 ¹³¹	54	23	21 17	22 54	0 00 10	8 59	77	
22	151	46.2	57.6	256	31.4 ¹⁵³	+13 03.0 ¹³⁰	56	37	21 38	** ** *	08 8	51	80	
23	166	45.9	57.8	271	05.7 ¹⁵³	+12 49.9 ¹³¹	58	20 53	22 06	** ** *	18 4	41	84	
24	181	45.6	-22 58.1	285	40.1 ¹⁵⁴	+12 36.8 ¹³¹	60 S	21 13	22 49	** ** *	0 30 **	8 31	88	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 18 ^h 42 ^m 6		Mag: -3.9 PMG: 12 ^h 40 ^m			Mag: +1.5 PMG: 10 ^h 48 ^m			Mag: -1.7 PMG: 10 ^h 51 ^m			Mag: +0.4 PMG: 4 ^h 36 ^m		
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'		
0	78	35.1	170	16.6	-24 05.1	197 58.9	-20 46.0	196 57.8	-20 09.6	290 51.4	+14 14.1			
1	93	37.5	185	15.7	05.3	212 59.5	46.3	211 59.7	09.7	305 53.9	14.1			
2	108	40.0	200	14.7	05.4	228 00.1	46.7	227 01.6	09.8	320 56.3	14.1			
3	123	42.5	215	13.7	05.5	243 00.7	47.1	242 03.5	10.0	335 58.8	14.1			
4	138	44.9	230	12.8	05.6	258 01.3	47.5	257 05.4	10.1	351 01.3	14.1			
5	153	47.4	245	11.8	-24 05.8	273 01.9	-20 47.8	272 07.3	-20 10.2	6 03.8	+14 14.1			
6	168	49.9	260	10.8	-24 05.9	288 02.6	-20 48.2	287 09.1	-20 10.3	21 06.2	+14 14.1			
7	183	52.3	275	09.8	06.0	303 03.2	48.6	302 11.0	10.4	36 08.7	14.2			
8	198	54.8	290	08.9	06.1	318 03.8	48.9	317 12.9	10.5	51 11.2	14.2			
9	213	57.2	305	07.9	06.3	333 04.4	49.3	332 14.8	10.6	66 13.7	14.2			
10	228	59.7	320	06.9	06.4	348 05.0	49.7	347 16.7	10.7	81 16.2	14.2			
11	244	02.2	335	06.0	-24 06.5	3 05.6	-20 50.0	2 18.6	-20 10.8	96 18.7	+14 14.2			
12	259	04.6	350	05.0	-24 06.6	18 06.2	-20 50.4	17 20.5	-20 10.9	111 21.1	+14 14.2			
13	274	07.1	5 04.0	06.7	33 06.8	50.8	32 22.4	11.0	126 23.6	14.3				
14	289	09.6	20 03.0	06.8	48 07.4	51.1	47 24.3	11.1	141 26.1	14.3				
15	304	12.0	35 02.1	06.9	63 08.0	51.5	62 26.2	11.2	156 28.6	14.3				
16	319	14.5	50 01.1	07.1	78 08.7	51.9	77 28.1	11.3	171 31.1	14.3				
17	334	17.0	65 00.1	-24 07.2	93 09.3	-20 52.2	92 29.9	-20 11.4	186 33.5	+14 14.3				
18	349	19.4	79 59.1	-24 07.3	108 09.9	-20 52.6	107 31.8	-20 11.5	201 36.0	+14 14.3				
19	4	21.9	94 58.2	07.4	123 10.5	53.0	122 33.7	11.6	216 38.5	14.3				
20	19	24.4	109 57.2	07.5	138 11.1	53.3	137 35.6	11.7	231 41.0	14.4				
21	34	26.8	124 56.2	07.6	153 11.7	53.7	152 37.5	11.8	246 43.5	14.4				
22	49	29.3	139 55.2	07.7	168 12.3	54.1	167 39.4	11.9	261 45.9	14.4				
23	64	31.7	154 54.3	07.8	183 12.9	54.4	182 41.3	12.1	276 48.4	14.4				
24	79	34.2	169 53.3	-24 07.9	198 13.5	-20 54.8	197 43.2	-20 12.2	291 50.9	+14 14.4				
Dif	—		-10		-1	+6		-4	+19		-1	+25		0

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna				
	SD: 16'2 PMG: 11 ^h 53 ^m 2			Edad: 20 ^d 1 PHE { 4 ^h : 54'8 12 ^h : 54'7 20 ^h : 54'6 SD: 15'0 PMG: 5 ^h 06 ^m R°: 40 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	m
0	181	45.6	-22	58.1	285	40.1	+12	36.8	60 N	6 59	7 55	8 52	22 43	82	12 27	**	
1	196	45.3		58.3	300	14.6		23.6	58	52	44	35	47	79	22	2	
2	211	45.0		58.5	314	49.2	+12	10.4	56	45	34	21	51	76	17	5	
3	226	44.7		58.7	329	23.8	+11	57.2	54	39	25	8 09	54	73	13		
4	241	44.4		58.9	343	58.5		43.9	52	34	17	7 58	22 57	71	09	9	
5	256	44.2	-22	59.1	358	33.3	+11	30.6	50	6 29	7 10	7 48	23 00	68	12 05	12	
6	271	43.9	-22	59.3	13	08.1	+11	17.2	45	6 17	6 54	7 28	23 06	64	11 57	17	
7	286	43.6		59.5	27	43.0	+11	03.9	40	6 07	41	7 11	11	60	51	20	
8	301	43.3		59.7	42	18.0	+10	50.4	35	5 58	30	6 58	16	56	45	23	
9	316	43.0	-22	59.9	56	53.0		37.0	30	49	19	46	19	53	40	26	
10	331	42.7	-23	00.1	71	28.0		23.5	20	33	6 01	25	26	48	31	31	
11	346	42.4	-23	00.4	86	03.2	+10	10.0	10 N	5 18	5 44	6 07	23 31	44	11 23	36	
12	1	42.2	-23	00.6	100	38.4	+9	56.5	0	5 01	5 27	5 49	23 37	39	11 16	40	
13	16	41.9		00.8	115	13.6		42.9	10 S	4 42	5 09	32	42	35	08	45	
14	31	41.6		01.0	129	48.9		29.4	20	4 20	4 49	5 14	48	30	11 00	49	
15	46	41.3		01.2	144	24.2		15.7	30	3 52	25	4 52	54	26	10 51	54	
16	61	41.0		01.4	158	59.6	+9	02.1	35	33	4 10	39	23 58	22	46	57	
17	76	40.7	-23	01.6	173	35.1	+8	48.4	40	3 11	3 52	4 25	** * *	**	10 40	60	
18	91	40.4	-23	01.8	188	10.6	+8	34.7	45	2 41	3 30	4 07	** * *	**	10 33	64	
19	106	40.1		02.0	202	46.1		21.0	50	1 57	3 01	3 45	0 00	12	24	69	
20	121	39.8		02.2	217	21.7	+8	07.3	52	1 31	2 46	34	05	10	20	72	
21	136	39.6		02.4	231	57.3	+7	53.5	54	0 51	29	23	10	8	16	74	
22	151	39.3		02.6	246	33.0		39.8	56	** * *	2 08	3 09	16	5	11	77	
23	166	39.0		02.8	261	08.7		26.0	58	** * *	1 40	2 53	22	2	10 05	80	
24	181	38.7	-23	02.9	275	44.5	+7	12.2	60 S	** * *	0 57	2 33	0 29	**	9 59	84	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 18 ^h 38 ^m 7		Mag: -3.9 PMG: 12 ^h 41 ^m		Mag: +1.5 PMG: 10 ^h 47 ^m		Mag: -1.7 PMG: 10 ^h 48 ^m		Mag: +0.4 PMG: 4 ^h 32 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	79	34.2	169	53.3	-24	07.9	198	13.5	-20	54.8	197	43.2	-20	12.2	291	50.9	+14	14.4
1	94	36.7	184	52.3		08.0	213	14.1		55.1	212	45.1		12.3	306	53.4		14.4
2	109	39.1	199	51.4		08.1	228	14.7		55.5	227	47.0		12.4	321	55.9		14.5
3	124	41.6	214	50.4		08.2	243	15.3		55.9	242	48.9		12.5	336	58.4		14.5
4	139	44.1	229	49.4		08.3	258	16.0		56.2	257	50.8		12.6	352	00.8		14.5
5	154	46.5	244	48.4	-24	08.4	273	16.6	-20	56.6	272	52.6	-20	12.7	7	03.3	+14	14.5
6	169	49.0	259	47.5	-24	08.5	288	17.2	-20	57.0	287	54.5	-20	12.8	22	05.8	+14	14.5
7	184	51.5	274	46.5		08.6	303	17.8		57.3	302	56.4		12.9	37	08.3		14.5
8	199	53.9	289	45.5		08.6	318	18.4		57.7	317	58.3		13.0	52	10.8		14.6
9	214	56.4	304	44.5		08.7	333	19.0		58.0	333	00.2		13.1	67	13.3		14.6
10	229	58.8	319	43.6		08.8	348	19.6		58.4	348	02.1		13.2	82	15.8		14.6
11	245	01.3	334	42.6	-24	08.9	3	20.2	-20	58.8	3	04.0	-20	13.3	97	18.2	+14	14.6
12	260	03.8	349	41.6	-24	09.0	18	20.8	-20	59.1	18	05.9	-20	13.4	112	20.7	+14	14.6
13	275	06.2	4	40.6		09.1	33	21.4		59.5	33	07.8		13.5	127	23.2		14.6
14	290	08.7	19	39.7		09.2	48	22.0	-20	59.8	48	09.7		13.6	142	25.7		14.7
15	305	11.2	34	38.7		09.2	63	22.6	-21	00.2	63	11.6		13.7	157	28.2		14.7
16	320	13.6	49	37.7		09.3	78	23.2		00.6	78	13.5		13.8	172	30.7		14.7
17	335	16.1	64	36.7	-24	09.4	93	23.8	-21	00.9	93	15.3	-20	13.9	187	33.2	+14	14.7
18	350	18.6	79	35.8	-24	09.5	108	24.4	-21	01.3	108	17.2	-20	14.0	202	35.6	+14	14.7
19	5	21.0	94	34.8		09.5	123	25.0		01.6	123	19.1		14.1	217	38.1		14.7
20	20	23.5	109	33.8		09.6	138	25.6		02.0	138	21.0		14.2	232	40.6		14.8
21	35	26.0	124	32.8		09.7	153	26.2		02.3	153	22.9		14.3	247	43.1		14.8
22	50	28.4	139	31.9		09.8	168	26.8		02.7	168	24.8		14.4	262	45.6		14.8
23	65	30.9	154	30.9		09.8	183	27.4		03.1	183	26.7		14.6	277	48.1		14.8
24	80	33.3	169	29.9	-24	09.9	198	28.0	-21	03.4	198	28.6	-20	14.7	292	50.6	+14	14.8
Dif	—		-10		-1		+6		-4		+19		-1		+25		0	

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16'2			Edad: 21 ^d 1 PHE { 4 ^h : 54'5 12 ^h : 54'4 20 ^h : 54'3										
	PMG: 11 ^h 53 ^m 7			SD: 14'8 PMG: 5 ^h 46 ^m R°: 39 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m
0	181	38.7	-23 02.9	275	44.5	+7 12.2		60 N	14 54	15 51	16 47	** ** *	12 26	**
1	196	38.4	03.1	290	20.3 ¹⁶⁸	+6 58.3 ¹³⁹		58	15 11	16 02	16 54	** ** *	24 2	
2	211	38.1	03.3	304	56.2 ¹⁶⁹	44.5 ¹³⁸		56	25	12	17 01	** ** *	22 4	
3	226	37.8	03.5	319	32.0 ¹⁶⁸	30.6 ¹³⁹		54	37	21	07	** ** *	20	
4	241	37.5	03.7	334	08.0 ¹⁷⁰	16.7 ¹³⁹		52	48	29	13	** ** *	18 9	
5	256	37.2	-23 03.9	348	43.9 ¹⁶⁹	+6 02.8 ¹³⁹		50	15 58	16 36	17 18	** ** *	12 17	11
6	271	37.0	-23 04.1	3	19.9 ¹⁷⁰	+5 48.9 ¹³⁹		45	16 18	16 52	17 29	** ** *	12 14	15
7	286	36.7	04.3	17	55.9 ¹⁷⁰	34.9 ¹⁴⁰		40	35	17 05	39	** ** *	11 19	
8	301	36.4	04.5	32	32.0 ¹⁷¹	21.0 ¹³⁹		35	16 49	17	49	** ** *	08 23	
9	316	36.1	04.7	47	08.1 ¹⁷¹	+5 07.0 ¹⁴⁰		30	17 01	27	17 57	** ** *	06 25	
10	331	35.8	04.9	61	44.2 ¹⁷¹	+4 53.1 ¹³⁹		20	22	17 46	18 13	** ** *	12 02	31
11	346	35.5	-23 05.0	76	20.3 ¹⁷¹	+4 39.1 ¹⁴⁰		10 N	17 40	18 03	18 29	** ** *	11 59	35
12	1	35.2	-23 05.2	90	56.5 ¹⁷²	+4 25.1 ¹⁴⁰		0	17 57	18 20	18 46	** ** *	11 56	39
13	16	34.9	05.4	105	32.7 ¹⁷²	+4 11.1 ¹⁴⁰		10 S	18 15	38	19 05	** ** *	53 43	
14	31	34.6	05.6	120	08.9 ¹⁷²	+3 57.1 ¹⁴⁰		20	33	18 58	27	** ** *	49 48	
15	46	34.3	05.8	134	45.2 ¹⁷³	43.0 ¹⁴¹		30	18 55	19 23	19 56	** ** *	45 53	
16	61	34.0	06.0	149	21.4 ¹⁷²	29.0 ¹⁴⁰		35	19 08	38	20 14	** ** *	43 55	
17	76	33.7	-23 06.1	163	57.7 ¹⁷³	+3 14.9 ¹⁴¹		40	19 23	19 56	20 37	0 02 19	11 40	59
18	91	33.5	-23 06.3	178	34.0 ¹⁷³	+3 00.9 ¹⁴⁰		45	19 41	20 18	21 07	0 07 15	11 37	63
19	106	33.2	06.5	193	10.4 ¹⁷⁴	+2 46.8 ¹⁴¹		50	20 03	20 47	21 51	12 12	33 68	
20	121	32.9	06.7	207	46.7 ¹⁷³	32.8 ¹⁴⁰		52	13	21 02	22 18	15 9	32 70	
21	136	32.6	06.9	222	23.1 ¹⁷⁴	18.7 ¹⁴¹		54	25	19	23 00	18 7	30 72	
22	151	32.3	07.0	236	59.4 ¹⁷³	+2 04.6 ¹⁴¹		56	39	21 41	** ** *	21 4	28 75	
23	166	32.0	07.2	251	35.8 ¹⁷⁴	+1 50.6 ¹⁴⁰		58	20 56	22 09	** ** *	24 2	25 78	
24	181	31.7	-23 07.4	266	12.2 ¹⁷⁴	+1 36.5 ¹⁴¹		60 S	21 16	22 55	** ** *	0 28 **	11 23	81
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 18 ^h 34 ^m 7		Mag: -3.9 PMG: 12 ^h 43 ^m		Mag: +1.5 PMG: 10 ^h 46 ^m		Mag: -1.7 PMG: 10 ^h 45 ^m		Mag: +0.4 PMG: 4 ^h 28 ^m					
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	80	33.3	169	29.9	198	28.0	198	28.6	292	50.6				
1	95	35.8	184	28.9	213	28.6	213	30.5	307	53.1				
2	110	38.3	199	28.0	228	29.2	228	32.4	322	55.5				
3	125	40.7	214	27.0	243	29.9	243	34.3	337	58.0				
4	140	43.2	229	26.0	258	30.5	258	36.2	353	00.5				
5	155	45.7	244	25.0	273	31.1	273	38.1	8	03.0				
6	170	48.1	259	24.1	288	31.7	288	39.9	23	05.5				
7	185	50.6	274	23.1	303	32.3	303	41.8	38	08.0				
8	200	53.1	289	22.1	318	32.9	318	43.7	53	10.5				
9	215	55.5	304	21.1	333	33.5	333	45.6	68	13.0				
10	230	58.0	319	20.1	348	34.1	348	47.5	83	15.5				
11	246	00.5	334	19.2	3	34.7	3	49.4	98	17.9				
12	261	02.9	349	18.2	18	35.3	18	51.3	113	20.4				
13	276	05.4	4	17.2	33	35.9	33	53.2	128	22.9				
14	291	07.8	19	16.2	48	36.5	48	55.1	143	25.4				
15	306	10.3	34	15.3	63	37.1	63	57.0	158	27.9				
16	321	12.8	49	14.3	78	37.7	78	58.9	173	30.4				
17	336	15.2	64	13.3	93	38.2	94	00.8	188	32.9				
18	351	17.7	79	12.3	108	38.8	109	02.7	203	35.4				
19	6	20.2	94	11.4	123	39.4	124	04.5	218	37.9				
20	21	22.6	109	10.4	138	40.0	139	06.4	233	40.4				
21	36	25.1	124	09.4	153	40.6	154	08.3	248	42.8				
22	51	27.6	139	08.4	168	41.2	169	10.2	263	45.3				
23	66	30.0	154	07.5	183	41.8	184	12.1	278	47.8				
24	81	32.5	169	06.5	198	42.4	199	14.0	293	50.3				
Dif	—		-10	-1	+6	-4	+19	-1	+25	0				

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'2			Edad: 22 ^d 1 PHE { 4 ^h : 54'3 12 ^h : 54'2 20 ^h : 54'2	SD: 14'8			R°: 39 ^m							
	PMG: 11 ^h 54 ^m 1				PMG: 6 ^h 25 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	
0	181	31.7	-23	07.4	266	12.2	+1	36.5	60 N	7 01	7 58	8 55	0 05	81	
1	196	31.4		07.6	280	48.6 ¹⁷⁴		22.4 ¹⁴¹	58	6 54	46	38	06	78	
2	211	31.1		07.7	295	25.0 ¹⁷⁴	+1	08.3 ¹⁴¹	56	47	36	23	07	74	
3	226	30.8		07.9	310	01.5 ¹⁷⁵	+0	54.2 ¹⁴¹	54	41	27	11	07	73	
4	241	30.5		08.1	324	37.9 ¹⁷⁴		40.1 ¹⁴¹	52	35	19	8 00	08	70	
5	256	30.2	-23	08.3	339	14.4 ¹⁷⁵	+0	26.1 ¹⁴⁰	50	6 30	7 12	7 50	0 08	68	
6	271	29.9	-23	08.4	353	50.8 ¹⁷⁴	+0	12.0 ¹⁴¹	45	6 19	6 56	7 30	0 10	63	
7	286	29.6		08.6	8	27.3 ¹⁷⁵	-0	02.1 ¹⁴¹	40	6 09	43	7 13	11	59	
8	301	29.3		08.8	23	03.7 ¹⁷⁴		16.2 ¹⁴¹	35	5 59	31	6 59	12	55	
9	316	29.0		08.9	37	40.2 ¹⁷⁵		30.3 ¹⁴¹	30	51	21	47	12	53	
10	331	28.8		09.1	52	16.6 ¹⁷⁴		44.4 ¹⁴¹	20	34	6 02	26	14	47	
11	346	28.5	-23	09.3	66	53.1 ¹⁷⁵	-0	58.4 ¹⁴⁰	10 N	5 19	5 45	6 08	0 15	43	
12	1	28.2	-23	09.4	81	29.5 ¹⁷⁴	-1	12.5 ¹⁴¹	0	5 02	5 28	5 50	0 16	39	
13	16	27.9		09.6	96	06.0 ¹⁷⁵		26.6 ¹⁴¹	10 S	4 43	5 10	33	17	35	
14	31	27.6		09.8	110	42.4 ¹⁷⁴		40.6 ¹⁴⁰	20	4 21	4 50	5 14	18	30	
15	46	27.3		09.9	125	18.9 ¹⁷⁵	-1	54.7 ¹⁴¹	30	3 52	25	4 53	20	25	
16	61	27.0		10.1	139	55.3 ¹⁷⁴	-2	08.7 ¹⁴⁰	35	34	4 10	40	20	23	
17	76	26.7	-23	10.3	154	31.7 ¹⁷⁴	-2	22.8 ¹⁴¹	40	3 11	3 52	4 25	0 21	19	
18	91	26.4	-23	10.4	169	08.1 ¹⁷⁴	-2	36.8 ¹⁴⁰	45	2 41	3 30	4 07	0 22	16	
19	106	26.1		10.6	183	44.6 ¹⁷⁵	-2	50.8 ¹⁴⁰	50	1 56	3 01	3 45	24	11	
20	121	25.8		10.7	198	20.9 ¹⁷³	-3	04.8 ¹⁴⁰	52	1 30	2 46	34	24	9	
21	136	25.5		10.9	212	57.3 ¹⁷⁴		18.8 ¹⁴⁰	54	0 48	28	22	25	7	
22	151	25.2		11.1	227	33.7 ¹⁷⁴		32.8 ¹⁴⁰	56	** ** *	2 07	3 08	25	5	
23	166	24.9		11.2	242	10.0 ¹⁷³	-3	46.8 ¹⁴⁰	58	** ** *	1 38	2 52	26	2	
24	181	24.6	-23	11.4	256	46.4 ¹⁷⁴	-4	00.8 ¹⁴⁰	60 S	** ** *	0 53	2 32	0 27	**	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 18 ^h 30 ^m 8		Mag: -3.9 PMG: 12 ^h 44 ^m		Mag: +1.5 PMG: 10 ^h 45 ^m		Mag: -1.8 PMG: 10 ^h 42 ^m		Mag: +0.4 PMG: 4 ^h 24 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	81	32.5	169	06.5	-24	11.2	198	42.4	-21	11.9
1	96	34.9	184	05.5		11.2	213	43.0		12.2
2	111	37.4	199	04.5		11.2	228	43.6		12.6
3	126	39.9	214	03.5		11.3	243	44.2		12.9
4	141	42.3	229	02.6		11.3	258	44.8		13.2
5	156	44.8	244	01.6	-24	11.3	273	45.4	-21	13.6
6	171	47.3	259	00.6	-24	11.4	288	46.0	-21	13.9
7	186	49.7	273	59.6		11.4	303	46.6		14.3
8	201	52.2	288	58.7		11.4	318	47.2		14.6
9	216	54.7	303	57.7		11.5	333	47.8		15.0
10	231	57.1	318	56.7		11.5	348	48.4		15.3
11	246	59.6	333	55.7	-24	11.5	3	49.0	-21	15.7
12	262	02.1	348	54.8	-24	11.5	18	49.6	-21	16.0
13	277	04.5	3	53.8		11.5	33	50.2		16.4
14	292	07.0	18	52.8		11.6	48	50.8		16.7
15	307	09.4	33	51.8		11.6	63	51.4		17.0
16	322	11.9	48	50.8		11.6	78	51.9		17.4
17	337	14.4	63	49.9	-24	11.6	93	52.5	-21	17.7
18	352	16.8	78	48.9	-24	11.6	108	53.1	-21	18.1
19	7	19.3	93	47.9		11.6	123	53.7		18.4
20	22	21.8	108	46.9		11.7	138	54.3		18.7
21	37	24.2	123	46.0		11.7	153	54.9		19.1
22	52	26.7	138	45.0		11.7	168	55.5		19.4
23	67	29.2	153	44.0		11.7	183	56.1		19.8
24	82	31.6	168	43.0	-24	11.7	198	56.7	-21	20.1
Dif	—		-10		0		+6		-3	

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna										
	SD: 16'2			Edad: 23 ^d 1	PHE {	4 ^h : 54'2 12 ^h : 54'3 20 ^h : 54'3			Final del crepúsculo			Salida de Luna		Puesta de Luna										
	PMG: 11 ^h 54 ^m 6								Final del crepúsculo			Salida de Luna		Puesta de Luna										
	hG ☉	Dec							hG ☾	Dif	Dec	Dif	Civil	Náutico	Hora	Rº	Hora	Rº						
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	h	m	h	m				
0	181	24.6	-23	11.4	256	46.4	-4	00.8	60 N	14	53	15	50	16	47	1	26	83	12	24	**			
1	196	24.3		11.5	271	22.7 ¹⁷³		14.7 ¹³⁹	58	15	10	16	02	16	54	24	79	27	3					
2	211	24.0		11.7	285	59.0 ¹⁷³		28.7 ¹⁴⁰	56	25		12	17	01	21	77	31	5						
3	226	23.7		11.8	300	35.3 ¹⁷³		42.6 ¹³⁹	54	37		21	07	20	73	34	8							
4	241	23.4		12.0	315	11.5 ¹⁷²		-4 56.5 ¹³⁹	52	48		29	13	18	71	37	10							
5	256	23.1	-23	12.1	329	47.8 ¹⁷³		-5 10.4 ¹³⁹	50	15	58	16	37	17	18	1	16	69	12	39	12			
6	271	22.8	-23	12.3	344	24.0 ¹⁷²		-5 24.3 ¹³⁹	45	16	19	16	52	17	30	1	13	63	12	45	16			
7	286	22.5		12.4	359	00.2 ¹⁷²		38.2 ¹³⁹	40	35		17	06	40	10	59	49	21						
8	301	22.2		12.6	13	36.3 ¹⁷¹		-5 52.0 ¹³⁸	35	16	49	17	49	07	56	53	24							
9	316	21.9		12.7	28	12.5 ¹⁷²		-6 05.9 ¹³⁹	30	17	02	28	17	58	05	53	12	57	27					
10	331	21.6		12.9	42	48.6 ¹⁷¹		19.7 ¹³⁸	20	23		17	47	18	14	1	01	48	13	03	32			
11	346	21.3	-23	13.0	57	24.6 ¹⁷⁰		-6 33.5 ¹³⁸	10 N	17	41	18	04	18	30	0	58	43	13	08	37			
12	1	21.0	-23	13.2	72	00.7 ¹⁷¹		-6 47.3 ¹³⁸	0	17	58	18	21	18	47	0	55	39	13	14	40			
13	16	20.7		13.3	86	36.7 ¹⁷⁰		-7 01.0 ¹³⁷	10 S	18	16	39		19	06	52	35	19	44					
14	31	20.4		13.5	101	12.7 ¹⁷⁰		14.7 ¹³⁷	20	35		18	59	28	48	31	24	49						
15	46	20.1		13.6	115	48.6 ¹⁶⁹		28.5 ¹³⁸	30	18	56	19	24	19	57	45	26	31	54					
16	61	19.8		13.8	130	24.5 ¹⁶⁹		42.1 ¹³⁶	35	19	09	39	20	16	43	23	34	57						
17	76	19.5	-23	13.9	145	00.4 ¹⁶⁹		-7 55.8 ¹³⁷	40	19	24	19	57	20	39	0	40	20	13	38	61			
18	91	19.2	-23	14.1	159	36.2 ¹⁶⁸		-8 09.5 ¹³⁷	45	19	42	20	19	21	09	0	38	16	13	43	65			
19	106	18.9		14.2	174	12.0 ¹⁶⁸		23.1 ¹³⁶	50	20	05	20	49	21	54	35	11	49	69					
20	121	18.6		14.3	188	47.8 ¹⁶⁸		36.7 ¹³⁶	52	15		21	04	22	21	33	10	52	71					
21	136	18.3		14.5	203	23.5 ¹⁶⁷		-8 50.2 ¹³⁵	54	27		22	23	05	32	7	55	74						
22	151	18.0		14.6	217	59.2 ¹⁶⁷		-9 03.8 ¹³⁶	56	41		21	43	** **	30	5	13	58	77					
23	166	17.7		14.8	232	34.8 ¹⁶⁶		17.3 ¹³⁵	58	20	58	22	13	** **	28	2	14	01	81					
24	181	17.4	-23	14.9	247	10.4 ¹⁶⁶		-9 30.8 ¹³⁵	60 S	21	18	23	00	** **	0	26	**	14	06	84				
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO											
	PMG: 18 ^h 26 ^m 9			Mag: -3.9 PMG: 12 ^h 46 ^m			Mag: +1.5 PMG: 10 ^h 44 ^m			Mag: -1.8 PMG: 10 ^h 39 ^m			Mag: +0.4 PMG: 4 ^h 20 ^m											
	hG ♈			hG ♀ Dec			hG ♂ Dec			hG ♃ Dec			hG ♄ Dec											
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	82	31.6	168	43.0	-24	11.7	198	56.7	-21	20.1	199	59.5	-20	19.6	294	50.2	+14	15.7						
1	97	34.1	183	42.1		11.7	213	57.3		20.5	215	01.3		19.7	309	52.7		15.8						
2	112	36.6	198	41.1		11.7	228	57.9		20.8	230	03.2		19.8	324	55.2		15.8						
3	127	39.0	213	40.1		11.7	243	58.5		21.1	245	05.1		19.9	339	57.7		15.8						
4	142	41.5	228	39.1		11.7	258	59.0		21.5	260	07.0		20.0	355	00.2		15.8						
5	157	43.9	243	38.1	-24	11.7	273	59.6	-21	21.8	275	08.9	-20	20.1	10	02.7	+14	15.8						
6	172	46.4	258	37.2	-24	11.7	289	00.2	-21	22.1	290	10.8	-20	20.2	25	05.2	+14	15.9						
7	187	48.9	273	36.2		11.7	304	00.8		22.5	305	12.7		20.3	40	07.7		15.9						
8	202	51.3	288	35.2		11.7	319	01.4		22.8	320	14.6		20.4	55	10.2		15.9						
9	217	53.8	303	34.2		11.7	334	02.0		23.2	335	16.5		20.5	70	12.7		15.9						
10	232	56.3	318	33.3		11.7	349	02.6		23.5	350	18.4		20.6	85	15.2		15.9						
11	247	58.7	333	32.3	-24	11.7	4	03.2	-21	23.8	5	20.3	-20	20.7	100	17.7	+14	16.0						
12	263	01.2	348	31.3	-24	11.7	19	03.8	-21	24.2	20	22.2	-20	20.8	115	20.2	+14	16.0						
13	278	03.7	3	30.3		11.7	34	04.4		24.5	35	24.1		20.9	130	22.7		16.0						
14	293	06.1	18	29.4		11.6	49	04.9		24.8	50	26.0		21.0	145	25.2		16.0						
15	308	08.6	33	28.4		11.6	64	05.5		25.2	65	27.9		21.1	160	27.7		16.0						
16	323	11.0	48	27.4		11.6	79	06.1		25.5	80	29.8		21.2	175	30.2		16.1						
17	338	13.5	63	26.4	-24	11.6	94	06.7	-21	25.8	95	31.7	-20	21.3	190	32.7	+14	16.1						
18	353	16.0	78	25.4	-24	11.6	109	07.3	-21	26.2	110	33.5	-20	21.4	205	35.2	+14	16.1						
19	8	18.4	93	24.5		11.6	124	07.9		26.5	125	35.4		21.5	220	37.7		16.1						
20	23	20.9	108	23.5		11.5	139	08.5		26.8	140	37.3		21.6	235	40.2		16.2						
21	38	23.4	123	22.5		11.5	154	09.1		27.2	155	39.2		21.7	250	42.7		16.2						
22	53	25.8	138	21.5		11.5	169	09.6		27.5	170	41.1		21.8	265	45.2		16.2						
23	68	28.3	153	20.6		11.5	184	10.2		27.8	185	43.0		21.9	280	47.7		16.2						
24	83	30.8	168	19.6	-24	11.5	199	10.8	-21	28.2	200	44.9	-20	22.0	295	50.2	+14	16.2						
Dif	—			-10			0			+6			-3			+19			-1			+25		

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 16'2 PMG: 11 ^h 55 ^m 1			Edad: 24 ^d 1 PHE { 4 ^h : 54'4 12 ^h : 54'5 20 ^h : 54'6 SD: 14'8 PMG: 7 ^h 44 ^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	h	m
0	181	17.4	-23	14.9	247	10.4	-9	30.8	60 N	7 03	8 00	8 57	2 49	86	12 23	**		
1	196	17.1		15.0	261	46.0 ¹⁶⁶		44.2 ¹³⁴	58	6 55	7 48	40	43	82	30	3		
2	211	16.8		15.2	276	21.5 ¹⁶⁵	-9	57.6 ¹³⁴	56		49	38	25	38	78	36	7	
3	226	16.5		15.3	290	56.9 ¹⁶⁴	-10	11.0 ¹³⁴	54		43	29	13	33	76	42	9	
4	241	16.2		15.4	305	32.3 ¹⁶⁴		24.4 ¹³⁴	52		37	21	8 02	29	73	47	12	
5	256	15.9	-23	15.6	320	07.6 ¹⁶³	-10	37.7 ¹³³	50	6 32	7 13	7 52	2 25	70	12 51	15		
6	271	15.6	-23	15.7	334	42.9 ¹⁶³	-10	51.0 ¹³³	45	6 20	6 57	7 31	2 16	66	13 01	20		
7	286	15.3		15.8	349	18.2 ¹⁶³	-11	04.3 ¹³³	40		10	44	15	09	62	10	23	
8	301	15.0		16.0	3	53.4 ¹⁶²		17.5 ¹³²	35	6 01	32	7 00	2 03	59	17	27		
9	316	14.7		16.1	18	28.5 ¹⁶¹		30.7 ¹³²	30	5 52	22	6 48	1 58	55	24	29		
10	331	14.4		16.2	33	03.6 ¹⁶¹		43.8 ¹³¹	20		36	6 03	27	49	50	35	34	
11	346	14.1	-23	16.3	47	38.6 ¹⁶⁰	-11	56.9 ¹³¹	10 N	5 20	5 46	6 09	1 41	46	13 45	39		
12	1	13.8	-23	16.5	62	13.6 ¹⁶⁰	-12	10.0 ¹³¹	0	5 03	5 29	5 51	1 34	42	13 54	43		
13	16	13.5		16.6	76	48.5 ¹⁵⁹		23.0 ¹³⁰	10 S	4 44	5 11	34	27	37	14 03	47		
14	31	13.2		16.7	91	23.3 ¹⁵⁸		36.0 ¹³⁰	20	4 21	4 50	5 15	19	34	13	51		
15	46	12.9		16.9	105	58.1 ¹⁵⁸	-12	49.0 ¹³⁰	30	3 52	26	4 53	11	28	25	56		
16	61	12.6		17.0	120	32.8 ¹⁵⁷	-13	01.9 ¹²⁹	35		34	4 11	40	06	25	31	59	
17	76	12.3	-23	17.1	135	07.5 ¹⁵⁷	-13	14.8 ¹²⁹	40	3 11	3 52	4 25	1 00	22	14 39	62		
18	91	12.0	-23	17.2	149	42.1 ¹⁵⁶	-13	27.6 ¹²⁸	45	2 41	3 30	4 07	0 54	18	14 48	66		
19	106	11.7		17.3	164	16.6 ¹⁵⁵		40.4 ¹²⁸	50	1 56	3 01	3 45	46	14	14 58	72		
20	121	11.4		17.5	178	51.1 ¹⁵⁵	-13	53.1 ¹²⁷	52	1 29	2 46	34	43	11	15 03	75		
21	136	11.1		17.6	193	25.5 ¹⁵⁴	-14	05.8 ¹²⁷	54	0 45	28	22	39	9	09	77		
22	151	10.8		17.7	207	59.8 ¹⁵³		18.5 ¹²⁷	56	** ** *	2 06	3 08	35	6	15	81		
23	166	10.5		17.8	222	34.1 ¹⁵³		31.1 ¹²⁶	58	** ** *	1 37	2 51	30	3	22	84		
24	181	10.2	-23	17.9	237	08.2 ¹⁵¹	-14	43.6 ¹²⁵	60 S	** ** *	0 50	2 31	0 25	**	15 30	89		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 18 ^h 22 ^m 9		Mag: -3.9 PMG: 12 ^h 48 ^m		Mag: +1.5 PMG: 10 ^h 43 ^m		Mag: -1.8 PMG: 10 ^h 36 ^m		Mag: +0.4 PMG: 4 ^h 16 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	83	30.8	168	19.6	-24	11.5	199	10.8	-21	28.2	200	44.9	-20	22.0	295	50.2	+14	16.2
1	98	33.2	183	18.6		11.4	214	11.4		28.5	215	46.8		22.1	310	52.7		16.3
2	113	35.7	198	17.6		11.4	229	12.0		28.8	230	48.7		22.2	325	55.2		16.3
3	128	38.2	213	16.7		11.4	244	12.6		29.2	245	50.6		22.3	340	57.7		16.3
4	143	40.6	228	15.7		11.3	259	13.2		29.5	260	52.5		22.4	356	00.2		16.3
5	158	43.1	243	14.7	-24	11.3	274	13.7	-21	29.8	275	54.4	-20	22.5	11	02.7	+14	16.4
6	173	45.5	258	13.7	-24	11.3	289	14.3	-21	30.2	290	56.3	-20	22.6	26	05.2	+14	16.4
7	188	48.0	273	12.7		11.2	304	14.9		30.5	305	58.2		22.7	41	07.7		16.4
8	203	50.5	288	11.8		11.2	319	15.5		30.8	321	00.1		22.8	56	10.2		16.4
9	218	52.9	303	10.8		11.2	334	16.1		31.2	336	02.0		22.9	71	12.7		16.4
10	233	55.4	318	09.8		11.1	349	16.7		31.5	351	03.9		23.0	86	15.2		16.5
11	248	57.9	333	08.8	-24	11.1	4	17.2	-21	31.8	6	05.8	-20	23.1	101	17.7	+14	16.5
12	264	00.3	348	07.9	-24	11.1	19	17.8	-21	32.1	21	07.7	-20	23.2	116	20.2	+14	16.5
13	279	02.8	3	06.9		11.0	34	18.4		32.5	36	09.5		23.3	131	22.7		16.5
14	294	05.3	18	05.9		11.0	49	19.0		32.8	51	11.4		23.4	146	25.2		16.6
15	309	07.7	33	04.9		10.9	64	19.6		33.1	66	13.3		23.5	161	27.7		16.6
16	324	10.2	48	04.0		10.9	79	20.2		33.5	81	15.2		23.6	176	30.2		16.6
17	339	12.7	63	03.0	-24	10.8	94	20.7	-21	33.8	96	17.1	-20	23.7	191	32.7	+14	16.6
18	354	15.1	78	02.0	-24	10.8	109	21.3	-21	34.1	111	19.0	-20	23.8	206	35.2	+14	16.6
19	9	17.6	93	01.0		10.7	124	21.9		34.4	126	20.9		23.9	221	37.7		16.7
20	24	20.0	108	00.1		10.7	139	22.5		34.8	141	22.8		24.0	236	40.2		16.7
21	39	22.5	122	59.1		10.6	154	23.1		35.1	156	24.7		24.1	251	42.7		16.7
22	54	25.0	137	58.1		10.6	169	23.6		35.4	171	26.6		24.2	266	45.2		16.7
23	69	27.4	152	57.1		10.5	184	24.2		35.7	186	28.5		24.3	281	47.7		16.8
24	84	29.9	167	56.2	-24	10.5	199	24.8	-21	36.1	201	30.4	-20	24.4	296	50.2	+14	16.8
Dif	—		-10		0		+6		-3		+19		-1		+25			

UT	SOL				☾ LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 16:3 PMG: 11 ^h 55 ^m 6				Edad: 25 ^d 1 PHE { 4 ^h : 54:7 12 ^h : 54:8 20 ^h : 54:9 PMG: 8 ^h 26 ^m R°: 46 ^m													
	hG ☉	Dec			hG ☾	Dif					Civil		Náutico		Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m		
0	181	10.2	-23	17.9	237	08.2	-14	43.6	60 N	14 53	15 51	16 47	4 15 93	12 22 1				
1	196	09.9		18.1	251	42.4 ¹⁵²	-14	56.1 ¹²⁵	58	15 10	16 02	16 55	4 05 87	33 6				
2	211	09.6		18.2	266	16.4 ¹⁵⁰	-15	08.6 ¹²⁵	56	25	12	17 01	3 56 83	43 10				
3	226	09.3		18.3	280	50.4 ¹⁵⁰		21.0 ¹²⁴	54	38	21	08	49 79	51 14				
4	241	09.0		18.4	295	24.3 ¹⁴⁹		33.3 ¹²³	52	49	30	13	42 76	12 59 17				
5	256	08.7	-23	18.5	309	58.1 ¹⁴⁸	-15	45.6 ¹²³	50	15 58	16 37	17 18	3 35 74	13 06 19				
6	271	08.4	-23	18.6	324	31.8 ¹⁴⁷	-15	57.8 ¹²²	45	16 19	16 53	17 30	3 22 68	13 21 24				
7	286	08.1		18.7	339	05.5 ¹⁴⁷	-16	10.0 ¹²²	40	36	17 06	40	11 64	33 28				
8	301	07.8		18.9	353	39.1 ¹⁴⁶		22.1 ¹²¹	35	16 50	18	50	3 02 60	44 31				
9	316	07.5		19.0	8	12.6 ¹⁴⁵		34.2 ¹²¹	30	17 02	29	17 59	2 53 58	13 53 34				
10	331	07.2		19.1	22	46.0 ¹⁴⁴		46.2 ¹²⁰	20	23	17 47	18 15	39 53	14 09 39				
11	346	06.9	-23	19.2	37	19.3 ¹⁴³	-16	58.2 ¹²⁰	10 N	17 42	18 05	18 31	2 27 49	14 24 42				
12	1	06.6	-23	19.3	51	52.6 ¹⁴³	-17	10.0 ¹¹⁸	0	17 59	18 22	18 48	2 16 44	14 37 46				
13	16	06.3		19.4	66	25.8 ¹⁴²		21.9 ¹¹⁹	10 S	18 17	18 40	19 07	2 04 41	14 50 50				
14	31	06.0		19.5	80	58.8 ¹⁴⁰		33.6 ¹¹⁷	20	36	19 00	30	1 53 36	15 04 55				
15	46	05.7		19.6	95	31.9 ¹⁴¹		45.3 ¹¹⁷	30	18 58	25	19 59	39 32	21 59				
16	61	05.3		19.7	110	04.8 ¹³⁹	-17	57.0 ¹¹⁷	35	19 11	40	20 17	31 29	30 62				
17	76	05.0	-23	19.8	124	37.6 ¹³⁸	-18	08.5 ¹¹⁵	40	19 26	19 59	20 40	1 22 26	15 41 65				
18	91	04.7	-23	19.9	139	10.4 ¹³⁸	-18	20.0 ¹¹⁵	45	19 44	20 21	21 11	1 12 22	15 54 70				
19	106	04.4		20.0	153	43.0 ¹³⁶		31.4 ¹¹⁴	50	20 06	20 51	21 56	1 00 16	16 10 75				
20	121	04.1		20.1	168	15.6 ¹³⁶		42.8 ¹¹⁴	52	17	21 06	22 24	0 54 14	18 77				
21	136	03.8		20.2	182	48.1 ¹³⁵	-18	54.1 ¹¹³	54	29	24	23 09	48 11	26 80				
22	151	03.5		20.3	197	20.4 ¹³³	-19	05.3 ¹¹²	56	20 43	21 46	** **	41 8	36 84				
23	166	03.2		20.4	211	52.7 ¹³³		16.4 ¹¹¹	58	21 00	22 15	** **	33 5	46 89				
24	181	02.9	-23	20.5	226	25.0 ¹³³	-19	27.5 ¹¹¹	60 S	21 20	23 05	** **	0 24 0	16 59 94				
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 18 ^h 19 ^m 0		Mag: -3.9 PMG: 12 ^h 49 ^m				Mag: +1.5 PMG: 10 ^h 42 ^m				Mag: -1.8 PMG: 10 ^h 33 ^m				Mag: +0.4 PMG: 4 ^h 12 ^m			
	hG ♈		hG ♀	Dec			hG ♂	Dec			hG ♃	Dec			hG ♄	Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	84	29.9	167	56.2	-24	10.5	199	24.8	-21	36.1	201	30.4	-20	24.4	296	50.2	+14	16.8
1	99	32.4	182	55.2		10.4	214	25.4		36.4	216	32.3		24.5	311	52.8		16.8
2	114	34.8	197	54.2		10.4	229	26.0		36.7	231	34.2		24.6	326	55.3		16.8
3	129	37.3	212	53.2		10.3	244	26.5		37.0	246	36.1		24.7	341	57.8		16.9
4	144	39.8	227	52.3		10.2	259	27.1		37.3	261	38.0		24.8	357	00.3		16.9
5	159	42.2	242	51.3	-24	10.2	274	27.7	-21	37.7	276	39.9	-20	24.9	12	02.8	+14	16.9
6	174	44.7	257	50.3	-24	10.1	289	28.3	-21	38.0	291	41.8	-20	25.0	27	05.3	+14	16.9
7	189	47.1	272	49.3		10.0	304	28.9		38.3	306	43.7		25.1	42	07.8		17.0
8	204	49.6	287	48.3		10.0	319	29.4		38.6	321	45.6		25.2	57	10.3		17.0
9	219	52.1	302	47.4		09.9	334	30.0		39.0	336	47.5		25.3	72	12.8		17.0
10	234	54.5	317	46.4		09.8	349	30.6		39.3	351	49.4		25.4	87	15.3		17.0
11	249	57.0	332	45.4	-24	09.8	4	31.2	-21	39.6	6	51.3	-20	25.5	102	17.8	+14	17.0
12	264	59.5	347	44.4	-24	09.7	19	31.8	-21	39.9	21	53.1	-20	25.6	117	20.3	+14	17.1
13	280	01.9	2	43.5		09.6	34	32.3		40.2	36	55.0		25.7	132	22.8		17.1
14	295	04.4	17	42.5		09.6	49	32.9		40.6	51	56.9		25.8	147	25.3		17.1
15	310	06.9	32	41.5		09.5	64	33.5		40.9	66	58.8		25.9	162	27.9		17.1
16	325	09.3	47	40.6		09.4	79	34.1		41.2	82	00.7		26.0	177	30.4		17.2
17	340	11.8	62	39.6	-24	09.3	94	34.6	-21	41.5	97	02.6	-20	26.1	192	32.9	+14	17.2
18	355	14.3	77	38.6	-24	09.2	109	35.2	-21	41.8	112	04.5	-20	26.2	207	35.4	+14	17.2
19	10	16.7	92	37.6		09.2	124	35.8		42.2	127	06.4		26.3	222	37.9		17.2
20	25	19.2	107	36.7		09.1	139	36.4		42.5	142	08.3		26.4	237	40.4		17.3
21	40	21.6	122	35.7		09.0	154	36.9		42.8	157	10.2		26.5	252	42.9		17.3
22	55	24.1	137	34.7		08.9	169	37.5		43.1	172	12.1		26.6	267	45.4		17.3
23	70	26.6	152	33.7		08.8	184	38.1		43.4	187	14.0		26.7	282	47.9		17.3
24	85	29.0	167	32.8	-24	08.7	199	38.7	-21	43.7	202	15.9	-20	26.8	297	50.4	+14	17.4
Dif	—		-10 +1				+6 -3				+19 -1				+25 0			

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16'3 PMG: 11 ^h 56 ^m 0			Edad: 26 ^d 1 PHE { 4 ^h : 55'1 12 ^h : 55'3 20 ^h : 55'4 SD: 15'0 PMG: 9 ^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	02.9	-23	20.5	226	25.0	-19	27.5	60 N	7 05	8 01	8 59	5 48	98	12 23	4
1	196	02.6		20.6	240	57.1 ¹³¹		38.5 ¹¹⁰	58	6 57	7 50	42	32	91	39	11
2	211	02.3		20.7	255	29.1 ¹³⁰	-19	49.4 ¹⁰⁹	56	50	39	27	19	86	12 53	16
3	226	02.0		20.8	270	01.0 ¹²⁹	-20	00.3 ¹⁰⁹	54	44	30	14	5 08	81	13 05	20
4	241	01.7		20.9	284	32.8 ¹²⁸		11.0 ¹⁰⁷	52	39	22	8 03	4 58	78	16	23
5	256	01.4	-23	21.0	299	04.6 ¹²⁸	-20	21.7 ¹⁰⁷	50	6 33	7 15	7 53	4 49	75	13 25	26
6	271	01.1	-23	21.1	313	36.2 ¹²⁶	-20	32.3 ¹⁰⁶	45	6 22	6 59	7 33	4 30	70	13 45	31
7	286	00.8		21.2	328	07.8 ¹²⁶		42.8 ¹⁰⁵	40	11	45	16	15	66	14 01	35
8	301	00.5		21.3	342	39.2 ¹²⁴	-20	53.2 ¹⁰⁴	35	6 02	34	7 02	4 02	63	15	38
9	316	00.2		21.4	357	10.5 ¹²³	-21	03.6 ¹⁰⁴	30	5 53	23	6 49	3 51	60	27	41
10	330	59.8		21.5	11	41.8 ¹²³		13.8 ¹⁰²	20	37	6 04	28	32	56	14 48	44
11	345	59.5	-23	21.6	26	12.9 ¹²¹	-21	24.0 ¹⁰²	10 N	5 21	5 47	6 10	3 16	52	15 06	48
12	0	59.2	-23	21.7	40	44.0 ¹²¹	-21	34.1 ¹⁰¹	0	5 04	5 30	5 52	3 00	49	15 23	51
13	15	58.9		21.7	55	14.9 ¹¹⁹		44.1 ¹⁰⁰	10 S	4 45	5 12	35	2 45	45	40	54
14	30	58.6		21.8	69	45.8 ¹¹⁹	-21	54.0 ⁹⁹	20	4 22	4 51	5 16	29	42	15 59	57
15	45	58.3		21.9	84	16.6 ¹¹⁸	-22	03.8 ⁹⁸	30	3 53	26	4 54	11	37	16 20	61
16	60	58.0		22.0	98	47.2 ¹¹⁶		13.5 ⁹⁷	35	34	4 11	41	2 00	34	32	64
17	75	57.7	-23	22.1	113	17.8 ¹¹⁶	-22	23.1 ⁹⁶	40	3 11	3 53	4 26	1 48	31	16 46	67
18	90	57.4	-23	22.2	127	48.2 ¹¹⁴	-22	32.6 ⁹⁵	45	2 41	3 30	4 08	1 34	27	17 04	70
19	105	57.1		22.3	142	18.6 ¹¹⁴		42.1 ⁹⁵	50	1 56	3 01	3 45	16	23	25	75
20	120	56.8		22.3	156	48.8 ¹¹²	-22	51.4 ⁹³	52	1 28	2 46	35	1 08	20	35	78
21	135	56.5		22.4	171	18.9 ¹¹¹	-23	00.6 ⁹²	54	0 43	28	22	0 59	17	17 46	81
22	150	56.2		22.5	185	49.0 ¹¹¹		09.7 ⁹¹	56	** ** *	2 06	3 08	49	13	18 00	85
23	165	55.9		22.6	200	18.9 ¹⁰⁹		18.7 ⁹⁰	58	** ** *	1 36	2 51	38	8	15	91
24	180	55.6	-23	22.7	214	48.8 ¹⁰⁹	-23	27.6 ⁸⁹	60 S	** ** *	0 47	2 31	0 24	3	18 33	99
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 18 ^h 15 ^m 1			Mag: -3.9 PMG: 12 ^h 51 ^m			Mag: +1.5 PMG: 10 ^h 41 ^m			Mag: -1.8 PMG: 10 ^h 30 ^m			Mag: +0.3 PMG: 4 ^h 08 ^m			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	85	29.0	167	32.8	-24	08.7	199	38.7	-21	43.7	202	15.9	-20	26.8	297	50.4
1	100	31.5	182	31.8		08.7	214	39.2		44.1	217	17.8		26.9	312	52.9
2	115	34.0	197	30.8		08.6	229	39.8		44.4	232	19.7		27.0	327	55.5
3	130	36.4	212	29.8		08.5	244	40.4		44.7	247	21.6		27.1	342	58.0
4	145	38.9	227	28.9		08.4	259	41.0		45.0	262	23.5		27.2	358	00.5
5	160	41.4	242	27.9	-24	08.3	274	41.5	-21	45.3	277	25.4	-20	27.2	13	03.0
6	175	43.8	257	26.9	-24	08.2	289	42.1	-21	45.6	292	27.3	-20	27.3	28	05.5
7	190	46.3	272	25.9		08.1	304	42.7		45.9	307	29.2		27.4	43	08.0
8	205	48.8	287	25.0		08.0	319	43.3		46.3	322	31.1		27.5	58	10.5
9	220	51.2	302	24.0		07.9	334	43.8		46.6	337	33.0		27.6	73	13.0
10	235	53.7	317	23.0		07.8	349	44.4		46.9	352	34.9		27.7	88	15.5
11	250	56.1	332	22.0	-24	07.7	4	45.0	-21	47.2	7	36.8	-20	27.8	103	18.1
12	265	58.6	347	21.1	-24	07.6	19	45.6	-21	47.5	22	38.7	-20	27.9	118	20.6
13	281	01.1	2	20.1		07.5	34	46.1		47.8	37	40.6		28.0	133	23.1
14	296	03.5	17	19.1		07.4	49	46.7		48.1	52	42.5		28.1	148	25.6
15	311	06.0	32	18.2		07.3	64	47.3		48.4	67	44.4		28.2	163	28.1
16	326	08.5	47	17.2		07.2	79	47.8		48.8	82	46.3		28.3	178	30.6
17	341	10.9	62	16.2	-24	07.1	94	48.4	-21	49.1	97	48.2	-20	28.4	193	33.1
18	356	13.4	77	15.2	-24	06.9	109	49.0	-21	49.4	112	50.1	-20	28.5	208	35.6
19	11	15.9	92	14.3		06.8	124	49.6		49.7	127	51.9		28.6	223	38.2
20	26	18.3	107	13.3		06.7	139	50.1		50.0	142	53.8		28.7	238	40.7
21	41	20.8	122	12.3		06.6	154	50.7		50.3	157	55.7		28.8	253	43.2
22	56	23.2	137	11.3		06.5	169	51.3		50.6	172	57.6		28.9	268	45.7
23	71	25.7	152	10.4		06.4	184	51.8		50.9	187	59.5		29.0	283	48.2
24	86	28.2	167	09.4	-24	06.3	199	52.4	-21	51.2	203	01.4	-20	29.1	298	50.7
Dif	—			-10 +1			+6 -3			+19 -1			+25 0			

UT	SOL				● LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16:3 PMG: 11 ^h 56 ^m 5				Edad: 27 ^d 1 PHE { 4 ^h : 55/6 12 ^h : 55/8 20 ^h : 56/0 PMG: 10 ^h 01 ^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	h m m	
0	180	55.6	-23	22.7	214	48.8	-23	27.6	60 N	14 53	15 51	16 48	7 26 100	12 27 12		
1	195	55.2		22.7	229	18.5 ¹⁰⁷		36.5 ⁸⁹	58	15 11	16 03	16 55	7 03 90	12 50 22		
2	210	54.9		22.8	243	48.1 ¹⁰⁶		45.2 ⁸⁷	56	25	13	17 02	6 45 84	13 09 28		
3	225	54.6		22.9	258	17.7 ¹⁰⁶	-23	53.7 ⁸⁵	54	38	22	08	29 80	25 32		
4	240	54.3		23.0	272	47.1 ¹⁰⁴	-24	02.2 ⁸⁵	52	49	30	14	16 77	39 34		
5	255	54.0	-23	23.0	287	16.4 ¹⁰³	-24	10.6 ⁸⁴	50	15 59	16 38	17 19	6 04 74	13 51 37		
6	270	53.7	-23	23.1	301	45.6 ¹⁰²	-24	18.9 ⁸³	45	16 20	16 54	17 31	5 40 70	14 16 41		
7	285	53.4		23.2	316	14.7 ¹⁰¹		27.0 ⁸¹	40	37	17 07	41	21 66	36 44		
8	300	53.1		23.3	330	43.8 ¹⁰¹		35.0 ⁸⁰	35	16 51	19	51	5 05 64	14 53 46		
9	315	52.8		23.3	345	12.7 ⁹⁹		42.9 ⁷⁹	30	17 03	29	17 59	4 51 62	15 08 47		
10	330	52.5		23.4	359	41.5 ⁹⁸		50.7 ⁷⁸	20	24	17 48	18 16	28 58	32 51		
11	345	52.2	-23	23.5	14	10.2 ⁹⁷	-24	58.4 ⁷⁷	10 N	17 43	18 06	18 32	4 08 55	15 54 52		
12	0	51.9	-23	23.5	28	38.8 ⁹⁶	-25	06.0 ⁷⁶	0	18 00	18 23	18 49	3 49 53	16 14 55		
13	15	51.5		23.6	43	07.3 ⁹⁵		13.4 ⁷⁴	10 S	18	18 41	19 08	30 51	34 57		
14	30	51.2		23.7	57	35.7 ⁹⁴		20.7 ⁷³	20	37	19 01	19 31	3 11 47	16 56 59		
15	45	50.9		23.7	72	04.1 ⁹⁴		27.9 ⁷²	30	18 59	26	20 00	2 48 44	17 21 61		
16	60	50.6		23.8	86	32.3 ⁹²		34.9 ⁷⁰	35	19 12	19 42	18	34 42	36 63		
17	75	50.3	-23	23.9	101	00.4 ⁹¹	-25	41.9 ⁷⁰	40	19 27	20 00	20 42	2 19 39	17 53 65		
18	90	50.0	-23	23.9	115	28.4 ⁹⁰	-25	48.7 ⁶⁸	45	19 45	20 22	21 12	2 01 36	18 14 67		
19	105	49.7		24.0	129	56.3 ⁸⁹	-25	55.3 ⁶⁶	50	20 08	20 52	21 58	1 39 31	40 71		
20	120	49.4		24.1	144	24.2 ⁸⁹	-26	01.9 ⁶⁶	52	18	21 07	22 26	28 29	18 53 73		
21	135	49.1		24.1	158	51.9 ⁸⁷		08.3 ⁶⁴	54	31	25	23 12	16 26	19 07 76		
22	150	48.8		24.2	173	19.5 ⁸⁶		14.6 ⁶³	56	20 45	21 48	** **	1 02 22	25 78		
23	165	48.5		24.3	187	47.1 ⁸⁶		20.7 ⁶¹	58	21 02	22 17	** **	0 46 16	19 46 83		
24	180	48.2	-23	24.3	202	14.5 ⁸⁴	-26	26.7 ⁶⁰	60 S	21 22	23 08	** **	0 27 8	20 12 94		
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO							
	PMG 18 ^h 11 ^m 1	Mag: -3.9 PMG: 12 ^h 52 ^m	Mag: +1.5 PMG: 10 ^h 40 ^m	Mag: -1.8 PMG: 10 ^h 27 ^m	Mag: +0.3 PMG: 4 ^h 04 ^m											
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec							
h	°	'	°	'	°	'	°	'	°	'						
0	86	28.2	167	09.4	199	52.4	203	01.4	298	50.7						
1	101	30.6	182	08.4	214	53.0	218	03.3	313	53.2						
2	116	33.1	197	07.5	229	53.5	233	05.2	328	55.8						
3	131	35.6	212	06.5	244	54.1	248	07.1	343	58.3						
4	146	38.0	227	05.5	259	54.7	263	09.0	359	00.8						
5	161	40.5	242	04.5	274	55.3	278	10.9	14	03.3						
6	176	43.0	257	03.6	289	55.8	293	12.8	29	05.8						
7	191	45.4	272	02.6	304	56.4	308	14.7	44	08.3						
8	206	47.9	287	01.6	319	57.0	323	16.6	59	10.9						
9	221	50.4	302	00.7	334	57.5	338	18.5	74	13.4						
10	236	52.8	316	59.7	349	58.1	353	20.4	89	15.9						
11	251	55.3	331	58.7	4	58.7	8	22.3	104	18.4						
12	266	57.7	346	57.8	19	59.2	23	24.2	119	20.9						
13	282	00.2	1	56.8	34	59.8	38	26.1	134	23.4						
14	297	02.7	16	55.8	50	00.4	53	28.0	149	26.0						
15	312	05.1	31	54.8	65	00.9	68	29.9	164	28.5						
16	327	07.6	46	53.9	80	01.5	83	31.8	179	31.0						
17	342	10.1	61	52.9	95	02.1	98	33.7	194	33.5						
18	357	12.5	76	51.9	110	02.6	113	35.6	209	36.0						
19	12	15.0	91	51.0	125	03.2	128	37.5	224	38.5						
20	27	17.5	106	50.0	140	03.8	143	39.4	239	41.1						
21	42	19.9	121	49.0	155	04.3	158	41.3	254	43.6						
22	57	22.4	136	48.1	170	04.9	173	43.2	269	46.1						
23	72	24.9	151	47.1	185	05.5	188	45.1	284	48.6						
24	87	27.3	166	46.1	200	06.0	203	47.0	299	51.1						
Dif	—	-10	+1	+6	-3	+19	-1	+25	0							

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'3 PMG: 11 ^h 57 ^m 0			Edad: 28 ^d 1 PHE { 4 ^h : 56'2 12 ^h : 56'4 20 ^h : 56'6 R°: 57 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	m
0	180	48.2	-23	202	14.5	-26	26.7	60 N	7 06	8 03	9 01	9 06	83	12 39	36
1	195	47.8		216	41.8		32.6	58	6 58	7 51	8 43	8 33	76	13 12	44
2	210	47.5		231	09.1		38.3	56	52	41	28	8 09	72	37	47
3	225	47.2		245	36.3		43.9	54	46	32	16	7 49	70	13 57	48
4	240	46.9		260	03.4		49.3	52	40	24	8 05	33	68	14 13	51
5	255	46.6	-23	274	30.3	-26	54.6	50	6 35	7 16	7 55	7 18	67	14 28	51
6	270	46.3	-23	288	57.2	-26	59.8	45	6 23	7 00	7 34	6 50	65	14 57	53
7	285	46.0		303	24.1	-27	04.8	40	12	6 47	17	27	64	15 20	54
8	300	45.7		317	50.8		09.7	35	6 03	35	7 03	6 09	62	39	55
9	315	45.4		332	17.4		14.4	30	5 54	24	6 51	5 53	61	15 55	56
10	330	45.1		346	44.0		19.0	20	38	6 05	29	26	59	16 23	56
11	345	44.7	-23	1	10.5	-27	23.4	10 N	5 22	5 48	6 11	5 03	58	16 46	58
12	0	44.4	-23	15	36.9	-27	27.7	0	5 05	5 31	5 53	4 42	56	17 09	57
13	15	44.1		30	03.2		31.8	10 S	4 46	5 13	36	4 21	55	31	58
14	30	43.8		44	29.5		35.7	20	4 23	4 52	5 17	3 58	53	17 55	58
15	45	43.5		58	55.6		39.6	30	3 54	27	4 55	32	51	18 22	60
16	60	43.2		73	21.7		43.2	35	35	4 12	42	3 16	51	39	59
17	75	42.9	-23	87	47.8	-27	46.7	40	3 12	3 54	4 27	2 58	49	18 58	60
18	90	42.6	-23	102	13.7	-27	50.1	45	2 41	3 31	4 09	2 37	47	19 21	61
19	105	42.3		116	39.6		53.3	50	1 56	3 01	3 46	2 10	44	19 51	61
20	120	42.0		131	05.4		56.3	52	1 28	2 46	35	1 57	42	20 06	61
21	135	41.6		145	31.1	-27	59.1	54	0 41	28	23	42	39	23	61
22	150	41.3		159	56.8	-28	01.9	56	** ** *	2 06	3 09	24	37	20 43	62
23	165	41.0		174	22.5		04.4	58	** ** *	1 36	2 52	1 02	32	21 09	63
24	180	40.7	-23	188	48.0	-28	06.8	60 S	** ** *	0 45	2 31	0 35	23	21 46	63
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 18 ^h 07 ^m 2		Mag: -3.9 PMG: 12 ^h 54 ^m			Mag: +1.5 PMG: 10 ^h 39 ^m			Mag: -1.8 PMG: 10 ^h 24 ^m			Mag: +0.3 PMG: 4 ^h 00 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	
0	87	27.3	166	46.1	-24	200	06.0	-21	203	47.0	-20	299	51.1	+14	18.6
1	102	29.8	181	45.2		215	06.6		218	48.9		314	53.7		18.7
2	117	32.2	196	44.2		230	07.2		233	50.8		329	56.2		18.7
3	132	34.7	211	43.2		245	07.7		248	52.7		344	58.7		18.7
4	147	37.2	226	42.2		260	08.3	-21	263	54.6		0	01.2		18.8
5	162	39.6	241	41.3	-24	275	08.8	-22	278	56.5	-20	15	03.7	+14	18.8
6	177	42.1	256	40.3	-24	290	09.4	-22	293	58.4	-20	30	06.3	+14	18.8
7	192	44.6	271	39.3		305	10.0		309	00.3		45	08.8		18.8
8	207	47.0	286	38.4		320	10.5		324	02.2		60	11.3		18.9
9	222	49.5	301	37.4		335	11.1		339	04.1		75	13.8		18.9
10	237	52.0	316	36.4		350	11.7		354	06.0		90	16.3		18.9
11	252	54.4	331	35.5	-24	5	12.2	-22	9	07.9	-20	105	18.9	+14	19.0
12	267	56.9	346	34.5	-24	20	12.8	-22	24	09.8	-20	120	21.4	+14	19.0
13	282	59.4	1	33.5		35	13.4		39	11.7		135	23.9		19.0
14	298	01.8	16	32.6		50	13.9		54	13.6		150	26.4		19.0
15	313	04.3	31	31.6		65	14.5		69	15.5		165	28.9		19.1
16	328	06.7	46	30.6		80	15.0		84	17.4		180	31.5		19.1
17	343	09.2	61	29.7	-24	95	15.6	-22	99	19.3	-20	195	34.0	+14	19.1
18	358	11.7	76	28.7	-24	110	16.2	-22	114	21.2	-20	210	36.5	+14	19.2
19	13	14.1	91	27.7	-23	125	16.7		129	23.1		225	39.0		19.2
20	28	16.6	106	26.8		140	17.3		144	25.0		240	41.6		19.2
21	43	19.1	121	25.8		155	17.8		159	26.9		255	44.1		19.2
22	58	21.5	136	24.9		170	18.4		174	28.8		270	46.6		19.3
23	73	24.0	151	23.9		185	19.0		189	30.7		285	49.1		19.3
24	88	26.5	166	22.9	-23	200	19.5	-22	204	32.6	-20	300	51.6	+14	19.3
Dif	—		-10		+2	+6		-3	+19		-1	+25			0

UT	SOL				● LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna		
	SD: 16/3 PMG: 11 ^h 57 ^m 5				Edad: 29 ^d 1 PHE { 4 ^h : 56/8 12 ^h : 57/0 20 ^h : 57/2 PMG: 11 ^h 52 ^m R°: 59 ^m													
	hG ☉		Dec		hG ☾		Dif				Civil		Náutico		Hora R°		Hora R°	
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m	m	h m	m		
0	180	40.7	-23	25.5	188	48.0	-28	06.8	60 N	14 54	15 52	16 48	10 29	43	13 15	80		
1	195	40.4		25.5	203	13.5		09.0	58	15 11	16 03	16 56	9 49	48	13 56	74		
2	210	40.1		25.6	217	39.0		11.1	56		26	13	17 03	9 21	51	14 24	71	
3	225	39.8		25.6	232	04.3		13.0	54		39	23	09	8 59	52	14 45	70	
4	240	39.5		25.6	246	29.7		14.7	52		15 50	31	15	41	53	15 04	68	
5	255	39.2	-23	25.7	260	55.0	-28	16.2	50		16 00	16 38	17 20	8 25	55	15 19	67	
6	270	38.8	-23	25.7	275	20.2	-28	17.6	45		16 21	16 54	17 32	7 55	55	15 50	65	
7	285	38.5		25.8	289	45.4		18.9	40		37	17 08	42	31	56	16 14	64	
8	300	38.2		25.8	304	10.5		19.9	35		16 52	20	17 51	7 11	57	34	63	
9	315	37.9		25.8	318	35.6		20.8	30		17 04	30	18 00	6 54	57	16 51	62	
10	330	37.6		25.8	333	00.7		21.5	20		25	17 49	17	25	58	17 19	61	
11	345	37.3	-23	25.9	347	25.7	-28	22.1	10 N		17 44	18 07	18 33	6 01	58	17 44	59	
12	0	37.0	-23	25.9	1	50.7	-28	22.4	0		18 01	18 24	18 50	5 38	59	18 06	59	
13	15	36.7		25.9	16	15.6		22.6	10 S		19	18 42	19 09	5 16	59	29	58	
14	30	36.4		26.0	30	40.5		22.7	20		18 38	19 02	19 32	4 51	60	18 53	57	
15	45	36.0		26.0	45	05.4		22.5	30		19 00	27	20 01	23	60	19 22	54	
16	60	35.7		26.0	59	30.3		22.2	35		13	19 43	20	4 07	59	38	54	
17	75	35.4	-23	26.0	73	55.1	-28	21.7	40		19 28	20 01	20 43	3 47	60	19 58	52	
18	90	35.1	-23	26.1	88	19.9	-28	21.1	45		19 46	20 24	21 13	3 24	59	20 22	50	
19	105	34.8		26.1	102	44.7		20.2	50		20 09	20 53	21 59	2 54	59	20 52	47	
20	120	34.5		26.1	117	09.4		19.2	52		20	21 09	22 27	39	59	21 07	46	
21	135	34.2		26.1	131	34.2		18.1	54		32	27	23 14	21	60	24	44	
22	150	33.9		26.2	145	58.9		16.7	56		20 46	21 49	** **	2 01	59	21 45	41	
23	165	33.6		26.2	160	23.6		15.2	58		21 03	22 19	** **	1 34	59	22 12	36	
24	180	33.2	-23	26.2	174	48.3	-28	13.5	60 S		21 24	23 10	** **	0 58	58	22 49	27	
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 18 ^h 03 ^m 3		Mag: -3.9 PMG: 12 ^h 55 ^m				Mag: +1.5 PMG: 10 ^h 38 ^m				Mag: -1.8 PMG: 10 ^h 21 ^m				Mag: +0.3 PMG: 3 ^h 56 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	88	26.5	166	22.9	-23	59.1	200	19.5	-22	05.6	204	32.6	-20	33.7	300	51.6	+14	19.3
1	103	28.9	181	22.0		58.9	215	20.1		05.9	219	34.5		33.8	315	54.2		19.4
2	118	31.4	196	21.0		58.7	230	20.6		06.2	234	36.4		33.9	330	56.7		19.4
3	133	33.9	211	20.0		58.5	245	21.2		06.5	249	38.3		34.0	345	59.2		19.4
4	148	36.3	226	19.1		58.3	260	21.8		06.8	264	40.2		34.1	1	01.7		19.4
5	163	38.8	241	18.1	-23	58.1	275	22.3	-22	07.1	279	42.1	-20	34.2	16	04.3	+14	19.5
6	178	41.2	256	17.1	-23	58.0	290	22.9	-22	07.3	294	44.0	-20	34.3	31	06.8	+14	19.5
7	193	43.7	271	16.2		57.8	305	23.4		07.6	309	45.9		34.4	46	09.3		19.5
8	208	46.2	286	15.2		57.6	320	24.0		07.9	324	47.8		34.5	61	11.8		19.6
9	223	48.6	301	14.2		57.4	335	24.5		08.2	339	49.7		34.6	76	14.4		19.6
10	238	51.1	316	13.3		57.2	350	25.1		08.5	354	51.6		34.7	91	16.9		19.6
11	253	53.6	331	12.3	-23	57.0	5	25.7	-22	08.8	9	53.5	-20	34.8	106	19.4	+14	19.7
12	268	56.0	346	11.4	-23	56.8	20	26.2	-22	09.1	24	55.4	-20	34.9	121	21.9	+14	19.7
13	283	58.5	1	10.4		56.6	35	26.8		09.4	39	57.3		35.0	136	24.5		19.7
14	299	01.0	16	09.4		56.4	50	27.3		09.6	54	59.2		35.0	151	27.0		19.7
15	314	03.4	31	08.5		56.2	65	27.9		09.9	70	01.1		35.1	166	29.5		19.8
16	329	05.9	46	07.5		56.0	80	28.4		10.2	85	03.0		35.2	181	32.0		19.8
17	344	08.4	61	06.5	-23	55.8	95	29.0	-22	10.5	100	04.9	-20	35.3	196	34.6	+14	19.8
18	359	10.8	76	05.6	-23	55.6	110	29.6	-22	10.8	115	06.8	-20	35.4	211	37.1	+14	19.9
19	14	13.3	91	04.6		55.4	125	30.1		11.1	130	08.7		35.5	226	39.6		19.9
20	29	15.7	106	03.7		55.2	140	30.7		11.4	145	10.6		35.6	241	42.2		19.9
21	44	18.2	121	02.7		55.0	155	31.2		11.6	160	12.5		35.7	256	44.7		20.0
22	59	20.7	136	01.7		54.8	170	31.8		11.9	175	14.4		35.8	271	47.2		20.0
23	74	23.1	151	00.8		54.6	185	32.3		12.2	190	16.3		35.9	286	49.7		20.0
24	89	25.6	165	59.8	-23	54.3	200	32.9	-22	12.5	205	18.2	-20	36.0	301	52.3	+14	20.1
Dif	—		-10		+2		+6		-3		+19		-1		+25		0	

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16'3 PMG: 11 ^h 58 ^m 0			Edad: 0 ^d 4 PHE { 4 ^h : 57'4 12 ^h : 57'5 20 ^h : 57'7 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	180	33.2	-23	26.2	174	48.3	-28	13.5	19	58	7 07	8 04	9 02	11 12	14	35 107
1	195	32.9		26.2	189	13.0		11.6	19	58	7 00	7 52	8 44	10 37	25	15 10 95
2	210	32.6		26.2	203	37.7		09.5	21	56	6 53	42	30	10 12	31	35 89
3	225	32.3		26.3	218	02.4		07.3	22	54	47	33	17	9 51	36	15 55 85
4	240	32.0		26.3	232	27.1		04.9	24	52	41	25	8 06	34	39	16 12 81
5	255	31.7	-23	26.3	246	51.8	-28	02.3	26	50	6 36	7 17	7 56	9 20	40	16 26 79
6	270	31.4	-23	26.3	261	16.4	-27	59.6	27	45	6 24	7 01	7 35	8 50	45	16 55 75
7	285	31.1		26.3	275	41.1		56.7	29	40	14	6 48	18	27	47	17 18 71
8	300	30.8		26.3	290	05.8		53.5	32	35	6 04	36	7 04	8 08	49	37 68
9	315	30.4		26.4	304	30.5		50.3	32	30	5 55	25	6 52	7 51	52	17 53 66
10	330	30.1		26.4	318	55.2		46.8	35	20	39	6 06	30	7 23	54	18 20 63
11	345	29.8	-23	26.4	333	20.0	-27	43.2	36	10 N	5 23	5 49	6 12	6 59	57	18 43 61
12	0	29.5	-23	26.4	347	44.7	-27	39.4	38	0	5 05	5 32	5 54	6 37	58	19 05 57
13	15	29.2		26.4	2	09.5		35.4	40	10 S	4 46	5 14	37	6 15	60	27 54
14	30	28.9		26.4	16	34.3		31.3	41	20	4 24	4 53	5 18	5 51	62	19 50 51
15	45	28.6		26.4	30	59.1		27.0	43	30	3 55	28	4 56	23	64	20 16 48
16	60	28.3		26.4	45	23.9		22.5	45	35	36	4 13	43	5 06	66	32 46
17	75	27.9	-23	26.4	59	48.7	-27	17.8	47	40	3 13	3 55	4 27	4 47	68	20 50 43
18	90	27.6	-23	26.4	74	13.6	-27	13.0	48	45	2 42	3 32	4 09	4 23	71	21 12 39
19	105	27.3		26.4	88	38.5		08.0	50	50	1 56	3 02	3 47	3 53	74	39 35
20	120	27.0		26.4	103	03.5	-27	02.8	52	52	1 28	2 47	36	38	76	21 53 32
21	135	26.7		26.4	117	28.4	-26	57.5	53	54	0 41	29	24	21	78	22 08 29
22	150	26.4		26.4	131	53.5		52.0	55	56	** ** *	2 07	3 09	3 00	81	26 24
23	165	26.1		26.4	146	18.5		46.3	57	58	** ** *	1 36	2 52	2 33	87	22 48 19
24	180	25.8	-23	26.5	160	43.6	-26	40.4	59	60 S	** ** *	0 45	2 32	1 56	96	23 16 10

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG 17 ^h 59 ^m 3		Mag: -3.9 PMG: 12 ^h 57 ^m		Mag: +1.5 PMG: 10 ^h 37 ^m		Mag: -1.8 PMG: 10 ^h 17 ^m		Mag: +0.3 PMG: 3 ^h 52 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	89	25.6	165	59.8	-23	54.3	200	32.9	-22	12.5	205	18.2	-20	36.0	301	52.3	+14	20.1
1	104	28.1	180	58.9		54.1	215	33.4		12.8	220	20.1		36.1	316	54.8		20.1
2	119	30.5	195	57.9		53.9	230	34.0		13.1	235	22.0		36.2	331	57.3		20.1
3	134	33.0	210	56.9		53.7	245	34.6		13.3	250	23.9		36.3	346	59.8		20.1
4	149	35.5	225	56.0		53.5	260	35.1		13.6	265	25.8		36.4	2	02.4		20.2
5	164	37.9	240	55.0	-23	53.3	275	35.7	-22	13.9	280	27.7	-20	36.5	17	04.9	+14	20.2
6	179	40.4	255	54.1	-23	53.1	290	36.2	-22	14.2	295	29.6	-20	36.6	32	07.4	+14	20.2
7	194	42.9	270	53.1		52.8	305	36.8		14.5	310	31.5		36.6	47	10.0		20.3
8	209	45.3	285	52.1		52.6	320	37.3		14.7	325	33.4		36.7	62	12.5		20.3
9	224	47.8	300	51.2		52.4	335	37.9		15.0	340	35.3		36.8	77	15.0		20.3
10	239	50.2	315	50.2		52.2	350	38.4		15.3	355	37.2		36.9	92	17.5		20.4
11	254	52.7	330	49.3	-23	51.9	5	39.0	-22	15.6	10	39.1	-20	37.0	107	20.1	+14	20.4
12	269	55.2	345	48.3	-23	51.7	20	39.5	-22	15.9	25	41.0	-20	37.1	122	22.6	+14	20.4
13	284	57.6	0	47.4		51.5	35	40.1		16.1	40	42.9		37.2	137	25.1		20.5
14	300	00.1	15	46.4		51.3	50	40.6		16.4	55	44.8		37.3	152	27.7		20.5
15	315	02.6	30	45.4		51.0	65	41.2		16.7	70	46.7		37.4	167	30.2		20.5
16	330	05.0	45	44.5		50.8	80	41.7		17.0	85	48.6		37.5	182	32.7		20.6
17	345	07.5	60	43.5	-23	50.6	95	42.3	-22	17.2	100	50.6	-20	37.6	197	35.3	+14	20.6
18	0	10.0	75	42.6	-23	50.3	110	42.8	-22	17.5	115	52.5	-20	37.7	212	37.8	+14	20.6
19	15	12.4	90	41.6		50.1	125	43.4		17.8	130	54.4		37.8	227	40.3		20.7
20	30	14.9	105	40.7		49.9	140	43.9		18.1	145	56.3		37.9	242	42.9		20.7
21	45	17.4	120	39.7		49.6	155	44.5		18.3	160	58.2		38.0	257	45.4		20.7
22	60	19.8	135	38.7		49.4	170	45.0		18.6	176	00.1		38.0	272	47.9		20.8
23	75	22.3	150	37.8		49.1	185	45.6		18.9	191	02.0		38.1	287	50.4		20.8
24	90	24.7	165	36.8	-23	48.9	200	46.1	-22	19.2	206	03.9	-20	38.2	302	53.0	+14	20.8
Dif	—		-10		+2		+6		-3		+19		-1		+25		0	

ALMANAQUE NÁUTICO PERSEIS

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'3 PMG: 11 ^h 59 ^m 0			Edad: 2 ^d 4 PHE { 4 ^h : 58'3 12 ^h : 58'4 20 ^h : 58'5 R°: 53 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	m
0	180	18.3	-23	26.2	147	01.1	-23	31.9	60 N	7 08	8 05	9 03	11 31	2	18 12 106
1	195	18.0		26.2	161	27.7	76	22.1	58	7 01	7 53	8 45	15	7	27 100
2	210	17.7		26.2	175	54.2	75	12.2	56	6 54	43	31	11 01	12	40 95
3	225	17.3		26.2	190	20.9	77	-23	54	48	34	18	10 50	15	18 51 92
4	240	17.0		26.1	204	47.6	77	-22	52	42	26	8 07	39 19	19 01	88
5	255	16.7	-23	26.1	219	14.4	78	-22	50	6 37	7 18	7 57	10 29	22	19 10 85
6	270	16.4	-23	26.1	233	41.3	79	-22	45	6 25	7 02	7 36	10 09	28	19 28 79
7	285	16.1		26.1	248	08.2	79		40	14	6 49	19	9 53	32	43 75
8	300	15.8		26.0	262	35.3	81	-22	35	6 05	37	7 05	39 36		19 56 70
9	315	15.5		26.0	277	02.4	81	-21	30	5 56	26	6 53	27 39		20 07 67
10	330	15.2		26.0	291	29.5	81		20	40	6 07	31	9 06	45	26 61
11	345	14.8	-23	26.0	305	56.8	83	-21	10 N	5 24	5 50	6 13	8 48	49	20 42 56
12	0	14.5	-23	25.9	320	24.1	83	-21	0	5 06	5 33	5 55	8 31	53	20 57 52
13	15	14.2		25.9	334	51.5	84		10 S	4 47	5 15	38	8 14	58	21 12 47
14	30	13.9		25.9	349	19.0	85	-21	20	4 25	4 54	5 19	7 56	62	28 42
15	45	13.6		25.8	3	46.5	85	-20	30	3 56	29	4 57	35	67	46 36
16	60	13.3		25.8	18	14.1	86		35	37	4 14	44	22	71	21 56 33
17	75	13.0	-23	25.8	32	41.8	87	-20	40	3 14	3 56	4 28	7 08	74	22 08 30
18	90	12.7	-23	25.7	47	09.6	88	-20	45	2 43	3 33	4 10	6 51	79	22 22 25
19	105	12.3		25.7	61	37.5	89	-20	50	1 57	3 03	3 48	30	85	39 19
20	120	12.0		25.7	76	05.4	89	-19	52	1 29	2 48	37	19	89	47 16
21	135	11.7		25.6	90	33.4	90		54	0 42	30	25	6 08	92	22 56 13
22	150	11.4		25.6	105	01.5	91		56	** ** *	2 08	3 10	5 55	96	23 05 10
23	165	11.1		25.6	119	29.6	91		58	** ** *	1 37	2 53	39	101	16 6
24	180	10.8	-23	25.5	133	57.8	92	-19	60 S	** ** *	0 46	2 33	5 21	108	23 29 1

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG 17 ^h 51 ^m 5		Mag: -3.9 PMG: 13 ^h 00 ^m		Mag: +1.5 PMG: 10 ^h 36 ^m		Mag: -1.8 PMG: 10 ^h 11 ^m		Mag: +0.3 PMG: 3 ^h 44 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	91	23.9	165	14.0	-23	42.7	200	59.3	-22	25.6	206	49.6	-20	40.5	303	53.8	+14	21.6
1	106	26.3	180	13.0		42.4	215	59.8		25.9	221	51.5		40.5	318	56.3		21.6
2	121	28.8	195	12.1		42.2	231	00.4		26.2	236	53.4		40.6	333	58.9		21.7
3	136	31.3	210	11.1		41.9	246	00.9		26.4	251	55.3		40.7	349	01.4		21.7
4	151	33.7	225	10.2		41.6	261	01.5		26.7	266	57.2		40.8	4	04.0		21.7
5	166	36.2	240	09.2	-23	41.3	276	02.0	-22	27.0	281	59.1	-20	40.9	19	06.5	+14	21.8
6	181	38.7	255	08.3	-23	41.0	291	02.6	-22	27.2	297	01.0	-20	41.0	34	09.0	+14	21.8
7	196	41.1	270	07.3		40.8	306	03.1		27.5	312	02.9		41.1	49	11.6		21.9
8	211	43.6	285	06.4		40.5	321	03.6		27.8	327	04.8		41.2	64	14.1		21.9
9	226	46.1	300	05.4		40.2	336	04.2		28.0	342	06.7		41.3	79	16.6		21.9
10	241	48.5	315	04.5		39.9	351	04.7		28.3	357	08.6		41.4	94	19.2		22.0
11	256	51.0	330	03.6	-23	39.6	6	05.3	-22	28.5	12	10.5	-20	41.5	109	21.7	+14	22.0
12	271	53.5	345	02.6	-23	39.3	21	05.8	-22	28.8	27	12.4	-20	41.6	124	24.3	+14	22.0
13	286	55.9	0	01.7		39.1	36	06.4		29.1	42	14.3		41.6	139	26.8		22.1
14	301	58.4	15	00.7		38.8	51	06.9		29.3	57	16.2		41.7	154	29.3		22.1
15	317	00.8	29	59.8		38.5	66	07.4		29.6	72	18.1		41.8	169	31.9		22.1
16	332	03.3	44	58.8		38.2	81	08.0		29.8	87	20.0		41.9	184	34.4		22.2
17	347	05.8	59	57.9	-23	37.9	96	08.5	-22	30.1	102	22.0	-20	42.0	199	36.9	+14	22.2
18	2	08.2	74	56.9	-23	37.6	111	09.1	-22	30.4	117	23.9	-20	42.1	214	39.5	+14	22.2
19	17	10.7	89	56.0		37.3	126	09.6		30.6	132	25.8		42.2	229	42.0		22.3
20	32	13.2	104	55.0		37.0	141	10.1		30.9	147	27.7		42.3	244	44.6		22.3
21	47	15.6	119	54.1		36.7	156	10.7		31.1	162	29.6		42.4	259	47.1		22.3
22	62	18.1	134	53.2		36.4	171	11.2		31.4	177	31.5		42.5	274	49.6		22.4
23	77	20.6	149	52.2		36.1	186	11.8		31.7	192	33.4		42.6	289	52.2		22.4
24	92	23.0	164	51.3	-23	35.8	201	12.3	-22	31.9	207	35.3	-20	42.6	304	54.7	+14	22.4
Dif	—		-9 +3		+5 -3		+19 -1		+25 0									

UT	SOL			 LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 16/3 PMG: 11 ^h 59 ^m 5			Edad: 3 ^d 4 PHE { 4 ^h : 58'6 12 ^h : 58'7 20 ^h : 58'8 R°: 49 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m	m	h m	m
0	180	10.8	-23	25.5	133	57.8	-19	01.3	60 N	14 56	15 54	16 51	11 33	0	19 58	102
1	195	10.5		25.5	148	26.1	93	-18 48.5	58	15 13	16 05	16 58	22	5	20 07	98
2	210	10.2		25.4	162	54.5	94	35.6	56	28	16	17 05	13	8	15	94
3	225	09.9		25.4	177	23.0	95	22.6	54	41	25	11	11 05	12	23	89
4	240	09.5		25.4	191	51.5	95	-18 09.5	52	15 52	33	17	10 58	14	29	87
5	255	09.2	-23	25.3	206	20.1	96	-17 56.2	50	16 02	16 40	17 22	10 51	17	20 35	84
6	270	08.9	-23	25.3	220	48.8	97	-17 42.9	45	16 23	16 57	17 34	10 37	23	20 47	78
7	285	08.6		25.2	235	17.5	97	29.5	40	39	17 10	44	25	27	20 58	72
8	300	08.3		25.2	249	46.3	98	16.0	35	16 54	22	17 54	15	31	21 06	69
9	315	08.0		25.1	264	15.2	99	-17 02.4	30	17 06	32	18 02	10 06	35	14	65
10	330	07.7		25.1	278	44.2	100	-16 48.7	20	27	17 51	19	9 51	40	27	59
11	345	07.4	-23	25.0	293	13.2	100	-16 34.9	10 N	17 46	18 09	18 35	9 37	46	21 38	54
12	0	07.0	-23	25.0	307	42.3	101	-16 21.0	0	18 03	18 26	18 52	9 24	51	21 49	48
13	15	06.7		24.9	322	11.5	102	-16 07.0	10 S	21	18 44	19 11	9 12	54	21 59	44
14	30	06.4		24.9	336	40.7	102	-15 52.9	20	18 40	19 04	19 34	8 58	60	22 10	39
15	45	06.1		24.8	351	10.0	103	38.7	30	19 02	29	20 03	42	66	22	33
16	60	05.8		24.8	5	39.4	104	24.5	35	15	19 45	21	33	69	29	30
17	75	05.5	-23	24.7	20	08.8	104	-15 10.2	40	19 30	20 03	20 45	8 22	74	22 38	25
18	90	05.2	-23	24.7	34	38.3	105	-14 55.7	45	19 48	20 25	21 15	8 10	78	22 47	21
19	105	04.9		24.6	49	07.9	106	41.2	50	20 11	20 55	22 01	7 55	84	22 58	16
20	120	04.6		24.6	63	37.5	106	26.6	52	21	21 10	22 29	48	87	23 03	14
21	135	04.2		24.5	78	07.2	107	-14 12.0	54	34	28	23 15	40	90	09	10
22	150	03.9		24.5	92	37.0	108	-13 57.2	56	20 48	21 51	** **	31	94	15	8
23	165	03.6		24.4	107	06.8	108	42.4	58	21 05	22 21	** **	20	99	22	4
24	180	03.3	-23	24.3	121	36.7	109	-13 27.5	60 S	21 25	23 11	** **	7 09	103	23 30	0

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 17 ^h 47 ^m 5		Mag: -3.9 PMG: 13 ^h 01 ^m		Mag: +1.5 PMG: 10 ^h 35 ^m		Mag: -1.8 PMG: 10 ^h 08 ^m		Mag: +0.3 PMG: 3 ^h 40 ^m									
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	92	23.0	164	51.3	-23	35.8	201	12.3	-22	31.9	207	35.3	-20	42.6	304	54.7	+14	22.4
1	107	25.5	179	50.3		35.5	216	12.9		32.2	222	37.2		42.7	319	57.3		22.5
2	122	28.0	194	49.4		35.2	231	13.4		32.4	237	39.1		42.8	334	59.8		22.5
3	137	30.4	209	48.4		34.9	246	13.9		32.7	252	41.0		42.9	350	02.4		22.6
4	152	32.9	224	47.5		34.6	261	14.5		32.9	267	42.9		43.0	5	04.9		22.6
5	167	35.3	239	46.6	-23	34.3	276	15.0	-22	33.2	282	44.8	-20	43.1	20	07.4	+14	22.6
6	182	37.8	254	45.6	-23	33.9	291	15.5	-22	33.4	297	46.7	-20	43.2	35	10.0	+14	22.7
7	197	40.3	269	44.7		33.6	306	16.1		33.7	312	48.6		43.3	50	12.5		22.7
8	212	42.7	284	43.7		33.3	321	16.6		34.0	327	50.5		43.4	65	15.1		22.7
9	227	45.2	299	42.8		33.0	336	17.2		34.2	342	52.5		43.5	80	17.6		22.8
10	242	47.7	314	41.9		32.7	351	17.7		34.5	357	54.4		43.6	95	20.1		22.8
11	257	50.1	329	40.9	-23	32.4	6	18.2	-22	34.7	12	56.3	-20	43.6	110	22.7	+14	22.8
12	272	52.6	344	40.0	-23	32.1	21	18.8	-22	35.0	27	58.2	-20	43.7	125	25.2	+14	22.9
13	287	55.1	359	39.0		31.7	36	19.3		35.2	43	00.1		43.8	140	27.8		22.9
14	302	57.5	14	38.1		31.4	51	19.9		35.5	58	02.0		43.9	155	30.3		22.9
15	318	00.0	29	37.2		31.1	66	20.4		35.7	73	03.9		44.0	170	32.9		23.0
16	333	02.5	44	36.2		30.8	81	20.9		36.0	88	05.8		44.1	185	35.4		23.0
17	348	04.9	59	35.3	-23	30.5	96	21.5	-22	36.2	103	07.7	-20	44.2	200	37.9	+14	23.1
18	3	07.4	74	34.3	-23	30.1	111	22.0	-22	36.5	118	09.6	-20	44.3	215	40.5	+14	23.1
19	18	09.8	89	33.4		29.8	126	22.5		36.7	133	11.5		44.4	230	43.0		23.1
20	33	12.3	104	32.5		29.5	141	23.1		37.0	148	13.4		44.5	245	45.6		23.2
21	48	14.8	119	31.5		29.1	156	23.6		37.2	163	15.3		44.5	260	48.1		23.2
22	63	17.2	134	30.6		28.8	171	24.2		37.5	178	17.2		44.6	275	50.7		23.2
23	78	19.7	149	29.7		28.5	186	24.7		37.7	193	19.2		44.7	290	53.2		23.3
24	93	22.2	164	28.7	-23	28.2	201	25.2	-22	38.0	208	21.1	-20	44.8	305	55.8	+14	23.3
Dif	—		-9		+3		+5		-3		+19		-1		+25		0	

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'3 PMG: 12 ^h 00 ^m 0			Edad: 4 ^d 4 PHE { 4 ^h : 58'9 12 ^h : 59'0 20 ^h : 59'0 PMG: 16 ^h 26 ^m R°: 48 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	m
0	180	03.3	-23	24.3	121	36.7	-13	27.5	60 N	7 09	8 06	9 03	11 33	**	21 40 99
1	195	03.0		24.3	136	06.6 ¹⁰⁹	-13	12.5 ¹⁵⁰	58	7 01	7 54	8 46	27	3	45 95
2	210	02.7		24.2	150	36.6 ¹¹⁰	-12	57.5 ¹⁵⁰	56	6 55	44	31	21	7	49 91
3	225	02.4		24.2	165	06.7 ¹¹¹		42.4 ¹⁵¹	54	48	35	19	17	9	52 88
4	240	02.1		24.1	179	36.8 ¹¹¹		27.2 ¹⁵²	52	43	27	8 07	12	12	56 85
5	255	01.8	-23	24.0	194	06.9 ¹¹¹	-12	11.9 ¹⁵³	50	6 38	7 19	7 58	11 08	15	21 59 82
6	270	01.4	-23	24.0	208	37.2 ¹¹³	-11	56.6 ¹⁵³	45	6 26	7 03	7 37	11 00	20	22 05 77
7	285	01.1		23.9	223	07.4 ¹¹²		41.2 ¹⁵⁴	40	15	6 49	20	10 52	25	10 72
8	300	00.8		23.9	237	37.8 ¹¹⁴		25.8 ¹⁵⁴	35	6 06	38	7 06	46	29	15 68
9	315	00.5		23.8	252	08.1 ¹¹³	-11	10.2 ¹⁵⁶	30	5 57	27	6 53	41	31	19 64
10	330	00.2		23.7	266	38.6 ¹¹⁵	-10	54.7 ¹⁵⁵	20	41	6 08	32	31	38	26 58
11	344	59.9	-23	23.7	281	09.1 ¹¹⁵	-10	39.0 ¹⁵⁷	10 N	5 25	5 51	6 14	10 23	43	22 32 52
12	359	59.6	-23	23.6	295	39.6 ¹¹⁵	-10	23.4 ¹⁵⁶	0	5 08	5 34	5 56	10 15	48	22 37 48
13	14	59.3		23.5	310	10.2 ¹¹⁶	-10	07.6 ¹⁵⁸	10 S	4 49	5 16	39	10 06	53	43 42
14	29	59.0		23.4	324	40.8 ¹¹⁶	-9	51.8 ¹⁵⁸	20	4 26	4 55	5 20	9 58	58	49 37
15	44	58.7		23.4	339	11.4 ¹¹⁶		36.0 ¹⁵⁸	30	3 57	30	4 58	48	65	55 32
16	59	58.3		23.3	353	42.2 ¹¹⁸		20.1 ¹⁵⁹	35	38	4 15	45	42	68	22 59 28
17	74	58.0	-23	23.2	8	12.9 ¹¹⁷	-9	04.1 ¹⁶⁰	40	3 15	3 57	4 30	9 36	72	23 03 24
18	89	57.7	-23	23.2	22	43.7 ¹¹⁸	-8	48.1 ¹⁶⁰	45	2 44	3 34	4 12	9 28	77	23 08 20
19	104	57.4		23.1	37	14.5 ¹¹⁸		32.1 ¹⁶⁰	50	1 59	3 04	3 49	19	83	14 14
20	119	57.1		23.0	51	45.4 ¹¹⁹	-8	16.0 ¹⁶¹	52	1 31	2 49	38	15	85	17 11
21	134	56.8		22.9	66	16.3 ¹¹⁹	-7	59.8 ¹⁶²	54	0 44	31	26	10	89	19 9
22	149	56.5		22.9	80	47.3 ¹²⁰		43.7 ¹⁶¹	56	** **	2 09	3 12	9 05	92	23 6
23	164	56.2		22.8	95	18.2 ¹¹⁹		27.4 ¹⁶³	58	** **	1 39	2 55	8 59	96	26 3
24	179	55.9	-23	22.7	109	49.3 ¹²¹	-7	11.2 ¹⁶²	60 S	** **	0 48	2 34	8 52	100	23 30 **

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 17 ^h 43 ^m 6		Mag: -3.9 PMG: 13 ^h 03 ^m		Mag: +1.5 PMG: 10 ^h 34 ^m		Mag: -1.8 PMG: 10 ^h 05 ^m		Mag: +0.3 PMG: 3 ^h 36 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	93	22.2	164	28.7	201	25.2	208	21.1	305	55.8
1	108	24.6	179	27.8	216	25.8	223	23.0	320	58.3
2	123	27.1	194	26.9	231	26.3	238	24.9	336	00.8
3	138	29.6	209	25.9	246	26.8	253	26.8	351	03.4
4	153	32.0	224	25.0	261	27.4	268	28.7	6	05.9
5	168	34.5	239	24.1	276	27.9	283	30.6	21	08.5
6	183	36.9	254	23.1	291	28.4	298	32.5	36	11.0
7	198	39.4	269	22.2	306	29.0	313	34.4	51	13.6
8	213	41.9	284	21.3	321	29.5	328	36.3	66	16.1
9	228	44.3	299	20.3	336	30.0	343	38.2	81	18.7
10	243	46.8	314	19.4	351	30.6	358	40.1	96	21.2
11	258	49.3	329	18.5	6	31.1	13	42.1	111	23.8
12	273	51.7	344	17.5	21	31.6	28	44.0	126	26.3
13	288	54.2	359	16.6	36	32.2	43	45.9	141	28.9
14	303	56.7	14	15.7	51	32.7	58	47.8	156	31.4
15	318	59.1	29	14.7	66	33.2	73	49.7	171	33.9
16	334	01.6	44	13.8	81	33.8	88	51.6	186	36.5
17	349	04.1	59	12.9	96	34.3	103	53.5	201	39.0
18	4	06.5	74	11.9	111	34.8	118	55.4	216	41.6
19	19	09.0	89	11.0	126	35.4	133	57.3	231	44.1
20	34	11.4	104	10.1	141	35.9	148	59.2	246	46.7
21	49	13.9	119	09.1	156	36.4	164	01.1	261	49.2
22	64	16.4	134	08.2	171	37.0	179	03.1	276	51.8
23	79	18.8	149	07.3	186	37.5	194	05.0	291	54.3
24	94	21.3	164	06.4	201	38.0	209	06.9	306	56.9
Dif	—		-9	+3	+5	-2	+19	-1	+25	0

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna					
	SD: 16:3 PMG: 12 ^h 00 ^m 5			Edad: 5 ^d 4 PHE { SD: 16:1 PMG: 17 ^h 14 ^m 4 ^h : 59/1 12 ^h : 59/1 20 ^h : 59/2 R°: 47 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m	m	h m	m			
0	179	55.9	-23	22.7	109	49.3	-7	11.2	60 N	14 58	15 55	16 52	11 32	**	23 19 99			
1	194	55.6		22.6	124	20.3 ¹²⁰	-6	54.9 ¹⁶³	58	15 15	16 07	16 59	30	3	20 94			
2	209	55.2		22.5	138	51.4 ¹²¹		38.5 ¹⁶⁴	56	30	17	17 06	28	6	20 91			
3	224	54.9		22.5	153	22.5 ¹²¹		22.2 ¹⁶³	54	42	26	12	26	9	20 88			
4	239	54.6		22.4	167	53.6 ¹²¹	-6	05.8 ¹⁶⁴	52	15 53	34	18	24	12	21 85			
5	254	54.3	-23	22.3	182	24.8 ¹²²	-5	49.3 ¹⁶⁵	50	16 03	16 42	17 23	11 23	14	23 21 82			
6	269	54.0	-23	22.2	196	56.0 ¹²²	-5	32.8 ¹⁶⁵	45	16 24	16 58	17 35	11 20	19	23 22 76			
7	284	53.7		22.1	211	27.2 ¹²²	-5	16.3 ¹⁶⁵	40	41	17 11	45	17	24	22 72			
8	299	53.4		22.1	225	58.4 ¹²²	-4	59.8 ¹⁶⁵	35	16 55	23	17 55	15	27	23 67			
9	314	53.1		22.0	240	29.7 ¹²³		43.3 ¹⁶⁵	30	17 07	34	18 03	12	31	23 64			
10	329	52.8		21.9	255	01.0 ¹²³		26.7 ¹⁶⁶	20	28	17 52	20	09	37	24 58			
11	344	52.5	-23	21.8	269	32.3 ¹²³	-4	10.1 ¹⁶⁶	10 N	17 47	18 10	18 36	11 06	42	23 24 53			
12	359	52.1	-23	21.7	284	03.6 ¹²³	-3	53.5 ¹⁶⁶	0	18 04	18 27	18 53	11 03	47	23 25 47			
13	14	51.8		21.6	298	34.9 ¹²³		36.8 ¹⁶⁷	10 S	22	18 45	19 12	10 59	53	25 43			
14	29	51.5		21.5	313	06.3 ¹²⁴		20.1 ¹⁶⁷	20	18 41	19 05	19 35	56	58	26 37			
15	44	51.2		21.4	327	37.7 ¹²⁴	-3	03.4 ¹⁶⁷	30	19 03	30	20 04	53	64	27 31			
16	59	50.9		21.3	342	09.0 ¹²³	-2	46.7 ¹⁶⁷	35	16	19 45	22	50	68	27 27			
17	74	50.6	-23	21.3	356	40.4 ¹²⁴	-2	30.0 ¹⁶⁷	40	19 31	20 04	20 45	10 48	72	23 27 24			
18	89	50.3	-23	21.2	11	11.8 ¹²⁴	-2	13.3 ¹⁶⁷	45	19 49	20 26	21 16	10 45	77	23 28 19			
19	104	50.0		21.1	25	43.2 ¹²⁴	-1	56.5 ¹⁶⁸	50	20 11	20 56	22 01	42	82	28 14			
20	119	49.7		21.0	40	14.7 ¹²⁵		39.8 ¹⁶⁷	52	22	21 11	22 29	40	85	28 12			
21	134	49.4		20.9	54	46.1 ¹²⁴		23.0 ¹⁶⁸	54	34	29	23 14	39	87	28 9			
22	149	49.1		20.8	69	17.5 ¹²⁴	-1	06.2 ¹⁶⁸	56	20 48	21 51	** **	37	91	29 6			
23	164	48.7		20.7	83	48.9 ¹²⁴	-0	49.5 ¹⁶⁷	58	21 05	22 20	** **	35	94	29 3			
24	179	48.4	-23	20.6	98	20.4 ¹²⁵	-0	32.7 ¹⁶⁸	60 S	21 26	23 10	** **	10 32	99	23 29 **			
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 17 ^h 39 ^m 7		Mag: -3.9 PMG: 13 ^h 04 ^m			Mag: +1.5 PMG: 10 ^h 33 ^m			Mag: -1.8 PMG: 10 ^h 02 ^m			Mag: +0.3 PMG: 3 ^h 32 ^m						
	hG ♈		hG ♀			hG ♂			hG ♃			hG ♄						
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	94	21.3	164	06.4	-23	19.8	201	38.0	-22	43.8	209	06.9	-20	47.0	306	56.9		
1	109	23.8	179	05.4		19.4	216	38.6		44.0	224	08.8		47.0	321	59.4		
2	124	26.2	194	04.5		19.1	231	39.1		44.3	239	10.7		47.1	337	02.0		
3	139	28.7	209	03.6		18.7	246	39.6		44.5	254	12.6		47.2	352	04.5		
4	154	31.2	224	02.7		18.3	261	40.1		44.8	269	14.5		47.3	7	07.1		
5	169	33.6	239	01.7	-23	18.0	276	40.7	-22	45.0	284	16.4	-20	47.4	22	09.6		
6	184	36.1	254	00.8	-23	17.6	291	41.2	-22	45.2	299	18.3	-20	47.5	37	12.2		
7	199	38.6	268	59.9		17.2	306	41.7		45.5	314	20.2		47.6	52	14.7		
8	214	41.0	283	58.9		16.8	321	42.3		45.7	329	22.2		47.7	67	17.3		
9	229	43.5	298	58.0		16.5	336	42.8		45.9	344	24.1		47.7	82	19.8		
10	244	45.9	313	57.1		16.1	351	43.3		46.2	359	26.0		47.8	97	22.4		
11	259	48.4	328	56.2	-23	15.7	6	43.9	-22	46.4	14	27.9	-20	47.9	112	24.9		
12	274	50.9	343	55.2	-23	15.3	21	44.4	-22	46.6	29	29.8	-20	48.0	127	27.5		
13	289	53.3	358	54.3		15.0	36	44.9		46.9	44	31.7		48.1	142	30.0		
14	304	55.8	13	53.4		14.6	51	45.4		47.1	59	33.6		48.2	157	32.6		
15	319	58.3	28	52.5		14.2	66	46.0		47.3	74	35.5		48.3	172	35.1		
16	335	00.7	43	51.6		13.8	81	46.5		47.6	89	37.4		48.4	187	37.7		
17	350	03.2	58	50.6	-23	13.4	96	47.0	-22	47.8	104	39.3	-20	48.4	202	40.2		
18	5	05.7	73	49.7	-23	13.1	111	47.6	-22	48.0	119	41.3	-20	48.5	217	42.8		
19	20	08.1	88	48.8		12.7	126	48.1		48.3	134	43.2		48.6	232	45.3		
20	35	10.6	103	47.9		12.3	141	48.6		48.5	149	45.1		48.7	247	47.9		
21	50	13.0	118	46.9		11.9	156	49.1		48.7	164	47.0		48.8	262	50.5		
22	65	15.5	133	46.0		11.5	171	49.7		49.0	179	48.9		48.9	277	53.0		
23	80	18.0	148	45.1		11.1	186	50.2		49.2	194	50.8		49.0	292	55.6		
24	95	20.4	163	44.2	-23	10.7	201	50.7	-22	49.4	209	52.7	-20	49.1	307	58.1		
Dif	—		-9			+4	+5			-2			+19			-1		
													+26					

UT	SOL			 LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16:3			Edad: 6 ^d 4	PHE {	4 ^h : 59:2 12 ^h : 59:2 20 ^h : 59:2									
	PMG: 12 ^h 01 ^m 0							SD: 16:1			SD: 18 ^h 01 ^m		R ^o : 48 ^m		
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R ^o	Hora	R ^o
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	m
0	179	48.4	-23	98	20.4	-0	32.7	60 N	7 09	8 06	9 04	11 31	0	** ** *	** ** *
1	194	48.1		112	51.8 ¹²⁴	-0	15.9 ¹⁶⁸	58	7 02	7 54	8 46	33 3		** ** *	** ** *
2	209	47.8		127	23.2 ¹²⁴	+0	00.9 ¹⁶⁸	56	6 55	44	32	34 6		** ** *	** ** *
3	224	47.5		141	54.6 ¹²⁴		17.7 ¹⁶⁸	54	49	35	19	35 9		** ** *	** ** *
4	239	47.2		156	26.1 ¹²⁵		34.5 ¹⁶⁸	52	43	27	8 08	36 12		** ** *	** ** *
5	254	46.9	-23	170	57.5 ¹²⁴	+0	51.3 ¹⁶⁸	50	6 38	7 20	7 58	11 37	14	** ** *	** ** *
6	269	46.6	-23	185	28.9 ¹²⁴	+1	08.1 ¹⁶⁸	45	6 26	7 04	7 37	11 39	20	** ** *	** ** *
7	284	46.3		200	00.3 ¹²⁴		24.9 ¹⁶⁸	40	16	6 50	21	41 24		** ** *	** ** *
8	299	46.0		214	31.7 ¹²⁴		41.7 ¹⁶⁸	35	6 07	38	7 07	42 28		** ** *	** ** *
9	314	45.7		229	03.1 ¹²⁴	+1	58.5 ¹⁶⁸	30	5 58	28	6 54	43 32		** ** *	** ** *
10	329	45.4		243	34.4 ¹²³	+2	15.2 ¹⁶⁷	20	42	6 09	33	46 37		** ** *	** ** *
11	344	45.1	-23	258	05.8 ¹²⁴	+2	32.0 ¹⁶⁸	10 N	5 25	5 52	6 15	11 48	43	** ** *	** ** *
12	359	44.7	-23	272	37.1 ¹²³	+2	48.7 ¹⁶⁷	0	5 09	5 35	5 57	11 50	48	** ** *	** ** *
13	14	44.4		287	08.5 ¹²⁴	+3	05.5 ¹⁶⁸	10 S	4 50	5 17	40	52 53		** ** *	** ** *
14	29	44.1		301	39.8 ¹²³		22.2 ¹⁶⁷	20	4 27	4 56	5 21	54 58		** ** *	** ** *
15	44	43.8		316	11.0 ¹²²		38.9 ¹⁶⁷	30	3 58	31	4 59	57 64	23 58	32	
16	59	43.5		330	42.3 ¹²³	+3	55.6 ¹⁶⁷	35	39	4 16	46	11 58	68	54	30
17	74	43.2	-23	345	13.6 ¹²³	+4	12.2 ¹⁶⁶	40	3 16	3 58	4 31	12 00	72	23 51	25
18	89	42.9	-23	359	44.8 ¹²²	+4	28.9 ¹⁶⁷	45	2 46	3 36	4 13	12 02	77	23 47	21
19	104	42.6		14	16.0 ¹²²	+4	45.5 ¹⁶⁶	50	2 01	3 06	3 50	04 83		42 15	
20	119	42.3		28	47.1 ¹²¹	+5	02.1 ¹⁶⁶	52	1 33	2 51	40	05 86		40 13	
21	134	42.0		43	18.3 ¹²²		18.7 ¹⁶⁶	54	0 48	33	27	06 89		37 10	
22	149	41.7		57	49.4 ¹²¹		35.2 ¹⁶⁵	56	** ** *	2 11	3 13	08 92		35 7	
23	164	41.4		72	20.5 ¹²¹	+5	51.8 ¹⁶⁶	58	** ** *	1 41	2 56	09 96		32 3	
24	179	41.1	-23	86	51.5 ¹²⁰	+6	08.3 ¹⁶⁵	60 S	** ** *	0 52	2 36	12 11	100	23 28	0

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 17 ^h 35 ^m 7		Mag: -3.9 PMG: 13 ^h 06 ^m		Mag: +1.5 PMG: 10 ^h 32 ^m		Mag: -1.8 PMG: 9 ^h 59 ^m		Mag: +0.3 PMG: 3 ^h 28 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	95	20.4	163	44.2	-23	10.7	201	50.7	-22	49.4	209	52.7	-20	49.1	307	58.1	+14	25.1
1	110	22.9	178	43.3		10.3	216	51.2		49.7	224	54.6		49.1	323	00.7		25.2
2	125	25.4	193	42.3		09.9	231	51.8		49.9	239	56.5		49.2	338	03.2		25.2
3	140	27.8	208	41.4		09.5	246	52.3		50.1	254	58.5		49.3	353	05.8		25.3
4	155	30.3	223	40.5		09.1	261	52.8		50.4	270	00.4		49.4	8	08.3		25.3
5	170	32.8	238	39.6	-23	08.7	276	53.4	-22	50.6	285	02.3	-20	49.5	23	10.9	+14	25.3
6	185	35.2	253	38.7	-23	08.3	291	53.9	-22	50.8	300	04.2	-20	49.6	38	13.4	+14	25.4
7	200	37.7	268	37.8		07.9	306	54.4		51.0	315	06.1		49.7	53	16.0		25.4
8	215	40.2	283	36.8		07.5	321	54.9		51.3	330	08.0		49.8	68	18.5		25.5
9	230	42.6	298	35.9		07.1	336	55.5		51.5	345	09.9		49.8	83	21.1		25.5
10	245	45.1	313	35.0		06.7	351	56.0		51.7	0	11.8		49.9	98	23.7		25.5
11	260	47.5	328	34.1	-23	06.3	6	56.5	-22	51.9	15	13.8	-20	50.0	113	26.2	+14	25.6
12	275	50.0	343	33.2	-23	05.9	21	57.0	-22	52.2	30	15.7	-20	50.1	128	28.8	+14	25.6
13	290	52.5	358	32.3		05.5	36	57.6		52.4	45	17.6		50.2	143	31.3		25.7
14	305	54.9	13	31.3		05.1	51	58.1		52.6	60	19.5		50.3	158	33.9		25.7
15	320	57.4	28	30.4		04.7	66	58.6		52.8	75	21.4		50.4	173	36.4		25.7
16	335	59.9	43	29.5		04.3	81	59.1		53.1	90	23.3		50.5	188	39.0		25.8
17	351	02.3	58	28.6	-23	03.9	96	59.7	-22	53.3	105	25.2	-20	50.5	203	41.5	+14	25.8
18	6	04.8	73	27.7	-23	03.4	112	00.2	-22	53.5	120	27.1	-20	50.6	218	44.1	+14	25.9
19	21	07.3	88	26.8		03.0	127	00.7		53.7	135	29.1		50.7	233	46.7		25.9
20	36	09.7	103	25.9		02.6	142	01.2		54.0	150	31.0		50.8	248	49.2		25.9
21	51	12.2	118	25.0		02.2	157	01.7		54.2	165	32.9		50.9	263	51.8		26.0
22	66	14.7	133	24.0		01.8	172	02.3		54.4	180	34.8		51.0	278	54.3		26.0
23	81	17.1	148	23.1		01.4	187	02.8		54.6	195	36.7		51.1	293	56.9		26.1
24	96	19.6	163	22.2	-23	00.9	202	03.3	-22	54.8	210	38.6	-20	51.1	308	59.4	+14	26.1
Dif	—		-9	+4			+5	-2			+19	-1			+26			

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna						
	SD: 16:3 PMG: 12 ^h 01 ^m 5			Edad: 7 ^d 4 PHE { 4 ^h : 59/2 12 ^h : 59/2 20 ^h : 59/2 R°: 51 ^m																
	hG ☉	Dec		hG ☾	Dif				Dec		Dif		Civil	Náutico	Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	m	h	m	m
0	179	41.1	-23	18.0	86	51.5	+6	08.3	60 N	15 00	15 57	16 54	11 31	0	0 58	102				
1	194	40.8		17.9	101	22.5 ¹²⁰		24.7 ¹⁶⁴	58	17	16 09	17 01	36	4	54	98				
2	209	40.4		17.8	115	53.5 ¹²⁰		41.2 ¹⁶⁵	56	31	19	08	40	8	51	93				
3	224	40.1		17.7	130	24.5 ¹²⁰	+6	57.6 ¹⁶⁴	54	44	28	14	44	11	48	90				
4	239	39.8		17.5	144	55.4 ¹¹⁹	+7	13.9 ¹⁶³	52	15 55	36	20	48	14	46	86				
5	254	39.5	-23	17.4	159	26.2 ¹¹⁸	+7	30.3 ¹⁶⁴	50	16 05	16 43	17 25	11 51	17	0 43	84				
6	269	39.2	-23	17.3	173	57.1 ¹¹⁹	+7	46.6 ¹⁶³	45	16 25	16 59	17 36	11 59	22	0 38	78				
7	284	38.9		17.2	188	27.8 ¹¹⁷	+8	02.8 ¹⁶²	40	42	17 13	47	12 05	27	34	73				
8	299	38.6		17.0	202	58.6 ¹¹⁸		19.0 ¹⁶²	35	16 56	24	17 56	10	31	30	69				
9	314	38.3		16.9	217	29.3 ¹¹⁷		35.2 ¹⁶²	30	17 08	35	18 05	15	34	27	66				
10	329	38.0		16.8	232	00.0 ¹¹⁷	+8	51.3 ¹⁶¹	20	30	17 54	21	23	40	22	59				
11	344	37.7	-23	16.7	246	30.6 ¹¹⁶	+9	07.4 ¹⁶¹	10 N	17 48	18 11	18 37	12 31	45	0 17	54				
12	359	37.4	-23	16.5	261	01.1 ¹¹⁵	+9	23.4 ¹⁶⁰	0	18 05	18 28	18 54	12 38	50	0 12	49				
13	14	37.1		16.4	275	31.6 ¹¹⁵		39.4 ¹⁶⁰	10 S	23	18 46	19 13	45	55	08	44				
14	29	36.8		16.3	290	02.1 ¹¹⁵	+9	55.4 ¹⁶⁰	20	18 42	19 06	19 35	12 52	61	0 03	39				
15	44	36.5		16.2	304	32.5 ¹¹⁴	+10	11.3 ¹⁵⁹	30	19 03	31	20 04	13 01	66	** ** *	**				
16	59	36.2		16.0	319	02.9 ¹¹⁴		27.1 ¹⁵⁸	35	16	19 46	23	06	70	** ** *	**				
17	74	35.9	-23	15.9	333	33.2 ¹¹³	+10	42.9 ¹⁵⁸	40	19 31	20 04	20 46	13 12	74	** ** *	**				
18	89	35.6	-23	15.8	348	03.4 ¹¹²	+10	58.6 ¹⁵⁷	45	19 49	20 27	21 16	13 19	79	** ** *	**				
19	104	35.2		15.6	2	33.6 ¹¹²	+11	14.3 ¹⁵⁷	50	20 12	20 56	22 01	27	85	23	57	19			
20	119	34.9		15.5	17	03.8 ¹¹²		29.9 ¹⁵⁶	52	22	21 11	22 28	31	88	53	15				
21	134	34.6		15.4	31	33.8 ¹¹⁰	+11	45.4 ¹⁵⁵	54	35	29	23 12	35	91	47	13				
22	149	34.3		15.2	46	03.9 ¹¹¹	+12	00.9 ¹⁵⁵	56	20 49	21 50	** ** *	40	95	42	9				
23	164	34.0		15.1	60	33.8 ¹⁰⁹		16.3 ¹⁵⁴	58	21 05	22 20	** ** *	45	99	35	5				
24	179	33.7	-23	15.0	75	03.7 ¹⁰⁹	+12	31.7 ¹⁵⁴	60 S	21 25	23 07	** ** *	13 51	104	23	28	0			
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO							
	PMG: 17 ^h 31 ^m 8			Mag: -3.9 PMG: 13 ^h 07 ^m			Mag: +1.5 PMG: 10 ^h 31 ^m			Mag: -1.8 PMG: 9 ^h 56 ^m			Mag: +0.3 PMG: 3 ^h 23 ^m							
	hG ♈		Dec	hG ♀		Dec	hG ♂		Dec	hG ♃		Dec	hG ♄		Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	96	19.6	163	22.2	-23	00.9	202	03.3	-22	54.8	210	38.6	-20	51.1	308	59.4	+14	26.1		
1	111	22.0	178	21.3		00.5	217	03.8		55.1	225	40.5		51.2	324	02.0		26.1		
2	126	24.5	193	20.4	-23	00.1	232	04.4		55.3	240	42.4		51.3	339	04.6		26.2		
3	141	27.0	208	19.5	-22	59.7	247	04.9		55.5	255	44.4		51.4	354	07.1		26.2		
4	156	29.4	223	18.6		59.2	262	05.4		55.7	270	46.3		51.5	9	09.7		26.3		
5	171	31.9	238	17.7	-22	58.8	277	05.9	-22	55.9	285	48.2	-20	51.6	24	12.2	+14	26.3		
6	186	34.4	253	16.8	-22	58.4	292	06.4	-22	56.2	300	50.1	-20	51.7	39	14.8	+14	26.3		
7	201	36.8	268	15.8		58.0	307	07.0		56.4	315	52.0		51.7	54	17.3		26.4		
8	216	39.3	283	14.9		57.5	322	07.5		56.6	330	53.9		51.8	69	19.9		26.4		
9	231	41.8	298	14.0		57.1	337	08.0		56.8	345	55.8		51.9	84	22.5		26.5		
10	246	44.2	313	13.1		56.7	352	08.5		57.0	0	57.8		52.0	99	25.0		26.5		
11	261	46.7	328	12.2	-22	56.2	7	09.0	-22	57.2	15	59.7	-20	52.1	114	27.6	+14	26.6		
12	276	49.1	343	11.3	-22	55.8	22	09.6	-22	57.5	31	01.6	-20	52.2	129	30.1	+14	26.6		
13	291	51.6	358	10.4		55.3	37	10.1		57.7	46	03.5		52.3	144	32.7		26.6		
14	306	54.1	13	09.5		54.9	52	10.6		57.9	61	05.4		52.4	159	35.3		26.7		
15	321	56.5	28	08.6		54.5	67	11.1		58.1	76	07.3		52.4	174	37.8		26.7		
16	336	59.0	43	07.7		54.0	82	11.6		58.3	91	09.2		52.5	189	40.4		26.8		
17	352	01.5	58	06.8	-22	53.6	97	12.2	-22	58.5	106	11.2	-20	52.6	204	42.9	+14	26.8		
18	7	03.9	73	05.9	-22	53.1	112	12.7	-22	58.8	121	13.1	-20	52.7	219	45.5	+14	26.8		
19	22	06.4	88	05.0		52.7	127	13.2		59.0	136	15.0		52.8	234	48.1		26.9		
20	37	08.9	103	04.1		52.2	142	13.7		59.2	151	16.9		52.9	249	50.6		26.9		
21	52	11.3	118	03.2		51.8	157	14.2		59.4	166	18.8		52.9	264	53.2		27.0		
22	67	13.8	133	02.3		51.4	172	14.8		59.6	181	20.7		53.0	279	55.7		27.0		
23	82	16.3	148	01.4		50.9	187	15.3	-22	59.8	196	22.6		53.1	294	58.3		27.1		
24	97	18.7	163	00.5	-22	50.5	202	15.8	-23	00.0	211	24.6	-20	53.2	310	00.9	+14	27.1		
Dif	—		-9		+4		+5		-2		+19		-1		+26		0			

UT	SOL			☾ LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 16:3 PMG: 12 ^h 02 ^m 0			Edad: 8 ^d 4 PHE { SD: 16:1 PMG: 19 ^h 40 ^m	4 ^h : 59:2 12 ^h : 59:1 20 ^h : 59:1 R°: 54 ^m	Náutico	Civil		Hora	R°		Hora	R°						
	hG ☉	Dec	hG ☾											Dif	Dec	Dif			
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	h	m	
0	179	33.7	-23	15.0	75	03.7	+12	31.7	60 N	7 10	8 06	9 03	11 31	1	2	40	106		
1	194	33.4		14.8	89	33.6 ¹⁰⁹	+12	47.0 ¹⁵³	58	7 02	7 55	8 46	40	7	32	100			
2	209	33.1		14.7	104	03.3 ¹⁰⁷	+13	02.2 ¹⁵²	56	6 56	45	32	48	11	24	97			
3	224	32.8		14.5	118	33.0 ¹⁰⁷		17.4 ¹⁵²	54	49	36	19	11 55	16	18	92			
4	239	32.5		14.4	133	02.7 ¹⁰⁷		32.5 ¹⁵¹	52	44	27	8 08	12 02	18	12	89			
5	254	32.2	-23	14.3	147	32.2 ¹⁰⁵	+13	47.5 ¹⁵⁰	50	6 39	7 20	7 58	12 08	21	2	07	86		
6	269	31.9	-23	14.1	162	01.7 ¹⁰⁵	+14	02.4 ¹⁴⁹	45	6 27	7 04	7 38	12 21	27	1	56	80		
7	284	31.6		14.0	176	31.2 ¹⁰⁵		17.3 ¹⁴⁹	40	17	6 51	21	32	31	47	75			
8	299	31.3		13.8	191	00.5 ¹⁰³		32.1 ¹⁴⁸	35	6 07	39	7 07	41	35	39	71			
9	314	31.0		13.7	205	29.8 ¹⁰³	+14	46.8 ¹⁴⁷	30	5 59	29	6 55	12 49	39	33	67			
10	329	30.7		13.6	219	59.0 ¹⁰²	+15	01.4 ¹⁴⁶	20	42	6 10	34	13 03	44	21	61			
11	344	30.4	-23	13.4	234	28.2 ¹⁰²	+15	15.9 ¹⁴⁵	10 N	5 26	5 53	6 16	13 16	49	1	11	56		
12	359	30.1	-23	13.3	248	57.3 ¹⁰¹	+15	30.4 ¹⁴⁵	0	5 10	5 36	5 58	13 28	53	1	01	52		
13	14	29.8		13.1	263	26.3 ¹⁰⁰		44.8 ¹⁴⁴	10 S	4 51	5 18	41	40	57	0	52	47		
14	29	29.5		13.0	277	55.2 ⁹⁹	+15	59.1 ¹⁴³	20	4 28	4 57	22	13 53	62	42	41			
15	44	29.2		12.8	292	24.0 ⁹⁸	+16	13.3 ¹⁴²	30	3 59	33	5 00	14 07	69	30	36			
16	59	28.9		12.7	306	52.8 ⁹⁸		27.4 ¹⁴¹	35	41	4 18	4 47	16	72	24	32			
17	74	28.6	-23	12.5	321	21.5 ⁹⁷	+16	41.4 ¹⁴⁰	40	3 18	3 59	4 32	14 26	76	0	16	29		
18	89	28.3	-23	12.4	335	50.1 ⁹⁶	+16	55.3 ¹³⁹	45	2 48	3 37	4 14	14 38	80	0	08	24		
19	104	28.0		12.2	350	18.7 ⁹⁶	+17	09.1 ¹³⁸	50	2 03	3 08	3 52	52	87	***	***	***		
20	119	27.7		12.1	4	47.1 ⁹⁴		22.9 ¹³⁸	52	1 36	2 53	41	14 59	90	***	***	***		
21	134	27.4		11.9	19	15.5 ⁹⁴		36.5 ¹³⁶	54	0 52	35	29	15 06	94	***	***	***		
22	149	27.0		11.8	33	43.8 ⁹³	+17	50.0 ¹³⁵	56	***	***	2 13	3 15		15	97	23	51	13
23	164	26.7		11.6	48	12.0 ⁹²	+18	03.5 ¹³⁵	58	***	***	1 44	2 59	24	103	40	9		
24	179	26.4	-23	11.4	62	40.1 ⁹¹	+18	16.8 ¹³³	60 S	***	***	0 57	2 38	15	35	110	23	28	2

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 17 ^h 27 ^m 9		Mag: -3.9 PMG: 13 ^h 09 ^m			Mag: +1.5 PMG: 10 ^h 31 ^m			Mag: -1.8 PMG: 9 ^h 53 ^m			Mag: +0.3 PMG: 3 ^h 19 ^m						
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	97	18.7	163	00.5	-22	50.5	202	15.8	-23	00.0	211	24.6	-20	53.2	310	00.9	+14	27.1
1	112	21.2	177	59.6		50.0	217	16.3	-23	00.2	226	26.5		53.3	325	03.4		27.1
2	127	23.6	192	58.7		49.5	232	16.8		00.5	241	28.4		53.4	340	06.0		27.2
3	142	26.1	207	57.8		49.1	247	17.4		00.7	256	30.3		53.5	355	08.5		27.2
4	157	28.6	222	56.9		48.6	262	17.9		00.9	271	32.2		53.5	10	11.1		27.3
5	172	31.0	237	56.0	-22	48.2	277	18.4	-23	01.1	286	34.1	-20	53.6	25	13.7	+14	27.3
6	187	33.5	252	55.1	-22	47.7	292	18.9	-23	01.3	301	36.1	-20	53.7	40	16.2	+14	27.4
7	202	36.0	267	54.2		47.3	307	19.4		01.5	316	38.0		53.8	55	18.8		27.4
8	217	38.4	282	53.3		46.8	322	19.9		01.7	331	39.9		53.9	70	21.4		27.4
9	232	40.9	297	52.4		46.3	337	20.5		01.9	346	41.8		54.0	85	23.9		27.5
10	247	43.4	312	51.5		45.9	352	21.0		02.1	1	43.7		54.1	100	26.5		27.5
11	262	45.8	327	50.6	-22	45.4	7	21.5	-23	02.3	16	45.6	-20	54.1	115	29.0	+14	27.6
12	277	48.3	342	49.7	-22	45.0	22	22.0	-23	02.5	31	47.5	-20	54.2	130	31.6	+14	27.6
13	292	50.8	357	48.8		44.5	37	22.5		02.8	46	49.5		54.3	145	34.2		27.6
14	307	53.2	12	47.9		44.0	52	23.0		03.0	61	51.4		54.4	160	36.7		27.7
15	322	55.7	27	47.0		43.6	67	23.6		03.2	76	53.3		54.5	175	39.3		27.7
16	337	58.1	42	46.1		43.1	82	24.1		03.4	91	55.2		54.6	190	41.9		27.8
17	353	00.6	57	45.2	-22	42.6	97	24.6	-23	03.6	106	57.1	-20	54.6	205	44.4	+14	27.8
18	8	03.1	72	44.3	-22	42.1	112	25.1	-23	03.8	121	59.0	-20	54.7	220	47.0	+14	27.9
19	23	05.5	87	43.4		41.7	127	25.6		04.0	137	01.0		54.8	235	49.6		27.9
20	38	08.0	102	42.5		41.2	142	26.1		04.2	152	02.9		54.9	250	52.1		27.9
21	53	10.5	117	41.6		40.7	157	26.6		04.4	167	04.8		55.0	265	54.7		28.0
22	68	12.9	132	40.7		40.2	172	27.2		04.6	182	06.7		55.1	280	57.2		28.0
23	83	15.4	147	39.8		39.8	187	27.7		04.8	197	08.6		55.2	295	59.8		28.1
24	98	17.9	162	38.9	-22	39.3	202	28.2	-23	05.0	212	10.5	-20	55.2	311	02.4	+14	28.1
Dif	—		-9		+5		+5		-2		+19		-1		+26		0	

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 16 ^d 3			Edad: 9 ^d 4	PHE {	4 ^h : 59'0			12 ^h : 59'0	20 ^h : 58'9	R°: 58 ^m				
	PMG: 12 ^h 02 ^m 5														
	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	26.4	-23	62	40.1	+18	16.8	60 N	15 02	15 59	16 56	11 32	5	4 26	
1	194	26.1		77	08.2	91	30.0	58	19	16 11	17 03	47	12	12 104	
2	209	25.8		91	36.1	89	43.2	56	33	21	10	11 59	18	4 01 97	
3	224	25.5		106	04.0	89	+18 56.2	54	46	30	16	12 11	22	3 50 93	
4	239	25.2		120	31.8	88	+19 09.1	52	15 57	38	21	20	26	41 90	
5	254	24.9	-23	134	59.5	87	+19 21.9	50	16 07	16 45	17 26	12 29	29	3 33 86	
6	269	24.6	-23	149	27.1	86	+19 34.5	45	16 27	17 01	17 38	12 48	34	3 16 80	
7	284	24.3		163	54.7	86	47.1	40	44	14	48	13 03	39	3 02 76	
8	299	24.0		178	22.1	84	+19 59.6	35	16 58	26	17 57	16	42	2 50 72	
9	314	23.7		192	49.5	84	+20 11.9	30	17 10	36	18 06	28	44	40 69	
10	329	23.4		207	16.8	83	24.1	20	31	17 55	22	13 47	50	22 64	
11	344	23.1	-23	221	44.0	82	+20 36.2	10 N	17 49	18 12	18 38	14 05	53	2 07 59	
12	359	22.8	-23	236	11.1	81	+20 48.2	0	18 06	18 29	18 55	14 21	57	1 53 55	
13	14	22.5		250	38.2	81	+21 00.0	10 S	24	18 47	19 14	37	61	39 50	
14	29	22.2		265	05.1	79	+21 11.7	20	18 42	19 07	19 36	14 55	64	23 47	
15	44	21.9		279	32.0	79	23.3	30	19 04	31	20 05	15 16	69	1 06 42	
16	59	21.6		293	58.7	77	34.8	35	17	19 47	23	28	71	0 56 39	
17	74	21.3	-23	308	25.4	77	+21 46.1	40	19 32	20 04	20 46	15 42	75	0 45 35	
18	89	21.0	-23	322	52.0	76	+21 57.3	45	19 50	20 27	21 16	15 58	80	0 32 30	
19	104	20.7		337	18.5	75	+22 08.4	50	20 12	20 56	22 00	16 19	85	16 24	
20	119	20.4		351	45.0	75	19.3	52	22	21 11	22 27	29	88	08 21	
21	134	20.1		6	11.3	73	30.1	54	34	28	23 09	40	92	0 00 18	
22	149	19.8		20	37.6	73	40.8	56	20 48	21 50	** ** *	16 52	97	** ** **	
23	164	19.5		35	03.7	71	+22 51.3	58	21 05	22 18	** ** *	17 07	103	23 49 16	
24	179	19.2	-23	49	29.8	71	+23 01.7	60 S	21 25	23 04	** ** *	17 25	113	23 30 8	
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG: 17 ^h 24 ^m 0		Mag: -3.9 PMG: 13 ^h 10 ^m		Mag: +1.5 PMG: 10 ^h 30 ^m		Mag: -1.8 PMG: 9 ^h 50 ^m		Mag: +0.3 PMG: 3 ^h 15 ^m						
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'					
0	98	17.9	162	38.9	202	28.2	212	10.5	311	02.4					
1	113	20.3	177	38.1	217	28.7	227	12.5	326	04.9					
2	128	22.8	192	37.2	232	29.2	242	14.4	341	07.5					
3	143	25.2	207	36.3	247	29.7	257	16.3	356	10.1					
4	158	27.7	222	35.4	262	30.2	272	18.2	11	12.6					
5	173	30.2	237	34.5	277	30.7	287	20.1	26	15.2					
6	188	32.6	252	33.6	292	31.3	302	22.1	41	17.8					
7	203	35.1	267	32.7	307	31.8	317	24.0	56	20.3					
8	218	37.6	282	31.8	322	32.3	332	25.9	71	22.9					
9	233	40.0	297	30.9	337	32.8	347	27.8	86	25.5					
10	248	42.5	312	30.0	352	33.3	2	29.7	101	28.0					
11	263	45.0	327	29.2	7	33.8	17	31.6	116	30.6					
12	278	47.4	342	28.3	22	34.3	32	33.6	131	33.2					
13	293	49.9	357	27.4	37	34.8	47	35.5	146	35.7					
14	308	52.4	12	26.5	52	35.4	62	37.4	161	38.3					
15	323	54.8	27	25.6	67	35.9	77	39.3	176	40.9					
16	338	57.3	42	24.7	82	36.4	92	41.2	191	43.4					
17	353	59.7	57	23.8	97	36.9	107	43.2	206	46.0					
18	9	02.2	72	23.0	112	37.4	122	45.1	221	48.6					
19	24	04.7	87	22.1	127	37.9	137	47.0	236	51.1					
20	39	07.1	102	21.2	142	38.4	152	48.9	251	53.7					
21	54	09.6	117	20.3	157	38.9	167	50.8	266	56.3					
22	69	12.1	132	19.4	172	39.4	182	52.7	281	58.9					
23	84	14.5	147	18.5	187	40.0	197	54.7	297	01.4					
24	99	17.0	162	17.7	202	40.5	212	56.6	312	04.0					
Dif	—		-9		+5		+19		-1						

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'3			Edad: 10 ^d .4	PHE { 4 ^h : 58'8 12 ^h : 58'7 20 ^h : 58'6	SD: 16'0	PMG: 21 ^h 32 ^m	Rº: 60 ^m									
	hG ☉	Dec								hG ☾	Dif		Dec	Dif	Náutico	Civil	Hora
h	°	'	°	°	'	°	'	°	°	h	m	h	m	h	m	h	m
0	179	19.2	-23 07.5	49	29.8	+23	01.7	102	60 N	7	10	8	06	9	03	11	37
1	194	18.9	07.3	63	55.9	71	11.9	102	58	7	02	7	55	8	46	11	59
2	209	18.6	07.1	78	21.8	69	22.0	101	56	6	56	45	32	12	17	30	38
3	224	18.3	06.9	92	47.6	68	32.0	100	54	50	36	19	33	34	23	89	
4	239	18.0	06.8	107	13.4	68	41.8	98	52	44	28	8	08	46	37	5	11
5	254	17.7	-23 06.6	121	39.1	67	+23	51.5	97	50	6	39	7	59	12	58	39
6	269	17.4	-23 06.4	136	04.7	66	+24	01.0	95	45	6	27	7	05	13	22	44
7	284	17.1	06.2	150	30.2	65	10.3	93	40	17	6	51	22	42	47	18	73
8	299	16.8	06.0	164	55.7	65	19.5	92	35	6	08	40	7	08	13	58	50
9	314	16.5	05.9	179	21.1	64	28.6	91	30	5	59	29	6	56	14	12	52
10	329	16.2	05.7	193	46.4	63	37.5	89	20	43	6	11	35	37	55	26	64
11	344	15.9	-23 05.5	208	11.6	62	+24	46.2	87	10 N	5	27	5	54	14	58	57
12	359	15.6	-23 05.3	222	36.7	61	+24	54.8	86	0	5	11	5	59	15	18	60
13	14	15.4	05.1	237	01.8	61	+25	03.2	84	10 S	4	52	5	19	38	62	29
14	29	15.1	04.9	251	26.8	60	11.5	83	20	30	4	59	23	15	59	65	2
15	44	14.8	04.7	265	51.8	60	19.6	81	30	4	01	34	5	01	16	25	67
16	59	14.5	04.6	280	16.6	58	27.6	80	35	3	42	19	4	49	39	69	35
17	74	14.2	-23 04.4	294	41.4	58	+25	35.3	77	40	3	20	4	01	16	57	71
18	89	13.9	-23 04.2	309	06.2	58	+25	43.0	77	45	2	50	3	39	17	18	73
19	104	13.6	04.0	323	30.8	56	50.4	74	50	2	05	3	10	3	54	44	78
20	119	13.3	03.8	337	55.4	56	+25	57.7	73	52	1	39	2	55	17	57	80
21	134	13.0	03.6	352	20.0	56	+26	04.8	71	54	0	57	37	31	18	12	82
22	149	12.7	03.4	6	44.5	55	11.8	70	56	** **	2	16	17	29	87	0	04
23	164	12.4	03.2	21	08.9	54	18.5	67	58	** **	1	47	3	01	18	50	93
24	179	12.1	-23 03.0	35	33.2	53	+26	25.2	67	60 S	** **	1	02	2	41	19	18

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 17 ^h 20 ^m 0		Mag: -3.9 PMG: 13 ^h 12 ^m			Mag: +1.5 PMG: 10 ^h 29 ^m			Mag: -1.8 PMG: 9 ^h 47 ^m			Mag: +0.3 PMG: 3 ^h 11 ^m			
	hG ♈	Dec	hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	'	°	°	'	°	°	'	°	°	'	°	
0	99	17.0	162	17.7	-22 27.4	202	40.5	-23 09.8	212	56.6	-20 57.2	312	04.0	+14 29.2	
1	114	19.5	177	16.8	26.9	217	41.0	09.9	227	58.5	57.3	327	06.6	29.2	
2	129	21.9	192	15.9	26.4	232	41.5	10.1	243	00.4	57.4	342	09.1	29.3	
3	144	24.4	207	15.0	25.9	247	42.0	10.3	258	02.3	57.5	357	11.7	29.3	
4	159	26.9	222	14.1	25.4	262	42.5	10.5	273	04.3	57.6	12	14.3	29.4	
5	174	29.3	237	13.3	-22 24.9	277	43.0	-23 10.7	288	06.2	-20 57.7	27	16.8	+14 29.4	
6	189	31.8	252	12.4	-22 24.4	292	43.5	-23 10.9	303	08.1	-20 57.7	42	19.4	+14 29.4	
7	204	34.2	267	11.5	23.8	307	44.0	11.1	318	10.0	57.8	57	22.0	29.5	
8	219	36.7	282	10.6	23.3	322	44.5	11.3	333	11.9	57.9	72	24.6	29.5	
9	234	39.2	297	09.7	22.8	337	45.0	11.5	348	13.9	58.0	87	27.1	29.6	
10	249	41.6	312	08.9	22.3	352	45.6	11.7	3	15.8	58.1	102	29.7	29.6	
11	264	44.1	327	08.0	-22 21.8	7	46.1	-23 11.9	18	17.7	-20 58.1	117	32.3	+14 29.7	
12	279	46.6	342	07.1	-22 21.2	22	46.6	-23 12.0	33	19.6	-20 58.2	132	34.8	+14 29.7	
13	294	49.0	357	06.2	20.7	37	47.1	12.2	48	21.5	58.3	147	37.4	29.8	
14	309	51.5	12	05.4	20.2	52	47.6	12.4	63	23.5	58.4	162	40.0	29.8	
15	324	54.0	27	04.5	19.7	67	48.1	12.6	78	25.4	58.5	177	42.5	29.9	
16	339	56.4	42	03.6	19.1	82	48.6	12.8	93	27.3	58.6	192	45.1	29.9	
17	354	58.9	57	02.7	-22 18.6	97	49.1	-23 13.0	108	29.2	-20 58.6	207	47.7	+14 29.9	
18	10	01.4	72	01.9	-22 18.1	112	49.6	-23 13.2	123	31.1	-20 58.7	222	50.3	+14 30.0	
19	25	03.8	87	01.0	17.6	127	50.1	13.4	138	33.1	58.8	237	52.8	30.0	
20	40	06.3	102	00.1	17.0	142	50.6	13.5	153	35.0	58.9	252	55.4	30.1	
21	55	08.7	116	59.3	16.5	157	51.1	13.7	168	36.9	59.0	267	58.0	30.1	
22	70	11.2	131	58.4	16.0	172	51.6	13.9	183	38.8	59.1	283	00.6	30.2	
23	85	13.7	146	57.5	15.4	187	52.1	14.1	198	40.7	59.1	298	03.1	30.2	
24	100	16.1	161	56.6	-22 14.9	202	52.7	-23 14.3	213	42.7	-20 59.2	313	05.7	+14 30.3	
Dif	—		-9 +5			+5 -2			+19 -1			+26 0			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 4			Edad: 11 ^d 4 PHE { 4 ^h : 58/5 12 ^h : 58/4 20 ^h : 58/2 PMG: 22 ^h 32 ^m R°: 60 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m	m	h m	m
0	179	12.1	-23 03.0	35	33.2	+26 25.2	64	60 N	15 05	16 01	16 58	11 52	40	8 06	87
1	194	11.8	02.8	49	57.6	54 31.6	64	58	21	13	17 05	12 23	47	7 35	79
2	209	11.5	02.6	64	21.8	52 37.9	63	56	36	23	11	12 47	50	7 11	76
3	224	11.2	02.4	78	46.0	52 43.9	60	54	48	31	17	13 07	52	6 52	74
4	239	10.9	02.2	93	10.2	52 49.9	60	52	15 59	39	23	23 54		36	72
5	254	10.6	-23 02.0	107	34.3	51 +26 55.6	57	50	16 08	16 47	17 28	13 37	55	6 22	71
6	269	10.3	-23 01.8	121	58.3	50 +27 01.2	56	45	16 29	17 02	17 39	14 06	56	5 53	69
7	284	10.0	01.6	136	22.4	51 06.6	54	40	45	16	50	29 57		31	67
8	299	09.7	01.4	150	46.3	49 11.8	52	35	16 59	27	17 59	14 48	58	5 13	66
9	314	09.4	01.2	165	10.3	50 16.8	50	30	17 11	37	18 07	15 04	59	4 57	65
10	329	09.1	01.0	179	34.2	49 21.7	49	20	32	17 56	23	32 59		30	64
11	344	08.8	-23 00.8	193	58.0	48 +27 26.3	46	10 N	17 50	18 13	18 39	15 55	60	4 07	62
12	359	08.5	-23 00.6	208	21.9	49 +27 30.8	45	0	18 07	18 30	18 56	16 18	60	3 46	61
13	14	08.2	00.4	222	45.7	48 35.1	43	10 S	24	18 47	19 14	16 40	61	25	59
14	29	08.0	-23 00.2	237	09.4	47 39.3	42	20	18 43	19 07	19 37	17 04	61	3 02	57
15	44	07.7	-23 00.0	251	33.2	48 43.2	39	30	19 05	32	20 05	32 62		2 36	55
16	59	07.4	-22 59.8	265	56.9	47 47.0	38	35	17	19 47	23	17 48	63	20	54
17	74	07.1	-22 59.6	280	20.6	47 +27 50.6	36	40	19 32	20 05	20 46	18 08	62	2 02	52
18	89	06.8	-22 59.4	294	44.3	47 +27 54.0	34	45	19 50	20 27	21 16	18 31	63	1 41	50
19	104	06.5	59.2	309	07.9	46 +27 57.2	32	50	20 12	20 56	21 59	19 02	63	13	47
20	119	06.2	59.0	323	31.5	46 +28 00.2	30	52	22	21 10	22 25	17 63		1 00	45
21	134	05.9	58.8	337	55.2	47 03.1	29	54	34	27	23 05	34 64		0 45	42
22	149	05.6	58.6	352	18.8	46 05.7	26	56	20 48	21 49	** **	19 56	64	27	39
23	164	05.3	58.3	6	42.4	46 08.2	25	58	21 04	22 17	** **	20 23	64	0 05	33
24	179	05.0	-22 58.1	21	06.0	46 +28 10.5	23	60 S	21 24	23 00	** **	21 01	65	** **	**

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 17 ^h 16 ^m 1		Mag: -3.9 PMG: 13 ^h 13 ^m		Mag: +1.5 PMG: 10 ^h 28 ^m		Mag: -1.8 PMG: 9 ^h 44 ^m		Mag: +0.2 PMG: 3 ^h 07 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	100	16.1	161	56.6	-22 14.9	202	52.7	-23 14.3	213	42.7	-20 59.2	313	05.7	+14 30.3
1	115	18.6	176	55.8	14.4	217	53.2	14.5	228	44.6	59.3	328	08.3	30.3
2	130	21.1	191	54.9	13.8	232	53.7	14.6	243	46.5	59.4	343	10.8	30.4
3	145	23.5	206	54.0	13.3	247	54.2	14.8	258	48.4	59.5	358	13.4	30.4
4	160	26.0	221	53.2	12.7	262	54.7	15.0	273	50.4	59.5	13	16.0	30.4
5	175	28.5	236	52.3	-22 12.2	277	55.2	-23 15.2	288	52.3	-20 59.6	28	18.6	+14 30.5
6	190	30.9	251	51.4	-22 11.7	292	55.7	-23 15.4	303	54.2	-20 59.7	43	21.1	+14 30.5
7	205	33.4	266	50.6	11.1	307	56.2	15.6	318	56.1	59.8	58	23.7	30.6
8	220	35.9	281	49.7	10.6	322	56.7	15.7	333	58.0	-20 59.9	73	26.3	30.6
9	235	38.3	296	48.8	10.0	337	57.2	15.9	349	00.0	-21 00.0	88	28.9	30.7
10	250	40.8	311	48.0	09.5	352	57.7	16.1	4	01.9	-21 00.0	103	31.4	30.7
11	265	43.2	326	47.1	-22 08.9	7	58.2	-23 16.3	19	03.8	-21 00.1	118	34.0	+14 30.8
12	280	45.7	341	46.2	-22 08.4	22	58.7	-23 16.5	34	05.7	-21 00.2	133	36.6	+14 30.8
13	295	48.2	356	45.4	07.8	37	59.2	16.6	49	07.7	00.3	148	39.2	30.9
14	310	50.6	11	44.5	07.3	52	59.7	16.8	64	09.6	00.4	163	41.7	30.9
15	325	53.1	26	43.6	06.7	68	00.2	17.0	79	11.5	00.4	178	44.3	31.0
16	340	55.6	41	42.8	06.2	83	00.7	17.2	94	13.4	00.5	193	46.9	31.0
17	355	58.0	56	41.9	-22 05.6	98	01.2	-23 17.3	109	15.3	-21 00.6	208	49.5	+14 31.1
18	11	00.5	71	41.0	-22 05.1	113	01.7	-23 17.5	124	17.3	-21 00.7	223	52.0	+14 31.1
19	26	03.0	86	40.2	04.5	128	02.2	17.7	139	19.2	00.8	238	54.6	31.1
20	41	05.4	101	39.3	03.9	143	02.7	17.9	154	21.1	00.8	253	57.2	31.2
21	56	07.9	116	38.5	03.4	158	03.2	18.1	169	23.0	00.9	268	59.8	31.2
22	71	10.4	131	37.6	02.8	173	03.7	18.2	184	25.0	01.0	284	02.3	31.3
23	86	12.8	146	36.7	02.3	188	04.2	18.4	199	26.9	01.1	299	04.9	31.3
24	101	15.3	161	35.9	-22 01.7	203	04.7	-23 18.6	214	28.8	-21 01.2	314	07.5	+14 31.4
Dif	—		-9 +5		+5 -2		+19 -1		+26 0					

Nº	NOMBRE	Mag		Ene	Feb	Mar	Abr	May	Jun	Jul	Ago	Sep	Oct	Nov	Dic
			o	/	/	/	/	/	/	/	/	/	/	/	/
1 - α And	<i>Alpheratz</i>	2.1	357	49.7	49.8	49.8	49.7	49.6	49.3	49.0	48.8	48.7	48.6	48.7	48.8
2 - β Cas	<i>Caph</i>	2.3	357	37.9	38.1	38.2	38.1	37.8	37.4	37.1	36.7	36.5	36.5	36.6	36.8
3 - γ Peg	<i>Algenib</i>	2.8	356	37.0	37.0	37.0	37.0	36.8	36.6	36.3	36.1	36.0	35.9	36.0	36.0
4 - α Phe	<i>Ankaa</i>	2.4	353	21.3	21.4	21.4	21.4	21.2	21.0	20.7	20.4	20.2	20.2	20.2	20.3
5 - α Cas	<i>Schedar</i>	2.2	349	47.6	47.8	47.9	47.8	47.6	47.2	46.9	46.5	46.3	46.2	46.3	46.4
6 - β Cet	<i>Diphda</i>	2.0	349	1.7	1.7	1.8	1.7	1.6	1.4	1.1	0.9	0.7	0.7	0.7	0.7
7 - γ Cas	<i>Navi</i>	1.6	345	44.2	44.5	44.6	44.6	44.3	43.9	43.5	43.2	42.9	42.8	42.8	43.0
8 - β And	<i>Mirach</i>	2.1	342	29.1	29.2	29.3	29.2	29.1	28.8	28.6	28.3	28.1	28.0	28.0	28.0
9 - α Eri	<i>Achernar</i>	0.5	335	30.7	31.0	31.1	31.2	31.1	30.8	30.5	30.1	29.8	29.7	29.7	29.9
10 - γ And	<i>Almak</i>	2.3	328	56.0	56.1	56.2	56.3	56.2	55.9	55.6	55.3	55.1	54.9	54.8	54.9
12 - α Ari	<i>Hamal</i>	2.0	328	7.3	7.4	7.5	7.5	7.4	7.2	7.0	6.7	6.5	6.3	6.3	6.3
11 - α UMi	<i>Polaris</i>	2.0	319	78.9	92.3	102.8	108.8	107.0	98.4	86.0	71.4	57.8	48.6	45.2	48.7
13 - θ Eri	<i>Acamar</i>	3.3	315	22.4	22.6	22.7	22.8	22.8	22.7	22.4	22.2	21.9	21.7	21.6	21.7
14 - α Cet	<i>Menkar</i>	2.5	314	21.0	21.1	21.2	21.2	21.2	21.0	20.8	20.6	20.3	20.2	20.1	20.0
15 - β Per	<i>Algol</i>	2.1	312	51.5	51.6	51.7	51.8	51.8	51.6	51.3	51.0	50.7	50.5	50.4	50.3
16 - α Per	<i>Mirfak</i>	1.8	308	48.5	48.7	48.9	49.0	49.0	48.7	48.5	48.1	47.8	47.5	47.3	47.3
17 - η Tau	<i>Alcyone</i>	2.9	303	2.2	2.3	2.4	2.5	2.5	2.3	2.1	1.9	1.6	1.4	1.2	1.2
18 - γ Eri	<i>Zaurak</i>	3.0	300	25.1	25.2	25.3	25.4	25.4	25.3	25.2	24.9	24.7	24.5	24.4	24.3
19 - α Tau	<i>Aldebaran</i>	0.9	290	55.8	55.8	56.0	56.1	56.1	56.0	55.8	55.6	55.3	55.1	54.9	54.8
20 - β Ori	<i>Rigel</i>	0.1	281	17.3	17.4	17.5	17.6	17.7	17.6	17.5	17.3	17.0	16.8	16.6	16.5
21 - α Aur	<i>Capella</i>	0.1	280	42.6	42.7	42.9	43.0	43.1	43.0	42.8	42.5	42.2	41.9	41.6	41.4
22 - γ Ori	<i>Bellatrix</i>	1.6	278	37.9	38.0	38.1	38.2	38.2	38.2	38.0	37.8	37.6	37.4	37.2	37.1
23 - β Tau	<i>Elnath</i>	1.7	278	19.6	19.7	19.8	19.9	20.0	19.9	19.7	19.5	19.2	19.0	18.7	18.6
24 - δ Ori	<i>Mintaka</i>	2.2	276	55.0	55.0	55.2	55.3	55.3	55.3	55.2	55.0	54.7	54.5	54.3	54.2
25 - ε Ori	<i>Alnilam</i>	1.7	275	51.9	52.0	52.1	52.2	52.3	52.2	52.1	51.9	51.7	51.5	51.3	51.1
26 - ζ Ori	<i>Alnitak</i>	1.9	274	43.8	43.8	43.9	44.1	44.1	44.1	43.9	43.8	43.5	43.3	43.1	43.0
27 - κ Ori	<i>Saiph</i>	2.1	272	59.1	59.1	59.2	59.4	59.4	59.4	59.3	59.1	58.9	58.7	58.5	58.3
28 - α Ori	<i>Betelgeuse</i>	0.4	271	7.2	7.3	7.4	7.5	7.6	7.5	7.4	7.2	7.0	6.8	6.5	6.4
29 - β Aur	<i>Menkalinan</i>	1.9	269	60.0	60.1	60.2	60.4	60.5	60.4	60.3	60.0	59.7	59.4	59.1	58.9
30 - β CMa	<i>Mirzam</i>	2.0	264	15.2	15.2	15.4	15.5	15.6	15.6	15.5	15.4	15.1	14.9	14.7	14.5
31 - α Car	<i>Canopus</i>	-0.7	263	58.2	58.3	58.6	58.8	59.0	59.1	59.1	58.9	58.6	58.3	58.0	57.8
32 - γ Gem	<i>Alhena</i>	1.9	260	28.8	28.8	28.9	29.0	29.1	29.1	29.0	28.8	28.6	28.3	28.1	27.9
33 - α CMa	<i>Sirius</i>	-1.5	258	38.5	38.5	38.6	38.8	38.9	38.9	38.8	38.6	38.4	38.2	38.0	37.8
34 - ε CMa	<i>Adhara</i>	1.5	255	16.7	16.7	16.9	17.0	17.1	17.2	17.1	17.0	16.8	16.6	16.3	16.1
35 - δ CMa	<i>Wezen</i>	1.9	252	50.1	50.1	50.2	50.4	50.5	50.6	50.5	50.4	50.2	50.0	49.7	49.5
36 - η CMa	<i>Aludra</i>	2.5	248	54.6	54.7	54.8	54.9	55.1	55.1	55.1	55.0	54.8	54.5	54.3	54.1
37 - α Gem	<i>Castor</i>	2.0	246	14.8	14.8	14.9	15.0	15.1	15.1	15.1	14.9	14.7	14.5	14.2	13.9
38 - α CMi	<i>Procyon</i>	0.4	245	5.4	5.4	5.5	5.6	5.7	5.7	5.7	5.5	5.3	5.1	4.9	4.7
39 - β Gem	<i>Pollux</i>	1.1	243	34.3	34.3	34.4	34.5	34.6	34.6	34.6	34.5	34.3	34.0	33.7	33.5
40 - ζ Pup	<i>Naos</i>	2.3	239	2.7	2.7	2.8	3.0	3.1	3.2	3.3	3.2	3.0	2.8	2.5	2.2
41 - γ Vel	<i>Regor</i>	1.8	237	33.8	33.8	33.9	34.2	34.4	34.5	34.5	34.5	34.3	34.0	33.7	33.5
42 - ε Car	<i>Avior</i>	1.9	234	19.9	20.0	20.1	20.4	20.7	20.9	21.1	21.0	20.8	20.5	20.1	19.8
43 - δ Velorum		2.0	228	46.5	46.5	46.6	46.9	47.1	47.3	47.4	47.4	47.2	46.9	46.6	46.3
44 - ζ Hydrae		3.1	226	4.0	3.9	3.9	4.0	4.1	4.2	4.2	4.1	4.0	3.8	3.6	3.3
45 - λ Vel	<i>Suhail</i>	2.2	222	56.4	56.3	56.4	56.6	56.7	56.9	56.9	56.9	56.8	56.6	56.3	56.0
46 - β Car	<i>Miaplacidus</i>	1.7	221	40.4	40.4	40.6	41.0	41.4	41.8	42.1	42.2	42.0	41.6	41.1	40.6
47 - ι Car	<i>Aspidiske</i>	2.3	220	40.8	40.8	40.9	41.1	41.4	41.6	41.8	41.8	41.7	41.4	41.0	40.6
48 - α Lyn	<i>Elvashak</i>	3.1	219	38.3	38.1	38.1	38.3	38.4	38.5	38.5	38.4	38.3	38.1	37.8	37.5
49 - α Hyd	<i>Alphard</i>	2.0	218	1.5	1.4	1.4	1.5	1.6	1.6	1.7	1.6	1.5	1.3	1.1	0.9
50 - α Leo	<i>Regulus</i>	1.4	207	49.3	49.2	49.2	49.2	49.3	49.4	49.4	49.4	49.3	49.2	48.9	48.7

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Posiciones aparentes

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	7.5	7.5	7.4	7.3	7.3	7.4	7.5	7.6	7.8	7.9	7.9	7.9
2 - β Cas	<i>Caph</i>	2.3	+59	11.2	11.1	11.0	10.9	10.8	10.8	10.9	11.1	11.2	11.4	11.5	11.6
3 - γ Peg	<i>Algenib</i>	2.8	+15	13.1	13.0	13.0	13.0	13.0	13.1	13.2	13.3	13.4	13.4	13.5	13.5
4 - α Phe	<i>Ankaa</i>	2.4	-42	16.7	16.6	16.5	16.3	16.2	16.0	16.0	15.9	16.0	16.1	16.2	16.3
5 - α Cas	<i>Schedar</i>	2.2	+56	34.5	34.4	34.3	34.2	34.1	34.1	34.2	34.3	34.5	34.6	34.8	34.8
6 - β Cet	<i>Diphda</i>	2.0	-17	57.4	57.3	57.3	57.2	57.1	57.0	56.9	56.8	56.8	56.8	56.9	57.0
7 - γ Cas	<i>Navi</i>	1.6	+60	45.3	45.2	45.1	44.9	44.9	44.8	44.9	45.0	45.2	45.4	45.5	45.6
8 - β And	<i>Mirach</i>	2.1	+35	39.3	39.3	39.2	39.1	39.1	39.1	39.2	39.3	39.4	39.6	39.6	39.7
9 - α Eri	<i>Achernar</i>	0.5	-57	12.6	12.6	12.5	12.3	12.1	12.0	11.8	11.8	11.9	12.0	12.2	12.3
10 - γ And	<i>Almak</i>	2.3	+42	21.8	21.7	21.7	21.6	21.5	21.5	21.5	21.6	21.8	21.9	22.0	22.1
12 - α Ari	<i>Hamal</i>	2.0	+23	29.6	29.6	29.5	29.5	29.5	29.5	29.6	29.7	29.8	29.8	29.9	29.9
11 - α UMi	<i>Polaris</i>	2.0	+89	17.8	17.8	17.8	17.6	17.5	17.4	17.3	17.4	17.5	17.6	17.8	18.0
13 - θ Eri	<i>Acamar</i>	3.3	-40	17.0	17.0	17.0	16.8	16.7	16.5	16.4	16.3	16.3	16.4	16.5	16.6
14 - α Cet	<i>Menkar</i>	2.5	+4	6.8	6.8	6.8	6.8	6.9	7.0	7.0	7.1	7.2	7.2	7.2	7.1
15 - β Per	<i>Algol</i>	2.1	+40	59.0	59.0	58.9	58.9	58.8	58.8	58.8	58.8	58.9	59.0	59.1	59.2
16 - α Per	<i>Mirfak</i>	1.8	+49	53.2	53.2	53.2	53.1	53.0	53.0	53.0	53.0	53.1	53.2	53.3	53.4
17 - η Tau	<i>Alcyone</i>	2.9	+24	7.6	7.6	7.6	7.5	7.5	7.5	7.6	7.6	7.7	7.7	7.8	7.8
18 - γ Eri	<i>Zaurak</i>	3.0	-13	29.5	29.5	29.5	29.5	29.4	29.3	29.2	29.1	29.0	29.1	29.1	29.2
19 - α Tau	<i>Aldebaran</i>	0.9	+16	31.4	31.4	31.4	31.4	31.4	31.4	31.4	31.5	31.5	31.6	31.6	31.5
20 - β Ori	<i>Rigel</i>	0.1	-8	11.6	11.7	11.7	11.7	11.6	11.5	11.4	11.4	11.3	11.3	11.4	11.5
21 - α Aur	<i>Capella</i>	0.1	+46	0.5	0.5	0.5	0.5	0.4	0.3	0.3	0.3	0.3	0.3	0.4	0.4
22 - γ Ori	<i>Bellatrix</i>	1.6	+6	21.4	21.4	21.3	21.4	21.4	21.4	21.5	21.5	21.6	21.6	21.5	21.5
23 - β Tau	<i>Elnath</i>	1.7	+28	36.9	36.9	36.9	36.9	36.9	36.9	36.9	36.9	36.9	36.9	36.9	36.9
24 - δ Ori	<i>Mintaka</i>	2.2	-0	17.6	17.7	17.7	17.7	17.6	17.6	17.5	17.4	17.4	17.4	17.4	17.5
25 - ϵ Ori	<i>Alnilam</i>	1.7	-1	11.8	11.9	11.9	11.9	11.8	11.8	11.7	11.6	11.6	11.6	11.6	11.7
26 - ζ Ori	<i>Alnitak</i>	1.9	-1	56.3	56.4	56.4	56.4	56.3	56.2	56.2	56.1	56.1	56.1	56.1	56.2
27 - κ Ori	<i>Saiph</i>	2.1	-9	40.0	40.1	40.1	40.1	40.0	39.9	39.8	39.8	39.7	39.7	39.8	39.9
28 - α Ori	<i>Betelgeuse</i>	0.4	+7	24.6	24.5	24.5	24.5	24.6	24.6	24.6	24.7	24.7	24.7	24.7	24.6
29 - β Aur	<i>Menkalinan</i>	1.9	+44	57.0	57.1	57.1	57.1	57.1	57.0	56.9	56.9	56.9	56.9	56.9	57.0
30 - β CMa	<i>Mirzam</i>	2.0	-17	57.5	57.6	57.6	57.6	57.6	57.5	57.4	57.3	57.2	57.2	57.3	57.4
31 - α Car	<i>Canopus</i>	-0.7	-52	41.9	42.1	42.1	42.1	42.0	41.9	41.7	41.6	41.5	41.5	41.6	41.8
32 - γ Gem	<i>Alhena</i>	1.9	+16	23.7	23.7	23.7	23.7	23.7	23.7	23.8	23.8	23.8	23.8	23.7	23.7
33 - α CMa	<i>Sirius</i>	-1.5	-16	43.4	43.5	43.6	43.6	43.5	43.4	43.3	43.2	43.2	43.2	43.3	43.4
34 - ϵ CMa	<i>Adhara</i>	1.5	-28	58.8	58.9	59.0	59.0	58.9	58.8	58.7	58.6	58.5	58.5	58.6	58.7
35 - δ CMa	<i>Wezen</i>	1.9	-26	24.1	24.2	24.3	24.3	24.3	24.2	24.0	23.9	23.9	23.9	23.9	24.1
36 - η CMa	<i>Aludra</i>	2.5	-29	18.8	19.0	19.0	19.1	19.0	18.9	18.8	18.7	18.6	18.6	18.7	18.8
37 - α Gem	<i>Castor</i>	2.0	+31	52.6	52.6	52.6	52.7	52.7	52.6	52.6	52.6	52.5	52.5	52.4	52.4
38 - α CMi	<i>Procyon</i>	0.4	+5	12.6	12.6	12.6	12.6	12.6	12.6	12.7	12.7	12.7	12.7	12.6	12.5
39 - β Gem	<i>Pollux</i>	1.1	+28	0.7	0.8	0.8	0.8	0.8	0.8	0.8	0.7	0.7	0.7	0.6	0.6
40 - ζ Pup	<i>Naos</i>	2.3	-40	1.1	1.3	1.4	1.4	1.4	1.3	1.2	1.1	1.0	0.9	1.0	1.1
41 - γ Vel	<i>Regor</i>	1.8	-47	21.1	21.3	21.4	21.5	21.5	21.4	21.3	21.1	21.0	21.0	21.0	21.2
42 - ϵ Car	<i>Avior</i>	1.9	-59	31.6	31.8	31.9	32.0	32.0	31.9	31.8	31.6	31.5	31.4	31.5	31.6
43 - δ Velorum		2.0	-54	43.7	43.9	44.0	44.1	44.1	44.1	43.9	43.8	43.7	43.6	43.6	43.8
44 - ζ Hydrae		3.1	+5	55.4	55.3	55.3	55.3	55.3	55.4	55.4	55.4	55.4	55.4	55.3	55.2
45 - λ Vel	<i>Suhail</i>	2.2	-43	27.3	27.4	27.6	27.7	27.7	27.6	27.5	27.4	27.3	27.2	27.2	27.4
46 - β Car	<i>Miaplacidus</i>	1.7	-69	44.3	44.5	44.7	44.8	44.8	44.8	44.7	44.5	44.4	44.3	44.3	44.4
47 - ι Car	<i>Aspidiske</i>	2.3	-59	17.8	18.0	18.2	18.3	18.3	18.3	18.2	18.0	17.9	17.8	17.8	17.9
48 - α Lyn	<i>Elvashak</i>	3.1	+34	22.0	22.0	22.1	22.1	22.1	22.1	22.1	22.0	21.9	21.8	21.8	21.7
49 - α Hyd	<i>Alphard</i>	2.0	-8	41.0	41.1	41.2	41.2	41.2	41.2	41.1	41.1	41.0	41.0	41.1	41.2
50 - α Leo	<i>Regulus</i>	1.4	+11	56.2	56.2	56.2	56.2	56.2	56.2	56.3	56.3	56.2	56.2	56.1	56.0

Nº	NOMBRE	Mag		Ene	Feb	Mar	Abr	May	Jun	Jul	Ago	Sep	Oct	Nov	Dic
			°	/	/	/	/	/	/	/	/	/	/	/	/
51 - μ	Velorum	2.7	198	14.4	14.2	14.2	14.2	14.4	14.5	14.7	14.8	14.7	14.6	14.3	14.0
52 - ν	Hydrae	3.1	197	31.0	30.8	30.8	30.8	30.9	31.0	31.0	31.0	31.0	30.9	30.7	30.4
53 - β	UMa Merak	2.4	194	26.4	26.1	26.0	26.1	26.3	26.5	26.6	26.7	26.7	26.5	26.2	25.8
54 - α	UMa Dubhe	1.8	193	57.9	57.6	57.5	57.6	57.8	58.0	58.2	58.3	58.3	58.1	57.8	57.3
55 - β	Leo Denebola	2.1	182	39.3	39.1	39.0	39.0	39.1	39.1	39.2	39.2	39.2	39.2	39.0	38.7
56 - γ	Crv Gienah	2.6	175	58.2	58.0	57.9	57.8	57.8	57.9	58.0	58.1	58.1	58.0	57.8	57.6
57 - α	Cru Acrux	1.4	173	16.0	15.7	15.5	15.4	15.5	15.7	16.0	16.2	16.3	16.3	16.0	15.6
58 - γ	Cru Gacrux	1.6	172	7.5	7.2	7.0	7.0	7.0	7.2	7.4	7.6	7.7	7.6	7.4	7.0
59 - γ	Cen Muhlifain	2.2	169	32.3	32.0	31.8	31.8	31.8	31.9	32.0	32.2	32.3	32.2	32.0	31.7
60 - β	Cru Mimosa	1.3	167	59.0	58.6	58.4	58.3	58.4	58.5	58.7	58.9	59.1	59.0	58.8	58.4
61 - ε	UMa Alioth	1.8	166	25.3	25.0	24.7	24.7	24.8	24.9	25.1	25.3	25.4	25.4	25.3	25.0
62 - α^2	CVn Cor Caroli	2.9	165	55.2	54.9	54.8	54.7	54.7	54.8	54.9	55.0	55.1	55.1	55.0	54.7
63 - ε	Vir Vindemiatrix	2.8	164	22.8	22.6	22.4	22.3	22.3	22.4	22.5	22.5	22.6	22.6	22.4	22.2
64 - ζ	UMa Mizar	2.3	158	57.3	56.9	56.7	56.6	56.6	56.8	57.0	57.2	57.3	57.4	57.2	57.0
65 - α	Vir Spica	1.0	158	37.4	37.1	37.0	36.9	36.8	36.9	36.9	37.0	37.1	37.1	37.0	36.8
66 - η	UMa Alkaid	1.9	153	3.2	2.9	2.7	2.6	2.6	2.7	2.8	3.0	3.1	3.2	3.1	2.9
67 - β	Cen Hadar	0.6	148	56.5	56.1	55.8	55.6	55.5	55.5	55.7	56.0	56.2	56.2	56.1	55.8
68 - θ	Cen Menkent	2.1	148	14.6	14.3	14.1	13.9	13.9	13.9	14.0	14.1	14.2	14.2	14.1	13.9
69 - α	Boo Arcturus	0.0	146	1.0	0.7	0.6	0.4	0.4	0.4	0.5	0.6	0.7	0.7	0.6	0.5
70 - α^1	Cen Rigil Kentaurus	0.0	139	60.2	59.8	59.4	59.2	59.1	59.1	59.3	59.5	59.8	59.9	59.8	59.5
71 - α^2	Lib Zubenelgenubi	2.8	137	12.0	11.7	11.5	11.3	11.3	11.2	11.3	11.4	11.5	11.5	11.5	11.3
72 - β	UMi Kochab	2.1	137	19.7	19.0	18.4	18.1	18.1	18.3	18.8	19.4	19.9	20.3	20.4	20.2
73 - β	Lib Zubeneschamali	2.6	130	40.2	39.9	39.7	39.6	39.5	39.4	39.4	39.5	39.6	39.7	39.7	39.5
74 - α	CrB Alphecca	2.2	126	16.0	15.8	15.5	15.4	15.2	15.2	15.3	15.4	15.5	15.6	15.6	15.5
75 - α	Ser Unukalhai	2.7	123	51.7	51.5	51.3	51.1	51.0	50.9	50.9	51.0	51.1	51.2	51.2	51.1
76 - α	Sco Antares	0.9	112	33.6	33.4	33.1	32.9	32.7	32.6	32.6	32.7	32.8	32.9	32.9	32.8
77 - α	TrA Atria	1.9	107	41.3	40.7	40.1	39.6	39.1	38.9	38.9	39.2	39.5	39.9	40.0	39.9
78 - ε	Scorpii	2.3	107	22.0	21.8	21.5	21.2	21.0	20.9	20.9	20.9	21.1	21.2	21.3	21.2
79 - η	Oph Sabik	2.4	102	19.4	19.2	19.0	18.8	18.6	18.4	18.4	18.5	18.6	18.7	18.7	18.7
80 - α	Her Rasalgethi	3.1	101	16.5	16.2	16.0	15.8	15.6	15.5	15.5	15.6	15.7	15.8	15.9	15.8
81 - λ	Sco Shaula	1.6	96	30.1	29.9	29.6	29.3	29.1	28.9	28.8	28.9	29.0	29.1	29.2	29.2
82 - α	Oph Rasalhague	2.1	96	12.1	11.9	11.7	11.5	11.3	11.1	11.1	11.2	11.3	11.4	11.5	11.5
83 - θ	Sco Sargas	1.9	95	34.1	33.9	33.6	33.3	33.0	32.8	32.7	32.8	32.9	33.1	33.2	33.1
84 - γ	Dra Eltanin	2.2	90	49.3	49.1	48.8	48.5	48.3	48.1	48.1	48.3	48.5	48.7	48.9	49.0
85 - ε	Sgr Kaus Australis	1.9	83	51.8	51.6	51.3	51.1	50.8	50.6	50.5	50.5	50.6	50.8	50.9	50.9
86 - α	Lyr Vega	0.0	80	43.3	43.1	42.9	42.6	42.4	42.2	42.2	42.2	42.4	42.6	42.7	42.8
87 - σ	Sgr Nunki	2.0	76	5.8	5.6	5.4	5.1	4.9	4.7	4.5	4.5	4.6	4.7	4.8	4.9
88 - α	Aql Altair	0.8	62	14.2	14.1	13.9	13.7	13.5	13.3	13.1	13.1	13.2	13.3	13.4	13.4
89 - γ	Cyg Sadr	2.2	54	23.8	23.8	23.6	23.4	23.1	22.8	22.7	22.7	22.7	22.9	23.1	23.2
90 - α	Pav Peacock	1.9	53	28.7	28.5	28.3	27.9	27.5	27.1	26.8	26.7	26.8	27.0	27.2	27.4
91 - α	Cyg Deneb	1.3	49	36.0	35.9	35.8	35.5	35.3	35.0	34.8	34.8	34.8	35.0	35.2	35.4
92 - α	Cep Alderamin	2.4	40	20.0	20.1	19.9	19.6	19.2	18.8	18.5	18.5	18.6	18.8	19.1	19.4
93 - ε	Peg Enif	0.7	33	53.1	53.1	53.0	52.8	52.6	52.3	52.1	52.0	52.0	52.0	52.1	52.2
94 - δ	Cap Deneb Algedi	2.9	33	9.7	9.6	9.5	9.4	9.1	8.9	8.7	8.5	8.5	8.5	8.7	8.7
95 - α	Gru Al Na'ir	1.7	27	51.1	51.1	51.0	50.8	50.5	50.1	49.8	49.6	49.6	49.7	49.8	50.0
96 - β	Gruis	2.1	19	14.8	14.8	14.8	14.6	14.3	14.0	13.7	13.5	13.4	13.4	13.6	13.7
97 - α	PsA Fomalhaut	1.2	15	30.4	30.5	30.4	30.3	30.0	29.8	29.5	29.3	29.2	29.2	29.3	29.4
98 - β	Peg Scheat	2.4	13	59.3	59.3	59.3	59.2	59.0	58.7	58.5	58.3	58.2	58.2	58.3	58.4
99 - α	Peg Markab	2.5	13	44.3	44.4	44.3	44.2	44.0	43.7	43.5	43.3	43.3	43.3	43.3	43.4

ESTRELLAS, 2006
Posiciones aparentes379
DECLINACIÓN

Nº	NOMBRE	Mag		Ene	Feb	Mar	Abr	May	Jun	Jul	Ago	Sep	Oct	Nov	Dic
			°	/	/	/	/	/	/	/	/	/	/	/	/
51 - μ	Velorum	2.7	-49	26.9	27.1	27.3	27.4	27.5	27.5	27.4	27.3	27.2	27.1	27.1	27.1
52 - ν	Hydrae	3.1	-16	13.5	13.6	13.7	13.7	13.7	13.7	13.7	13.6	13.6	13.5	13.6	13.7
53 - β	UMa Merak	2.4	+56	20.8	20.8	20.9	21.1	21.2	21.2	21.1	21.0	20.9	20.7	20.5	20.4
54 - α	UMa Dubhe	1.8	+61	42.9	42.9	43.1	43.2	43.3	43.3	43.2	43.1	42.9	42.8	42.6	42.5
55 - β	Leo Denebola	2.1	+14	32.2	32.1	32.1	32.2	32.2	32.2	32.3	32.2	32.2	32.1	32.0	31.9
56 - γ	Crv Gienah	2.6	-17	34.5	34.6	34.7	34.8	34.8	34.8	34.8	34.7	34.7	34.6	34.7	34.7
57 - α	Cru Acrux	1.4	-63	7.7	7.8	8.0	8.2	8.3	8.4	8.4	8.3	8.2	8.1	8.0	8.0
58 - γ	Cru Gacrux	1.6	-57	8.6	8.7	8.9	9.1	9.2	9.3	9.3	9.2	9.1	9.0	8.9	8.9
59 - γ	Cen Muhlifain	2.2	-48	59.4	59.5	59.7	59.8	59.9	60.0	60.0	59.9	59.8	59.7	59.6	59.7
60 - β	Cru Mimoso	1.3	-59	43.1	43.2	43.4	43.5	43.7	43.7	43.8	43.7	43.6	43.5	43.4	43.3
61 - ϵ	UMa Alioth	1.8	+55	55.3	55.3	55.4	55.5	55.6	55.7	55.7	55.7	55.5	55.4	55.2	55.0
62 - α^2	CVn Cor Caroli	2.9	+38	16.9	16.8	16.9	17.0	17.1	17.2	17.2	17.2	17.1	16.9	16.8	16.6
63 - ϵ	Vir Vindemiatrix	2.8	+10	55.5	55.4	55.4	55.4	55.4	55.5	55.5	55.5	55.5	55.4	55.3	55.2
64 - ζ	UMa Mizar	2.3	+54	53.3	53.3	53.3	53.5	53.6	53.7	53.7	53.7	53.6	53.4	53.2	53.0
65 - α	Vir Spica	1.0	-11	11.6	11.7	11.8	11.8	11.8	11.8	11.8	11.8	11.7	11.7	11.8	11.8
66 - η	UMa Alkaid	1.9	+49	16.6	16.6	16.7	16.8	16.9	17.0	17.1	17.0	16.9	16.8	16.6	16.4
67 - β	Cen Hadar	0.6	-60	23.9	24.0	24.1	24.3	24.4	24.5	24.6	24.6	24.5	24.4	24.3	24.2
68 - θ	Cen Menkent	2.1	-36	23.9	24.0	24.1	24.2	24.3	24.3	24.4	24.3	24.3	24.2	24.1	24.1
69 - α	Boo Arcturus	0.0	+19	8.8	8.8	8.7	8.8	8.9	8.9	9.0	9.0	9.0	8.9	8.8	8.6
70 - α^1	Cen Rigil Kentaurus	0.0	-60	51.4	51.5	51.6	51.8	51.9	52.0	52.1	52.1	52.0	51.9	51.8	51.7
71 - α^2	Lib Zubenelgenubi	2.8	-16	4.1	4.1	4.2	4.2	4.3	4.3	4.3	4.2	4.2	4.2	4.2	4.2
72 - β	UMi Kochab	2.1	+74	7.4	7.4	7.4	7.6	7.7	7.9	7.9	7.9	7.8	7.7	7.5	7.3
73 - β	Lib Zubeneshamali	2.6	-9	24.4	24.5	24.5	24.6	24.6	24.5	24.5	24.5	24.5	24.5	24.5	24.6
74 - α	CrB Alphecce	2.2	+26	41.4	41.3	41.3	41.3	41.4	41.5	41.6	41.7	41.7	41.6	41.5	41.3
75 - α	Ser Unukalhai	2.7	+6	24.2	24.1	24.1	24.1	24.2	24.2	24.3	24.3	24.3	24.3	24.2	24.1
76 - α	Sco Antares	0.9	-26	26.8	26.8	26.9	26.9	26.9	26.9	27.0	27.0	26.9	26.9	26.9	26.9
77 - α	TrA Atria	1.9	-69	2.2	2.2	2.2	2.3	2.4	2.5	2.7	2.7	2.7	2.7	2.6	2.4
78 - ϵ	Scorpii	2.3	-34	18.3	18.3	18.3	18.4	18.4	18.5	18.5	18.5	18.5	18.5	18.4	18.4
79 - η	Oph Sabik	2.4	-15	44.1	44.1	44.1	44.1	44.1	44.1	44.1	44.1	44.1	44.1	44.1	44.1
80 - α	Her Rasalgethi	3.1	+14	22.8	22.7	22.7	22.7	22.8	22.9	22.9	23.0	23.0	23.0	22.9	22.8
81 - λ	Sco Shaula	1.6	-37	6.5	6.5	6.5	6.6	6.6	6.6	6.7	6.7	6.7	6.7	6.7	6.6
82 - α	Oph Rasalhague	2.1	+12	33.1	33.0	33.0	33.0	33.1	33.2	33.3	33.3	33.4	33.4	33.3	33.2
83 - θ	Sco Sargas	1.9	-43	0.1	0.1	0.1	0.1	0.2	0.2	0.3	0.3	0.4	0.3	0.3	0.2
84 - γ	Dra Eltanin	2.2	+51	29.0	28.9	28.8	28.8	29.0	29.1	29.3	29.4	29.5	29.4	29.3	29.2
85 - ϵ	Sgr Kaus Australis	1.9	-34	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.1	23.1	23.1	23.0
86 - α	Lyr Vega	0.0	+38	47.1	47.0	46.9	46.9	47.0	47.2	47.3	47.5	47.6	47.6	47.5	47.4
87 - σ	Sgr Nunki	2.0	-26	17.5	17.5	17.5	17.4	17.4	17.4	17.4	17.4	17.4	17.4	17.4	17.4
88 - α	Aql Altair	0.8	+8	52.9	52.8	52.8	52.8	52.9	53.0	53.1	53.2	53.2	53.2	53.2	53.2
89 - γ	Cyg Sadr	2.2	+40	16.5	16.3	16.2	16.2	16.3	16.4	16.5	16.7	16.8	16.9	16.9	16.8
90 - α	Pav Peacock	1.9	-56	43.1	43.0	42.9	42.8	42.8	42.8	42.8	42.9	43.0	43.1	43.1	43.0
91 - α	Cyg Deneb	1.3	+45	18.0	17.9	17.8	17.7	17.8	17.9	18.1	18.3	18.4	18.5	18.5	18.4
92 - α	Cep Alderamin	2.4	+62	36.7	36.5	36.4	36.3	36.3	36.4	36.6	36.8	37.0	37.1	37.1	37.1
93 - ϵ	Peg Enif	0.7	+9	54.1	54.0	54.0	54.0	54.0	54.1	54.3	54.4	54.4	54.5	54.5	54.4
94 - δ	Cap Deneb Algedi	2.9	-16	6.2	6.2	6.1	6.1	6.0	5.9	5.8	5.8	5.8	5.8	5.8	5.9
95 - α	Gru Al Na'ir	1.7	-46	56.2	56.1	55.9	55.8	55.7	55.6	55.6	55.7	55.7	55.8	55.9	55.9
96 - β	Gruis	2.1	-46	51.5	51.4	51.2	51.1	51.0	50.9	50.8	50.9	51.0	51.1	51.1	51.2
97 - α	PsA Fomalhaut	1.2	-29	35.6	35.6	35.5	35.4	35.3	35.2	35.1	35.1	35.1	35.2	35.3	35.3
98 - β	Peg Scheat	2.4	+28	7.0	6.9	6.8	6.8	6.8	6.9	7.0	7.1	7.3	7.4	7.4	7.4
99 - α	Peg Markab	2.5	+15	14.2	14.2	14.1	14.1	14.2	14.3	14.4	14.5	14.6	14.7	14.7	14.7

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

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

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

Nº	NOMBRE	Mag	Ago	Sep	Oct	Nov	Dic	1ª CORRECCIÓN					
			h m	h m	h m	h m	h m						
1 - α Andromedae	<i>Alpheratz</i>	2.1	3 30	1 28	23 27	21 25	19 27	Se restará para obtener la hora del paso en otro día del mismo mes.					
2 - β Cassiopeae	<i>Caph</i>	2.3	3 31	1 29	23 27	21 25	19 28						
6 - β Ceti	<i>Diphda</i>	2.0	4 05	2 04	0 06	22 00	20 02						
9 - α Eridani	<i>Achernar</i>	0.5	4 59	2 57	0 59	22 54	20 56						
12 - α Arietis	<i>Hamal</i>	2.0	5 29	3 27	1 29	23 23	21 25	<table><tr><th>Día</th><th>Corr.</th></tr></table>	Día	Corr.			
Día	Corr.												
13 - θ Eridani	<i>Acamar</i>	3.3	6 20	4 18	2 20	0 18	22 16	<table><tr><td></td><td>h m</td></tr><tr><td>1</td><td>0 00</td></tr></table>		h m	1	0 00	
	h m												
1	0 00												
16 - α Persei	<i>Mirfak</i>	1.8	6 46	4 44	2 46	0 44	22 42	<table><tr><td>2</td><td>0 04</td></tr></table>	2	0 04			
2	0 04												
19 - α Tauri	<i>Aldebaran</i>	0.9	7 57	5 55	3 57	1 55	23 54	<table><tr><td>3</td><td>0 08</td></tr></table>	3	0 08			
3	0 08												
20 - β Orionis	<i>Rigel</i>	0.1	8 36	6 34	4 36	2 34	0 36	<table><tr><td>4</td><td>0 12</td></tr></table>	4	0 12			
4	0 12												
21 - α Aurigae	<i>Capella</i>	0.1	8 38	6 36	4 38	2 36	0 38	<table><tr><td>5</td><td>0 16</td></tr></table>	5	0 16			
5	0 16												
22 - γ Orionis	<i>Bellatrix</i>	1.6	8 46	6 44	4 46	2 44	0 47	<table><tr><td>6</td><td>0 20</td></tr></table>	6	0 20			
6	0 20												
28 - α Orionis	<i>Betelgeuse</i>	0.4	9 16	7 14	5 16	3 14	1 17	<table><tr><td>7</td><td>0 24</td></tr></table>	7	0 24			
7	0 24												
31 - α Carinae	<i>Canopus</i>	-0.7	9 45	7 43	5 45	3 43	1 45	<table><tr><td>8</td><td>0 28</td></tr></table>	8	0 28			
8	0 28												
33 - α Canis Majoris	<i>Sirius</i>	-1.5	10 06	8 04	6 06	4 04	2 06	<table><tr><td>9</td><td>0 31</td></tr></table>	9	0 31			
9	0 31												
34 - ϵ Canis Majoris	<i>Adhara</i>	1.5	10 19	8 17	6 19	4 18	2 20	<table><tr><td>10</td><td>0 35</td></tr></table>	10	0 35			
10	0 35												
								<table><tr><td>11</td><td>0 39</td></tr></table>	11	0 39			
11	0 39												
38 - α Canis Minoris	<i>Procyon</i>	0.4	11 00	8 58	7 00	4 58	3 00	<table><tr><td>12</td><td>0 43</td></tr></table>	12	0 43			
12	0 43												
39 - β Geminorum	<i>Pollux</i>	1.1	11 06	9 04	7 06	5 04	3 06	<table><tr><td>13</td><td>0 47</td></tr></table>	13	0 47			
13	0 47												
42 - ϵ Carinae	<i>Avior</i>	1.9	11 43	9 41	7 43	5 41	3 43	<table><tr><td>14</td><td>0 51</td></tr></table>	14	0 51			
14	0 51												
45 - λ Velorum	<i>Suhail</i>	2.2	12 28	10 26	8 28	6 27	4 29	<table><tr><td>15</td><td>0 55</td></tr></table>	15	0 55			
15	0 55												
46 - β Carinae	<i>Miaplacidus</i>	1.7	12 33	10 31	8 33	6 32	4 34	<table><tr><td>16</td><td>0 59</td></tr></table>	16	0 59			
16	0 59												
								<table><tr><td>17</td><td>1 03</td></tr></table>	17	1 03			
17	1 03												
49 - α Hydrae	<i>Alphard</i>	2.0	12 48	10 46	8 48	6 46	4 48	<table><tr><td>18</td><td>1 07</td></tr></table>	18	1 07			
18	1 07												
50 - α Leonis	<i>Regulus</i>	1.4	13 29	11 27	9 29	7 27	5 29	<table><tr><td>19</td><td>1 11</td></tr></table>	19	1 11			
19	1 11												
54 - α Ursae Majoris	<i>Dubhe</i>	1.8	14 24	12 22	10 24	8 22	6 24	<table><tr><td>20</td><td>1 15</td></tr></table>	20	1 15			
20	1 15												
55 - β Leonis	<i>Denebola</i>	2.1	15 09	13 07	11 09	9 07	7 09	<table><tr><td>21</td><td>1 19</td></tr></table>	21	1 19			
21	1 19												
57 - α Crucis	<i>Acrux</i>	1.4	15 46	13 45	11 47	9 45	7 47	<table><tr><td>22</td><td>1 23</td></tr></table>	22	1 23			
22	1 23												
								<table><tr><td>23</td><td>1 27</td></tr></table>	23	1 27			
23	1 27												
58 - γ Crucis	<i>Gacrux</i>	1.6	15 51	13 49	11 51	9 49	7 51	<table><tr><td>24</td><td>1 30</td></tr></table>	24	1 30			
24	1 30												
60 - β Crucis	<i>Mimosa</i>	1.3	16 08	14 06	12 08	10 06	8 08	<table><tr><td>25</td><td>1 34</td></tr></table>	25	1 34			
25	1 34												
61 - ϵ Ursae Majoris	<i>Alioth</i>	1.8	16 14	14 12	12 14	10 12	8 14	<table><tr><td>26</td><td>1 38</td></tr></table>	26	1 38			
26	1 38												
64 - ζ Ursae Majoris	<i>Mizar</i>	2.3	16 44	14 42	12 44	10 42	8 44	<table><tr><td>27</td><td>1 42</td></tr></table>	27	1 42			
27	1 42												
65 - α Virginis	<i>Spica</i>	1.0	16 45	14 43	12 45	10 43	8 45	<table><tr><td>28</td><td>1 46</td></tr></table>	28	1 46			
28	1 46												
								<table><tr><td>29</td><td>1 50</td></tr></table>	29	1 50			
29	1 50												
68 - θ Centauri	<i>Menkent</i>	2.1	17 26	15 24	13 26	11 25	9 27	<table><tr><td>30</td><td>1 54</td></tr></table>	30	1 54			
30	1 54												
69 - α Bootis	<i>Arcturus</i>	0.0	17 35	15 33	13 35	11 33	9 36	<table><tr><td>31</td><td>1 58</td></tr></table>	31	1 58			
31	1 58												
70 - α^1 Centauri	<i>Rigil Kentaurus</i>	0.0	17 59	15 57	13 59	11 57	10 00						
72 - β Ursae Minoris	<i>Kochab</i>	2.1	18 10	16 08	14 10	12 08	10 10	Si el resultado es negativo sumar 23 ^h 56 ^m .					
74 - α Coronae Borealis	<i>Alphecca</i>	2.2	18 54	16 52	14 54	12 52	10 54						
76 - α Scorpii	<i>Antares</i>	0.9	19 49	17 47	15 49	13 47	11 49	2ª CORRECCIÓN					
77 - α Trianguli Aust.	<i>Atria</i>	1.9	20 08	18 06	16 08	14 06	12 08						
81 - λ Scorpii	<i>Shaula</i>	1.6	20 53	18 51	16 53	14 51	12 53						
82 - α Ophiuchi	<i>Rasalhague</i>	2.1	20 54	18 52	16 54	14 52	12 54						
84 - γ Draconis	<i>Eltanin</i>	2.2	21 15	19 14	17 16	15 14	13 16	Se aplicará para tener la hora civil del paso por otro meridiano.					
85 - ϵ Sagittarii	<i>Kaus Australis</i>	1.9	21 43	19 41	17 43	15 41	13 44						
86 - α Lyrae	<i>Vega</i>	0.0	21 56	19 54	17 56	15 54	13 56	<table><tr><th>Long.</th><th>Corr.</th></tr></table>	Long.	Corr.			
Long.	Corr.												
87 - σ Sagittarii	<i>Nunki</i>	2.0	22 14	20 12	18 14	16 12	14 14	<table><tr><td></td><td>m</td></tr></table>		m			
	m												
88 - α Aquilae	<i>Altair</i>	0.8	23 09	21 08	19 10	17 08	15 10	<table><tr><td>180 W</td><td></td></tr></table>	180 W				
180 W													
90 - α Pavonis	<i>Peacock</i>	1.9	23 44	21 43	19 45	17 43	15 45	<table><tr><td>138 W</td><td>-2</td></tr></table>	138 W	-2			
138 W	-2												
								<table><tr><td>46 W</td><td>-1</td></tr></table>	46 W	-1			
46 W	-1												
91 - α Cygni	<i>Deneb</i>	1.3	0 04	21 58	20 00	17 58	16 00	<table><tr><td>46 E</td><td>0</td></tr></table>	46 E	0			
46 E	0												
93 - ϵ Pegasi	<i>Enif</i>	0.7	1 06	23 01	21 03	19 01	17 03	<table><tr><td>136 E</td><td>+1</td></tr></table>	136 E	+1			
136 E	+1												
95 - α Gruis	<i>Al Na'ir</i>	1.7	1 31	23 25	21 27	19 25	17 27	<table><tr><td>180 E</td><td>+2</td></tr></table>	180 E	+2			
180 E	+2												
97 - α Piscis Austrini	<i>Fomalhaut</i>	1.2	2 20	0 18	22 16	20 14	18 16						
99 - α Pegasi	<i>Markab</i>	2.5	2 27	0 25	22 23	20 21	18 23						

DETERMINACIÓN DE LA LATITUD
POR LA OBSERVACIÓN DE UNA ALTURA DE LA POLAR, 2006

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	-32.6	26 00	-41.1	52 00	-41.4	78 00	-33.2	104 00	-18.4	130 00	+0.2	156 00	+18.8
0 30	-32.8	26 30	-41.2	52 30	-41.3	78 30	-33.0	104 30	-18.0	130 30	+0.6	156 30	+19.1
1 00	-33.0	27 00	-41.3	53 00	-41.2	79 00	-32.8	105 00	-17.7	131 00	+1.0	157 00	+19.4
1 30	-33.3	27 30	-41.4	53 30	-41.1	79 30	-32.5	105 30	-17.4	131 30	+1.3	157 30	+19.7
2 00	-33.5	28 00	-41.5	54 00	-41.0	80 00	-32.3	106 00	-17.0	132 00	+1.7	158 00	+20.1
2 30	-33.7	28 30	-41.5	54 30	-40.9	80 30	-32.1	106 30	-16.7	132 30	+2.1	158 30	+20.4
3 00	-33.9	29 00	-41.6	55 00	-40.8	81 00	-31.8	107 00	-16.3	133 00	+2.4	159 00	+20.7
3 30	-34.2	29 30	-41.7	55 30	-40.7	81 30	-31.6	107 30	-16.0	133 30	+2.8	159 30	+21.0
4 00	-34.4	30 00	-41.7	56 00	-40.6	82 00	-31.3	108 00	-15.7	134 00	+3.2	160 00	+21.4
4 30	-34.6	30 30	-41.8	56 30	-40.5	82 30	-31.1	108 30	-15.3	134 30	+3.5	160 30	+21.7
5 00	-34.8	31 00	-41.9	57 00	-40.4	83 00	-30.8	109 00	-15.0	135 00	+3.9	161 00	+22.0
5 30	-35.0	31 30	-41.9	57 30	-40.3	83 30	-30.6	109 30	-14.6	135 30	+4.3	161 30	+22.3
6 00	-35.2	32 00	-42.0	58 00	-40.2	84 00	-30.3	110 00	-14.3	136 00	+4.6	162 00	+22.6
6 30	-35.4	32 30	-42.0	58 30	-40.1	84 30	-30.1	110 30	-13.9	136 30	+5.0	162 30	+22.9
7 00	-35.6	33 00	-42.1	59 00	-40.0	85 00	-29.8	111 00	-13.6	137 00	+5.4	163 00	+23.2
7 30	-35.8	33 30	-42.1	59 30	-39.8	85 30	-29.5	111 30	-13.2	137 30	+5.7	163 30	+23.6
8 00	-36.0	34 00	-42.1	60 00	-39.7	86 00	-29.3	112 00	-12.9	138 00	+6.1	164 00	+23.9
8 30	-36.2	34 30	-42.2	60 30	-39.6	86 30	-29.0	112 30	-12.5	138 30	+6.5	164 30	+24.2
9 00	-36.4	35 00	-42.2	61 00	-39.5	87 00	-28.7	113 00	-12.2	139 00	+6.8	165 00	+24.5
9 30	-36.6	35 30	-42.2	61 30	-39.3	87 30	-28.4	113 30	-11.8	139 30	+7.2	165 30	+24.8
10 00	-36.8	36 00	-42.3	62 00	-39.2	88 00	-28.2	114 00	-11.5	140 00	+7.6	166 00	+25.1
10 30	-37.0	36 30	-42.3	62 30	-39.0	88 30	-27.9	114 30	-11.1	140 30	+7.9	166 30	+25.4
11 00	-37.1	37 00	-42.3	63 00	-38.9	89 00	-27.6	115 00	-10.8	141 00	+8.3	167 00	+25.7
11 30	-37.3	37 30	-42.3	63 30	-38.7	89 30	-27.3	115 30	-10.4	141 30	+8.7	167 30	+25.9
12 00	-37.5	38 00	-42.3	64 00	-38.6	90 00	-27.1	116 00	-10.0	142 00	+9.0	168 00	+26.2
12 30	-37.7	38 30	-42.3	64 30	-38.4	90 30	-26.8	116 30	-9.7	142 30	+9.4	168 30	+26.5
13 00	-37.8	39 00	-42.3	65 00	-38.3	91 00	-26.5	117 00	-9.3	143 00	+9.7	169 00	+26.8
13 30	-38.0	39 30	-42.3	65 30	-38.1	91 30	-26.2	117 30	-9.0	143 30	+10.1	169 30	+27.1
14 00	-38.2	40 00	-42.3	66 00	-38.0	92 00	-25.9	118 00	-8.6	144 00	+10.5	170 00	+27.4
14 30	-38.3	40 30	-42.3	66 30	-37.8	92 30	-25.6	118 30	-8.2	144 30	+10.8	170 30	+27.7
15 00	-38.5	41 00	-42.3	67 00	-37.6	93 00	-25.3	119 00	-7.9	145 00	+11.2	171 00	+27.9
15 30	-38.6	41 30	-42.3	67 30	-37.5	93 30	-25.0	119 30	-7.5	145 30	+11.5	171 30	+28.2
16 00	-38.8	42 00	-42.3	68 00	-37.3	94 00	-24.7	120 00	-7.1	146 00	+11.9	172 00	+28.5
16 30	-38.9	42 30	-42.3	68 30	-37.1	94 30	-24.4	120 30	-6.8	146 30	+12.2	172 30	+28.8
17 00	-39.1	43 00	-42.3	69 00	-36.9	95 00	-24.1	121 00	-6.4	147 00	+12.6	173 00	+29.0
17 30	-39.2	43 30	-42.3	69 30	-36.7	95 30	-23.8	121 30	-6.0	147 30	+12.9	173 30	+29.3
18 00	-39.3	44 00	-42.2	70 00	-36.6	96 00	-23.5	122 00	-5.7	148 00	+13.3	174 00	+29.6
18 30	-39.5	44 30	-42.2	70 30	-36.4	96 30	-23.2	122 30	-5.3	148 30	+13.6	174 30	+29.8
19 00	-39.6	45 00	-42.2	71 00	-36.2	97 00	-22.9	123 00	-4.9	149 00	+14.0	175 00	+30.1
19 30	-39.7	45 30	-42.1	71 30	-36.0	97 30	-22.6	123 30	-4.6	149 30	+14.3	175 30	+30.4
20 00	-39.9	46 00	-42.1	72 00	-35.8	98 00	-22.3	124 00	-4.2	150 00	+14.7	176 00	+30.6
20 30	-40.0	46 30	-42.0	72 30	-35.6	98 30	-21.9	124 30	-3.8	150 30	+15.0	176 30	+30.9
21 00	-40.1	47 00	-42.0	73 00	-35.4	99 00	-21.6	125 00	-3.5	151 00	+15.4	177 00	+31.1
21 30	-40.2	47 30	-42.0	73 30	-35.2	99 30	-21.3	125 30	-3.1	151 30	+15.7	177 30	+31.4
22 00	-40.3	48 00	-41.9	74 00	-35.0	100 00	-21.0	126 00	-2.7	152 00	+16.1	178 00	+31.6
22 30	-40.5	48 30	-41.8	74 30	-34.8	100 30	-20.7	126 30	-2.4	152 30	+16.4	178 30	+31.9
23 00	-40.6	49 00	-41.8	75 00	-34.6	101 00	-20.3	127 00	-2.0	153 00	+16.7	179 00	+32.1
23 30	-40.7	49 30	-41.7	75 30	-34.3	101 30	-20.0	127 30	-1.6	153 30	+17.1	179 30	+32.3
24 00	-40.8	50 00	-41.7	76 00	-34.1	102 00	-19.7	128 00	-1.3	154 00	+17.4	180 00	+32.6
24 30	-40.9	50 30	-41.6	76 30	-33.9	102 30	-19.4	128 30	-0.9	154 30	+17.8	180 30	+32.8
25 00	-41.0	51 00	-41.5	77 00	-33.7	103 00	-19.0	129 00	-0.5	155 00	+18.1	181 00	+33.0
25 30	-41.1	51 30	-41.5	77 30	-33.5	103 30	-18.7	129 30	-0.2	155 30	+18.4	181 30	+33.3
26 00	-41.1	52 00	-41.4	78 00	-33.2	104 00	-18.4	130 00	+0.2	156 00	+18.8	182 00	+33.5

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TABLA I

h.L.Υ	Corr.	h.L.Υ	Corr.	h.L.Υ	Corr.	h.L.Υ	Corr.	h.L.Υ	Corr.	h.L.Υ	Corr.	h.L.Υ	Corr.
° /	'	° /	'	° /	'	° /	'	° /	'	° /	'	° /	'
182 00	+33.5	208 00	+41.5	234 00	+41.0	260 00	+32.3	286 00	+17.0	312 00	-1.7	338 00	-20.1
182 30	+33.7	208 30	+41.5	234 30	+40.9	260 30	+32.1	286 30	+16.7	312 30	-2.1	338 30	-20.4
183 00	+33.9	209 00	+41.6	235 00	+40.8	261 00	+31.8	287 00	+16.3	313 00	-2.4	339 00	-20.7
183 30	+34.2	209 30	+41.7	235 30	+40.7	261 30	+31.6	287 30	+16.0	313 30	-2.8	339 30	-21.0
184 00	+34.4	210 00	+41.7	236 00	+40.6	262 00	+31.3	288 00	+15.7	314 00	-3.2	340 00	-21.4
184 30	+34.6	210 30	+41.8	236 30	+40.5	262 30	+31.1	288 30	+15.3	314 30	-3.5	340 30	-21.7
185 00	+34.8	211 00	+41.9	237 00	+40.4	263 00	+30.8	289 00	+15.0	315 00	-3.9	341 00	-22.0
185 30	+35.0	211 30	+41.9	237 30	+40.3	263 30	+30.6	289 30	+14.6	315 30	-4.3	341 30	-22.3
186 00	+35.2	212 00	+42.0	238 00	+40.2	264 00	+30.3	290 00	+14.3	316 00	-4.6	342 00	-22.6
186 30	+35.4	212 30	+42.0	238 30	+40.1	264 30	+30.1	290 30	+13.9	316 30	-5.0	342 30	-22.9
187 00	+35.6	213 00	+42.1	239 00	+40.0	265 00	+29.8	291 00	+13.6	317 00	-5.4	343 00	-23.2
187 30	+35.8	213 30	+42.1	239 30	+39.8	265 30	+29.5	291 30	+13.2	317 30	-5.7	343 30	-23.6
188 00	+36.0	214 00	+42.1	240 00	+39.7	266 00	+29.3	292 00	+12.9	318 00	-6.1	344 00	-23.9
188 30	+36.2	214 30	+42.2	240 30	+39.6	266 30	+29.0	292 30	+12.5	318 30	-6.5	344 30	-24.2
189 00	+36.4	215 00	+42.2	241 00	+39.5	267 00	+28.7	293 00	+12.2	319 00	-6.8	345 00	-24.5
189 30	+36.6	215 30	+42.2	241 30	+39.3	267 30	+28.4	293 30	+11.8	319 30	-7.2	345 30	-24.8
190 00	+36.8	216 00	+42.3	242 00	+39.2	268 00	+28.2	294 00	+11.5	320 00	-7.6	346 00	-25.1
190 30	+37.0	216 30	+42.3	242 30	+39.0	268 30	+27.9	294 30	+11.1	320 30	-7.9	346 30	-25.4
191 00	+37.1	217 00	+42.3	243 00	+38.9	269 00	+27.6	295 00	+10.8	321 00	-8.3	347 00	-25.7
191 30	+37.3	217 30	+42.3	243 30	+38.7	269 30	+27.3	295 30	+10.4	321 30	-8.7	347 30	-25.9
192 00	+37.5	218 00	+42.3	244 00	+38.6	270 00	+27.1	296 00	+10.0	322 00	-9.0	348 00	-26.2
192 30	+37.7	218 30	+42.3	244 30	+38.4	270 30	+26.8	296 30	+9.7	322 30	-9.4	348 30	-26.5
193 00	+37.8	219 00	+42.3	245 00	+38.3	271 00	+26.5	297 00	+9.3	323 00	-9.7	349 00	-26.8
193 30	+38.0	219 30	+42.3	245 30	+38.1	271 30	+26.2	297 30	+9.0	323 30	-10.1	349 30	-27.1
194 00	+38.2	220 00	+42.3	246 00	+38.0	272 00	+25.9	298 00	+8.6	324 00	-10.5	350 00	-27.4
194 30	+38.3	220 30	+42.3	246 30	+37.8	272 30	+25.6	298 30	+8.2	324 30	-10.8	350 30	-27.7
195 00	+38.5	221 00	+42.3	247 00	+37.6	273 00	+25.3	299 00	+7.9	325 00	-11.2	351 00	-27.9
195 30	+38.6	221 30	+42.3	247 30	+37.5	273 30	+25.0	299 30	+7.5	325 30	-11.5	351 30	-28.2
196 00	+38.8	222 00	+42.3	248 00	+37.3	274 00	+24.7	300 00	+7.1	326 00	-11.9	352 00	-28.5
196 30	+38.9	222 30	+42.3	248 30	+37.1	274 30	+24.4	300 30	+6.8	326 30	-12.2	352 30	-28.8
197 00	+39.1	223 00	+42.3	249 00	+36.9	275 00	+24.1	301 00	+6.4	327 00	-12.6	353 00	-29.0
197 30	+39.2	223 30	+42.3	249 30	+36.7	275 30	+23.8	301 30	+6.0	327 30	-12.9	353 30	-29.3
198 00	+39.3	224 00	+42.2	250 00	+36.6	276 00	+23.5	302 00	+5.7	328 00	-13.3	354 00	-29.6
198 30	+39.5	224 30	+42.2	250 30	+36.4	276 30	+23.2	302 30	+5.3	328 30	-13.6	354 30	-29.8
199 00	+39.6	225 00	+42.2	251 00	+36.2	277 00	+22.9	303 00	+4.9	329 00	-14.0	355 00	-30.1
199 30	+39.7	225 30	+42.1	251 30	+36.0	277 30	+22.6	303 30	+4.6	329 30	-14.3	355 30	-30.4
200 00	+39.9	226 00	+42.1	252 00	+35.8	278 00	+22.3	304 00	+4.2	330 00	-14.7	356 00	-30.6
200 30	+40.0	226 30	+42.0	252 30	+35.6	278 30	+21.9	304 30	+3.8	330 30	-15.0	356 30	-30.9
201 00	+40.1	227 00	+42.0	253 00	+35.4	279 00	+21.6	305 00	+3.5	331 00	-15.4	357 00	-31.1
201 30	+40.2	227 30	+42.0	253 30	+35.2	279 30	+21.3	305 30	+3.1	331 30	-15.7	357 30	-31.4
202 00	+40.3	228 00	+41.9	254 00	+35.0	280 00	+21.0	306 00	+2.7	332 00	-16.1	358 00	-31.6
202 30	+40.5	228 30	+41.8	254 30	+34.8	280 30	+20.7	306 30	+2.4	332 30	-16.4	358 30	-31.9
203 00	+40.6	229 00	+41.8	255 00	+34.6	281 00	+20.3	307 00	+2.0	333 00	-16.7	359 00	-32.1
203 30	+40.7	229 30	+41.7	255 30	+34.3	281 30	+20.0	307 30	+1.6	333 30	-17.1	359 30	-32.3
204 00	+40.8	230 00	+41.7	256 00	+34.1	282 00	+19.7	308 00	+1.3	334 00	-17.4	360 00	-32.6
204 30	+40.9	230 30	+41.6	256 30	+33.9	282 30	+19.4	308 30	+0.9	334 30	-17.8		
205 00	+41.0	231 00	+41.5	257 00	+33.7	283 00	+19.0	309 00	+0.5	335 00	-18.1		
205 30	+41.1	231 30	+41.5	257 30	+33.5	283 30	+18.7	309 30	+0.2	335 30	-18.4		
206 00	+41.1	232 00	+41.4	258 00	+33.2	284 00	+18.4	310 00	-0.2	336 00	-18.8		
206 30	+41.2	232 30	+41.3	258 30	+33.0	284 30	+18.0	310 30	-0.6	336 30	-19.1		
207 00	+41.3	233 00	+41.2	259 00	+32.8	285 00	+17.7	311 00	-1.0	337 00	-19.4		
207 30	+41.4	233 30	+41.1	259 30	+32.5	285 30	+17.4	311 30	-1.3	337 30	-19.7		
208 00	+41.5	234 00	+41.0	260 00	+32.3	286 00	+17.0	312 00	-1.7	338 00	-20.1		

DETERMINACIÓN DE LA LATITUD
POR LA OBSERVACIÓN DE UNA ALTURA DE LA POLAR, 2006

TABLA II

(SIEMPRE POSITIVA)

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

TABLA III

hL $\cap$	Ene 1	Feb 1	Mar 1	Abr 1	May 1	Jun 1	Jul 1	Ago 1	Sep 1	Oct 1	Nov 1	Dic 1	Dic 32
°	/	/	/	/	/	/	/	/	/	/	/	/	/
0	+0.1	+0.1	0.0	-0.2	-0.3	-0.4	-0.4	-0.2	-0.1	+0.1	+0.3	+0.4	+0.5
20	+0.1	+0.2	+0.1	-0.1	-0.2	-0.3	-0.4	-0.3	-0.2	0.0	+0.2	+0.4	+0.5
40	+0.1	+0.2	+0.2	+0.1	-0.1	-0.2	-0.3	-0.3	-0.2	-0.1	+0.1	+0.3	+0.4
60	+0.1	+0.2	+0.2	+0.2	0.0	-0.1	-0.2	-0.3	-0.3	-0.2	-0.1	+0.1	+0.3
80	+0.1	+0.2	+0.3	+0.3	+0.2	0.0	-0.1	-0.2	-0.3	-0.3	-0.2	0.0	+0.1
100	0.0	+0.2	+0.3	+0.3	+0.3	+0.2	0.0	-0.2	-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	0.0	-0.2	-0.3	-0.4	-0.3	-0.2
140	-0.1	+0.1	+0.2	+0.3	+0.4	+0.4	+0.2	+0.1	-0.1	-0.3	-0.4	-0.4	-0.4
160	-0.1	0.0	+0.1	+0.3	+0.4	+0.4	+0.3	+0.2	0.0	-0.2	-0.4	-0.5	-0.5
180	-0.1	-0.1	0.0	+0.2	+0.3	+0.4	+0.4	+0.2	+0.1	-0.1	-0.3	-0.4	-0.5
200	-0.1	-0.2	-0.1	+0.1	+0.2	+0.3	+0.4	+0.3	+0.2	0.0	-0.2	-0.4	-0.5
220	-0.1	-0.2	-0.2	-0.1	+0.1	+0.2	+0.3	+0.3	+0.2	+0.1	-0.1	-0.3	-0.4
240	-0.1	-0.2	-0.2	-0.2	0.0	+0.1	+0.2	+0.3	+0.3	+0.2	+0.1	-0.1	-0.3
260	-0.1	-0.2	-0.3	-0.3	-0.2	0.0	+0.1	+0.2	+0.3	+0.3	+0.2	0.0	-0.1
280	0.0	-0.2	-0.3	-0.3	-0.3	-0.2	0.0	+0.2	+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	0.0	+0.2	+0.3	+0.4	+0.3	+0.2
320	+0.1	-0.1	-0.2	-0.3	-0.4	-0.4	-0.2	-0.1	+0.1	+0.3	+0.4	+0.4	+0.4
340	+0.1	0.0	-0.1	-0.3	-0.4	-0.4	-0.3	-0.2	0.0	+0.2	+0.4	+0.5	+0.5
360	+0.1	+0.1	0.0	-0.2	-0.3	-0.4	-0.4	-0.2	-0.1	+0.1	+0.3	+0.4	+0.5

Dic 32 corresponde al 1 de enero del año siguiente

hL [⌞]	Latitud												hL [⌞]
	10°	15°	20°	25°	30°	35°	40°	45°	50°	55°	60°	65°	
°	°	°	°	°	°	°	°	°	°	°	°	°	°
0	+0.5	+0.5	+0.5	+0.5	+0.5	+0.6	+0.6	+0.6	+0.7	+0.8	+0.9	+1.1	0
10	+0.4	+0.4	+0.4	+0.4	+0.4	+0.4	+0.5	+0.5	+0.6	+0.6	+0.7	+0.8	10
20	+0.2	+0.2	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.4	+0.4	+0.5	+0.6	20
30	+0.1	+0.1	+0.1	+0.1	+0.1	+0.1	+0.2	+0.2	+0.2	+0.2	+0.2	+0.3	30
40	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	40
50	-0.1	-0.1	-0.1	-0.1	-0.1	-0.2	-0.2	-0.2	-0.2	-0.2	-0.3	-0.3	50
60	-0.2	-0.3	-0.3	-0.3	-0.3	-0.3	-0.3	-0.4	-0.4	-0.4	-0.5	-0.6	60
70	-0.4	-0.4	-0.4	-0.4	-0.4	-0.4	-0.5	-0.5	-0.6	-0.6	-0.7	-0.9	70
80	-0.5	-0.5	-0.5	-0.5	-0.5	-0.6	-0.6	-0.7	-0.7	-0.8	-0.9	-1.1	80
90	-0.6	-0.6	-0.6	-0.6	-0.6	-0.7	-0.7	-0.8	-0.9	-1.0	-1.1	-1.3	90
100	-0.6	-0.6	-0.7	-0.7	-0.7	-0.8	-0.8	-0.9	-1.0	-1.1	-1.2	-1.5	100
110	-0.7	-0.7	-0.7	-0.7	-0.8	-0.8	-0.9	-0.9	-1.0	-1.2	-1.3	-1.6	110
120	-0.7	-0.7	-0.7	-0.8	-0.8	-0.9	-0.9	-1.0	-1.1	-1.2	-1.4	-1.7	120
130	-0.7	-0.7	-0.8	-0.8	-0.8	-0.9	-0.9	-1.0	-1.1	-1.2	-1.4	-1.7	130
140	-0.7	-0.7	-0.7	-0.8	-0.8	-0.8	-0.9	-1.0	-1.1	-1.2	-1.4	-1.6	140
150	-0.7	-0.7	-0.7	-0.7	-0.8	-0.8	-0.9	-0.9	-1.0	-1.1	-1.3	-1.6	150
160	-0.6	-0.6	-0.6	-0.7	-0.7	-0.7	-0.8	-0.9	-0.9	-1.1	-1.2	-1.4	160
170	-0.5	-0.6	-0.6	-0.6	-0.6	-0.7	-0.7	-0.8	-0.8	-0.9	-1.1	-1.3	170
180	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.6	-0.6	-0.7	-0.8	-0.9	-1.0	180
190	-0.4	-0.4	-0.4	-0.4	-0.4	-0.4	-0.5	-0.5	-0.5	-0.6	-0.7	-0.8	190
200	-0.2	-0.2	-0.3	-0.3	-0.3	-0.3	-0.3	-0.3	-0.4	-0.4	-0.5	-0.5	200
210	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.2	-0.2	-0.2	-0.2	-0.2	-0.3	210
220	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	220
230	+0.1	+0.1	+0.1	+0.1	+0.1	+0.2	+0.2	+0.2	+0.2	+0.2	+0.2	+0.3	230
240	+0.2	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.4	+0.4	+0.5	+0.6	240
250	+0.4	+0.4	+0.4	+0.4	+0.4	+0.4	+0.5	+0.5	+0.5	+0.6	+0.7	+0.8	250
260	+0.5	+0.5	+0.5	+0.5	+0.5	+0.6	+0.6	+0.6	+0.7	+0.8	+0.9	+1.1	260
270	+0.6	+0.6	+0.6	+0.6	+0.6	+0.7	+0.7	+0.8	+0.8	+0.9	+1.1	+1.3	270
280	+0.6	+0.6	+0.7	+0.7	+0.7	+0.7	+0.8	+0.9	+0.9	+1.1	+1.2	+1.4	280
290	+0.7	+0.7	+0.7	+0.7	+0.8	+0.8	+0.9	+0.9	+1.0	+1.2	+1.3	+1.6	290
300	+0.7	+0.7	+0.7	+0.8	+0.8	+0.8	+0.9	+1.0	+1.1	+1.2	+1.4	+1.6	300
310	+0.7	+0.7	+0.8	+0.8	+0.8	+0.9	+0.9	+1.0	+1.1	+1.2	+1.4	+1.7	310
320	+0.7	+0.7	+0.7	+0.8	+0.8	+0.8	+0.9	+1.0	+1.1	+1.2	+1.4	+1.7	320
330	+0.7	+0.7	+0.7	+0.7	+0.8	+0.8	+0.9	+0.9	+1.0	+1.2	+1.3	+1.6	330
340	+0.6	+0.6	+0.6	+0.7	+0.7	+0.7	+0.8	+0.9	+1.0	+1.1	+1.2	+1.5	340
350	+0.5	+0.6	+0.6	+0.6	+0.6	+0.7	+0.7	+0.8	+0.8	+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, 2006**

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TABLA A				TABLA B = SOL (LIMBO INFERIOR)											
Depresión del horizonte				Semidiámetro, refracción y paralaje										Correc. adicional (2006)	
Elevación del observador	Corrección	Elevación del observador	Corrección	Altura apte. ⊙	Corrección	Altura apte. ⊙	Corrección	Altura apte. ⊙	Corrección	Altura apte. ⊙	Corrección				
				° /	'	° /	'	° /	'	° /	'	° /	'	Ene 1	+0'3
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 22	+0'2
1.7	-2.4	13.1	-6.5	6 21	+8.3	8 54	+10.3	13 44	+12.3	27 12	+14.3			Feb 27	+0'1
1.9	-2.4	13.6	-6.5	6 27	+8.4	9 05	+10.4	14 06	+12.4	28 32	+14.4			Mar 22	0'0
2.0	-2.5	14.0	-6.6	6 33	+8.5	9 15	+10.5	14 29	+12.5	29 59	+14.5			Abr 13	-0'1
2.2	-2.6	14.4	-6.7	6 40	+8.6	9 26	+10.6	14 53	+12.6	31 34	+14.6			May 7	-0'2
2.3	-2.7	14.8	-6.8	6 46	+8.7	9 37	+10.7	15 18	+12.7	33 19	+14.7			Jun 12	-0'3
2.5	-2.8	15.3	-6.9	6 53	+8.8	9 47	+10.8	15 45	+12.8	35 16	+14.8			Jul 28	-0'2
2.7	-2.9	15.7	-7.0	7 00	+8.9	10 00	+10.9	16 13	+12.9	37 25	+14.9			Sep 1	-0'1
2.9	-3.0	16.2	-7.1	7 06	+9.0	10 12	+11.0	16 43	+13.0	39 49	+15.0			Sep 25	0'0
3.1	-3.1	16.6	-7.2	7 14	+9.1	10 25	+11.1	17 14	+13.1	42 30	+15.1			Oct 17	+0'1
3.3	-3.2	17.1	-7.3	7 21	+9.2	10 38	+11.2	17 47	+13.2	45 30	+15.2			Nov 10	+0'2
3.5	-3.3	17.6	-7.4	7 28	+9.3	10 52	+11.3	18 23	+13.3	48 53	+15.3			Dic 15	+0'3
3.7	-3.4	18.0	-7.5	7 36	+9.4	11 06	+11.4	19 01	+13.4	52 43	+15.4			Dic 31	
3.9	-3.5	18.5	-7.6	7 44	+9.5	11 21	+11.5	19 41	+13.5	57 01	+15.5				
4.2	-3.6	19.0	-7.7	7 52	+9.6	11 36	+11.6	20 24	+13.6	61 51	+15.6				
4.4	-3.7	19.5	-7.8	8 00	+9.7	11 52	+11.7	21 10	+13.7	67 16	+15.7				
4.7	-3.8	20.0	-7.9	8 08	+9.8	12 09	+11.8	21 59	+13.8	73 14	+15.8				
4.9	-3.9	20.5	-8.0	8 17	+9.9	12 26	+11.9	22 53	+13.9	79 42	+15.9				
5.2	-4.0	21.0	-8.1	8 26	+10.0	12 44	+12.0	23 50	+14.0	86 30	+16.0				
5.4	-4.1	21.5	-8.2	8 35	+10.1	13 03	+12.1	24 52	+14.1	90 00					
5.7	-4.2	22.1	-8.3	8 45		13 23		25 59							
6.0	-4.3	22.6	-8.4												
6.2	-4.4	23.1	-8.5												
6.5	-4.5	23.7	-8.6												
6.8	-4.6	24.2	-8.7												
7.1	-4.7	24.8	-8.8												
7.4	-4.8	25.4	-8.9												
7.7	-4.9	25.9	-9.0												
8.0	-5.0	26.5	-9.1												
8.4	-5.1	27.1	-9.2												
8.7	-5.2	27.7	-9.3												
9.0	-5.3	28.3	-9.4												
9.4	-5.4	28.9	-9.5												
9.7	-5.5	29.5	-9.6												
10.1	-5.6	30.1	-9.7												
10.4	-5.7	30.7	-9.8												
10.8	-5.8	31.3	-9.9												
11.2	-5.9	32.0	-10.0												
11.6	-6.0	32.6	-10.1												
11.9	-6.1	33.3	-10.2												
12.3	-6.2	33.9	-10.3												
12.7	-6.3	34.6	-10.4												

TABLA C = PLANETAS Y ESTRELLAS											
Refracción						Paralaje (2006)					
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								
7 30	-6.9	19 00	-2.8								
7 45	-6.7	20 00	-2.6								
8 00	-6.5	21 00	-2.5								
8 15	-6.3	22 00	-2.4								
8 30	-6.2	24 00	-2.2								
8 45	-6.0	26 00	-2.0								
9 00	-5.9	28 00	-1.8								
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.